



Ethics, Markets, & the State

Socratic Seminar Series

*Ethics, Markets,
& the State*

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I. The Scope Problem: Constitutions as Constraints on Government

Homer, "*The Odyssey*", Book XII, Internet Classics Archive, Translation by Samuel Butler.

William F. Shughart II, "Public Choice," *The Concise Encyclopedia of Economics*, (Library of Economics and Liberty: 2008).

James M. Buchanan, "Politics without Romance: A Sketch of Positive Public Choice Theory as Its Normative Implications", *The Logical Foundations of Constitutional Liberty*, The Collected Works of James M. Buchanan Volume 1, 1999.

Don Lavoie, "Democracy, Markets and the Legal Order: Politics in a Radically Liberal Society", *Social Philosophy and Policy Foundation*, 1993.

II. Rent-Seeking

David R. Henderson, "Rent Seeking," *The Concise Encyclopedia of Economics*, (Library of Economics and Liberty: 2008).

Planet Money (podcast), "Episode 524: Mr. Jones' Act", Originally aired March 12, 2014.
<http://www.npr.org/sections/money/2016/08/05/488869138/episode-524-mr-jones-act>

Jeffrey Simpson, "Political hell hath no fury like dairy farmers aroused", *The Globe and Mail*, June 22, 2012.

Peter Jaworski, "Blame the Politicians: A Government Failure Approach to Political Ethics", 2013.

III. The Collective Action Problem

Russell Hardin, "The Free Rider Problem", *The Stanford Encyclopedia of Philosophy* (Spring 2013 Edition), Edward N. Zalta (ed.).

Elinor Ostrom, "Collective Action and the Evolution of Social Norms", *Journal of Economic Perspectives*, Vol. 14, No. 3 (Summer 2000), pp. 137-158.

Tim Harford, "Do you believe in sharing?", *Financial Times*, 2013.

IV. The Collective Choice Problem

Kenneth J. Arrow, "A Difficulty in the Concept of Social Welfare", *The Journal of Political Economy*, Vol. 58, No. 4. (Aug., 1950), pp. 328-346.

Russell Roberts, "If you're paying, I'll have top sirloin", *The Wall Street Journal*, 1995.

V. The Knowledge Problem: Markets vs. Government

F.A. Hayek, "The Use of Knowledge in Society", *American Economic Review*, Vol. 35, No. 4, pp. 519-530.

Don Lavoie, "The Knowledge Problem", *National Economic Planning, What is Left?*, Cato Institute: 1985, pp. 51-92.

VI. Case Studies

Peter Jaworski, Hemeos Case Study.

Brian Richter, "Case Study: Do Business and Politics Mix?" *Harvard Business Review*, November 2014.

Session I

The Scope Problem: Constitutions as Constraints on Government

Readings

Homer, "*The Odyssey*", Book XII, Internet Classics Archive, Translation by Samuel Butler.

William F. Shughart II, "Public Choice," *The Concise Encyclopedia of Economics*, (Library of Economics and Liberty: 2008).

James M. Buchanan, "Politics without Romance: A Sketch of Positive Public Choice Theory as Its Normative Implications", *The Logical Foundations of Constitutional Liberty*, The Collected Works of James M. Buchanan Volume 1, 1999.

Don Lavoie, "Democracy, Markets and the Legal Order: Politics in a Radically Liberal Society", *Social Philosophy and Policy Foundation*, 1993.

The Odyssey

By Homer

Provided by The Internet Classics Archive

Translated by Samuel Butler

BOOK XII

"After we were clear of the river Oceanus, and had got out into the open sea, we went on till we reached the Aeaean island where there is dawn and sunrise as in other places. We then drew our ship on to the sands and got out of her on to the shore, where we went to sleep and waited till day should break.

"Then, when the child of morning, rosy-fingered Dawn, appeared, I sent some men to Circe's house to fetch the body of Elpenor. We cut firewood from a wood where the headland jutted out into the sea, and after we had wept over him and lamented him we performed his funeral rites. When his body and armour had been burned to ashes, we raised a cairn, set a stone over it, and at the top of the cairn we fixed the oar that he had been used to row with.

"While we were doing all this, Circe, who knew that we had got back from the house of Hades, dressed herself and came to us as fast as she could; and her maid servants came with her bringing us bread, meat, and wine. Then she stood in the midst of us and said, 'You have done a bold thing in going down alive to the house of Hades, and you will have died twice, to other people's once; now, then, stay here for the rest of the day, feast your fill, and go on with your voyage at daybreak tomorrow morning. In the meantime I will tell Ulysses about your course, and will explain everything to him so as to prevent your suffering from misadventure either by land or sea.'

"We agreed to do as she had said, and feasted through the livelong day to the going down of the sun, but when the sun had set and it came on dark, the men laid themselves down to sleep by the stern cables of the ship. Then Circe took me by the hand and bade me be seated away from the others, while she reclined by my side and asked me all about our adventures.

"'So far so good,' said she, when I had ended my story, 'and now pay attention to what I am about to tell you- heaven itself, indeed, will recall it to your recollection. First you will come to the Sirens who enchant all who come near them. If any one unwarily draws in too close and hears the singing of the Sirens, his wife and children will never welcome him home again, for they sit in a green field and warble

him to death with the sweetness of their song. There is a great heap of dead men's bones lying all around, with the flesh still rotting off them. Therefore pass these Sirens by, and stop your men's ears with wax that none of them may hear; but if you like you can listen yourself, for you may get the men to bind you as you stand upright on a cross-piece half way up the mast, and they must lash the rope's ends to the mast itself, that you may have the pleasure of listening. If you beg and pray the men to unloose you, then they must bind you faster.

"When your crew have taken you past these Sirens, I cannot give you coherent directions as to which of two courses you are to take; I will lay the two alternatives before you, and you must consider them for yourself. On the one hand there are some overhanging rocks against which the deep blue waves of Amphitrite beat with terrific fury; the blessed gods call these rocks the Wanderers. Here not even a bird may pass, no, not even the timid doves that bring ambrosia to Father Jove, but the sheer rock always carries off one of them, and Father Jove has to send another to make up their number; no ship that ever yet came to these rocks has got away again, but the waves and whirlwinds of fire are freighted with wreckage and with the bodies of dead men. The only vessel that ever sailed and got through, was the famous Argo on her way from the house of Aetes, and she too would have gone against these great rocks, only that Juno piloted her past them for the love she bore to Jason.

"Of these two rocks the one reaches heaven and its peak is lost in a dark cloud. This never leaves it, so that the top is never clear not even in summer and early autumn. No man though he had twenty hands and twenty feet could get a foothold on it and climb it, for it runs sheer up, as smooth as though it had been polished. In the middle of it there is a large cavern, looking West and turned towards Erebus; you must take your ship this way, but the cave is so high up that not even the stoutest archer could send an arrow into it. Inside it Scylla sits and yelps with a voice that you might take to be that of a young hound, but in truth she is a dreadful monster and no one- not even a god- could face her without being terror-struck. She has twelve mis-shapen feet, and six necks of the most prodigious length; and at the end of each neck she has a frightful head with three rows of teeth in each, all set very close together, so that they would crunch any one to death in a moment, and she sits deep within her shady cell thrusting out her heads and peering all round the rock, fishing for dolphins or dogfish or any larger monster that she can catch, of the thousands with which Amphitrite teems. No ship ever yet got past her without losing some men, for she shoots out all her heads at once, and carries off a man in each mouth.

"You will find the other rocks lie lower, but they are so close together

that there is not more than a bowshot between them. [A large fig tree in full leaf grows upon it], and under it lies the sucking whirlpool of Charybdis. Three times in the day does she vomit forth her waters, and three times she sucks them down again; see that you be not there when she is sucking, for if you are, Neptune himself could not save you; you must hug the Scylla side and drive ship by as fast as you can, for you had better lose six men than your whole crew.'

"'Is there no way,' said I, 'of escaping Charybdis, and at the same time keeping Scylla off when she is trying to harm my men?'

"'You dare-devil,' replied the goddess, you are always wanting to fight somebody or something; you will not let yourself be beaten even by the immortals. For Scylla is not mortal; moreover she is savage, extreme, rude, cruel and invincible. There is no help for it; your best chance will be to get by her as fast as ever you can, for if you dawdle about her rock while you are putting on your armour, she may catch you with a second cast of her six heads, and snap up another half dozen of your men; so drive your ship past her at full speed, and roar out lustily to Crataeis who is Scylla's dam, bad luck to her; she will then stop her from making a second raid upon you.

"'You will now come to the Thrinacian island, and here you will see many herds of cattle and flocks of sheep belonging to the sun-god- seven herds of cattle and seven flocks of sheep, with fifty head in each flock. They do not breed, nor do they become fewer in number, and they are tended by the goddesses Phaethusa and Lampetie, who are children of the sun-god Hyperion by Neaera. Their mother when she had borne them and had done suckling them sent them to the Thrinacian island, which was a long way off, to live there and look after their father's flocks and herds. If you leave these flocks unharmed, and think of nothing but getting home, you may yet after much hardship reach Ithaca; but if you harm them, then I forewarn you of the destruction both of your ship and of your comrades; and even though you may yourself escape, you will return late, in bad plight, after losing all your men.'

"Here she ended, and dawn enthroned in gold began to show in heaven, whereon she returned inland. I then went on board and told my men to loose the ship from her moorings; so they at once got into her, took their places, and began to smite the grey sea with their oars. Presently the great and cunning goddess Circe befriended us with a fair wind that blew dead aft, and stayed steadily with us, keeping our sails well filled, so we did whatever wanted doing to the ship's gear, and let her go as wind and helmsman headed her.

"Then, being much troubled in mind, I said to my men, 'My friends, it is not right that one or two of us alone should know the prophecies

that Circe has made me, I will therefore tell you about them, so that whether we live or die we may do so with our eyes open. First she said we were to keep clear of the Sirens, who sit and sing most beautifully in a field of flowers; but she said I might hear them myself so long as no one else did. Therefore, take me and bind me to the crosspiece half way up the mast; bind me as I stand upright, with a bond so fast that I cannot possibly break away, and lash the rope's ends to the mast itself. If I beg and pray you to set me free, then bind me more tightly still.'

"I had hardly finished telling everything to the men before we reached the island of the two Sirens, for the wind had been very favourable. Then all of a sudden it fell dead calm; there was not a breath of wind nor a ripple upon the water, so the men furled the sails and stowed them; then taking to their oars they whitened the water with the foam they raised in rowing. Meanwhile I took a large wheel of wax and cut it up small with my sword. Then I kneaded the wax in my strong hands till it became soft, which it soon did between the kneading and the rays of the sun-god son of Hyperion. Then I stopped the ears of all my men, and they bound me hands and feet to the mast as I stood upright on the crosspiece; but they went on rowing themselves. When we had got within earshot of the land, and the ship was going at a good rate, the Sirens saw that we were getting in shore and began with their singing.

'''Come here,' they sang, 'renowned Ulysses, honour to the Achaean name, and listen to our two voices. No one ever sailed past us without staying to hear the enchanting sweetness of our song- and he who listens will go on his way not only charmed, but wiser, for we know all the ills that the gods laid upon the Argives and Trojans before Troy, and can tell you everything that is going to happen over the whole world.'

"They sang these words most musically, and as I longed to hear them further I made by frowning to my men that they should set me free; but they quickened their stroke, and Eurylochus and Perimedes bound me with still stronger bonds till we had got out of hearing of the Sirens' voices. Then my men took the wax from their ears and unbound me.

"Immediately after we had got past the island I saw a great wave from which spray was rising, and I heard a loud roaring sound. The men were so frightened that they loosed hold of their oars, for the whole sea resounded with the rushing of the waters, but the ship stayed where it was, for the men had left off rowing. I went round, therefore, and exhorted them man by man not to lose heart.

'''My friends,' said I, 'this is not the first time that we have been

in danger, and we are in nothing like so bad a case as when the Cyclops shut us up in his cave; nevertheless, my courage and wise counsel saved us then, and we shall live to look back on all this as well.

Now, therefore, let us all do as I say, trust in Jove and row on with might and main. As for you, coxswain, these are your orders; attend to them, for the ship is in your hands; turn her head away from these steaming rapids and hug the rock, or she will give you the slip and be over yonder before you know where you are, and you will be the death of us.'

"So they did as I told them; but I said nothing about the awful monster Scylla, for I knew the men would not on rowing if I did, but would huddle together in the hold. In one thing only did I disobey Circe's strict instructions- I put on my armour. Then seizing two strong spears I took my stand on the ship's bows, for it was there that I expected first to see the monster of the rock, who was to do my men so much harm; but I could not make her out anywhere, though I strained my eyes with looking the gloomy rock all over and over

"Then we entered the Straits in great fear of mind, for on the one hand was Scylla, and on the other dread Charybdis kept sucking up the salt water. As she vomited it up, it was like the water in a cauldron when it is boiling over upon a great fire, and the spray reached the top of the rocks on either side. When she began to suck again, we could see the water all inside whirling round and round, and it made a deafening sound as it broke against the rocks. We could see the bottom of the whirlpool all black with sand and mud, and the men were at their wit's ends for fear. While we were taken up with this, and were expecting each moment to be our last, Scylla pounced down suddenly upon us and snatched up my six best men. I was looking at once after both ship and men, and in a moment I saw their hands and feet ever so high above me, struggling in the air as Scylla was carrying them off, and I heard them call out my name in one last despairing cry. As a fisherman, seated, spear in hand, upon some jutting rock throws bait into the water to deceive the poor little fishes, and spears them with the ox's horn with which his spear is shod, throwing them gasping on to the land as he catches them one by one- even so did Scylla land these panting creatures on her rock and munch them up at the mouth of her den, while they screamed and stretched out their hands to me in their mortal agony. This was the most sickening sight that I saw throughout all my voyages.

"When we had passed the [Wandering] rocks, with Scylla and terrible Charybdis, we reached the noble island of the sun-god, where were the goodly cattle and sheep belonging to the sun Hyperion. While still at sea in my ship I could bear the cattle lowing as they came home to the yards, and the sheep bleating. Then I remembered what the blind Theban prophet Teiresias had told me, and how carefully Aean Circe

had warned me to shun the island of the blessed sun-god. So being much troubled I said to the men, 'My men, I know you are hard pressed, but listen while I tell you the prophecy that Teiresias made me, and how carefully Aeaean Circe warned me to shun the island of the blessed sun-god, for it was here, she said, that our worst danger would lie. Head the ship, therefore, away from the island.'

"The men were in despair at this, and Eurylochus at once gave me an insolent answer. 'Ulysses,' said he, 'you are cruel; you are very strong yourself and never get worn out; you seem to be made of iron, and now, though your men are exhausted with toil and want of sleep, you will not let them land and cook themselves a good supper upon this island, but bid them put out to sea and go faring fruitlessly on through the watches of the flying night. It is by night that the winds blow hardest and do so much damage; how can we escape should one of those sudden squalls spring up from South West or West, which so often wreck a vessel when our lords the gods are unpropitious? Now, therefore, let us obey the of night and prepare our supper here hard by the ship; to-morrow morning we will go on board again and put out to sea.'

"Thus spoke Eurylochus, and the men approved his words. I saw that heaven meant us a mischief and said, 'You force me to yield, for you are many against one, but at any rate each one of you must take his solemn oath that if he meet with a herd of cattle or a large flock of sheep, he will not be so mad as to kill a single head of either, but will be satisfied with the food that Circe has given us.'

"They all swore as I bade them, and when they had completed their oath we made the ship fast in a harbour that was near a stream of fresh water, and the men went ashore and cooked their suppers. As soon as they had had enough to eat and drink, they began talking about their poor comrades whom Scylla had snatched up and eaten; this set them weeping and they went on crying till they fell off into a sound sleep.

"In the third watch of the night when the stars had shifted their places, Jove raised a great gale of wind that flew a hurricane so that land and sea were covered with thick clouds, and night sprang forth out of the heavens. When the child of morning, rosy-fingered Dawn, appeared, we brought the ship to land and drew her into a cave wherein the sea-nymphs hold their courts and dances, and I called the men together in council.

""My friends,' said I, 'we have meat and drink in the ship, let us mind, therefore, and not touch the cattle, or we shall suffer for it; for these cattle and sheep belong to the mighty sun, who sees and gives ear to everything. And again they promised that they would

obey.

"For a whole month the wind blew steadily from the South, and there was no other wind, but only South and East. As long as corn and wine held out the men did not touch the cattle when they were hungry; when, however, they had eaten all there was in the ship, they were forced to go further afield, with hook and line, catching birds, and taking whatever they could lay their hands on; for they were starving. One day, therefore, I went up inland that I might pray heaven to show me some means of getting away. When I had gone far enough to be clear of all my men, and had found a place that was well sheltered from the wind, I washed my hands and prayed to all the gods in Olympus till by and by they sent me off into a sweet sleep.

"Meanwhile Eurylochus had been giving evil counsel to the men, 'Listen to me,' said he, 'my poor comrades. All deaths are bad enough but there is none so bad as famine. Why should not we drive in the best of these cows and offer them in sacrifice to the immortal Gods? If we ever get back to Ithaca, we can build a fine temple to the sun-god and enrich it with every kind of ornament; if, however, he is determined to sink our ship out of revenge for these homed cattle, and the other gods are of the same mind, I for one would rather drink salt water once for all and have done with it, than be starved to death by inches in such a desert island as this is.'

"Thus spoke Eurylochus, and the men approved his words. Now the cattle, so fair and goodly, were feeding not far from the ship; the men, therefore drove in the best of them, and they all stood round them saying their prayers, and using young oak-shoots instead of barley-meal, for there was no barley left. When they had done praying they killed the cows and dressed their carcasses; they cut out the thigh bones, wrapped them round in two layers of fat, and set some pieces of raw meat on top of them. They had no wine with which to make drink-offerings over the sacrifice while it was cooking, so they kept pouring on a little water from time to time while the inward meats were being grilled; then, when the thigh bones were burned and they had tasted the inward meats, they cut the rest up small and put the pieces upon the spits.

"By this time my deep sleep had left me, and I turned back to the ship and to the sea shore. As I drew near I began to smell hot roast meat, so I groaned out a prayer to the immortal gods. 'Father Jove,' I exclaimed, 'and all you other gods who live in everlasting bliss, you have done me a cruel mischief by the sleep into which you have sent me; see what fine work these men of mine have been making in my absence.'

"Meanwhile Lampetie went straight off to the sun and told him we had been killing his cows, whereon he flew into a great rage, and said

to the immortals, 'Father Jove, and all you other gods who live in everlasting bliss, I must have vengeance on the crew of Ulysses' ship: they have had the insolence to kill my cows, which were the one thing I loved to look upon, whether I was going up heaven or down again. If they do not square accounts with me about my cows, I will go down to Hades and shine there among the dead.'

"'Sun,' said Jove, 'go on shining upon us gods and upon mankind over the fruitful earth. I will shiver their ship into little pieces with a bolt of white lightning as soon as they get out to sea.'

"I was told all this by Calypso, who said she had heard it from the mouth of Mercury.

"As soon as I got down to my ship and to the sea shore I rebuked each one of the men separately, but we could see no way out of it, for the cows were dead already. And indeed the gods began at once to show signs and wonders among us, for the hides of the cattle crawled about, and the joints upon the spits began to low like cows, and the meat, whether cooked or raw, kept on making a noise just as cows do.

"For six days my men kept driving in the best cows and feasting upon them, but when Jove the son of Saturn had added a seventh day, the fury of the gale abated; we therefore went on board, raised our masts, spread sail, and put out to sea. As soon as we were well away from the island, and could see nothing but sky and sea, the son of Saturn raised a black cloud over our ship, and the sea grew dark beneath it. We not get on much further, for in another moment we were caught by a terrific squall from the West that snapped the forestays of the mast so that it fell aft, while all the ship's gear tumbled about at the bottom of the vessel. The mast fell upon the head of the helmsman in the ship's stern, so that the bones of his head were crushed to pieces, and he fell overboard as though he were diving, with no more life left in him.

"Then Jove let fly with his thunderbolts, and the ship went round and round, and was filled with fire and brimstone as the lightning struck it. The men all fell into the sea; they were carried about in the water round the ship, looking like so many sea-gulls, but the god presently deprived them of all chance of getting home again.

"I stuck to the ship till the sea knocked her sides from her keel (which drifted about by itself) and struck the mast out of her in the direction of the keel; but there was a backstay of stout ox-thong still hanging about it, and with this I lashed the mast and keel together, and getting astride of them was carried wherever the winds chose to take me.

"[The gale from the West had now spent its force, and the wind got into the South again, which frightened me lest I should be taken back to the terrible whirlpool of Charybdis. This indeed was what actually happened, for I was borne along by the waves all night, and by sunrise had reacified the rock of Scylla, and the whirlpool. She was then sucking down the salt sea water, but I was carried aloft toward the fig tree, which I caught hold of and clung on to like a bat. I could not plant my feet anywhere so as to stand securely, for the roots were a long way off and the boughs that overshadowed the whole pool were too high, too vast, and too far apart for me to reach them; so I hung patiently on, waiting till the pool should discharge my mast and raft again- and a very long while it seemed. A juryman is not more glad to get home to supper, after having been long detained in court by troublesome cases, than I was to see my raft beginning to work its way out of the whirlpool again. At last I let go with my hands and feet, and fell heavily into the sea, bard by my raft on to which I then got, and began to row with my hands. As for Scylla, the father of gods and men would not let her get further sight of me- otherwise I should have certainly been lost.]

"Hence I was carried along for nine days till on the tenth night the gods stranded me on the Ogygian island, where dwells the great and powerful goddess Calypso. She took me in and was kind to me, but I need say no more about this, for I told you and your noble wife all about it yesterday, and I hate saying the same thing over and over again."

The Concise Encyclopedia of Economics

Public Choice

by William F. Shughart II

Public choice applies the theories and methods of economics to the analysis of **POLITICAL BEHAVIOR**, an area that was once the exclusive province of political scientists and sociologists. Public choice originated as a distinctive field of specialization a half century ago in the works of its founding fathers, **KENNETH ARROW**, Duncan Black, **JAMES BUCHANAN**, Gordon Tullock, Anthony Downs, William Niskanen, Mancur Olson, and William Riker. Public choice has revolutionized the study of democratic decision-making processes.

Foundational Principles

As James Buchanan artfully defined it, public choice is “politics without romance.” The wishful thinking it displaced presumes that participants in the political sphere aspire to promote the common good. In the conventional “public interest” view, public officials are portrayed as benevolent “public servants” who faithfully carry out the “will of the people.” In tending to the public’s business, voters, politicians, and policymakers are supposed somehow to rise above their own parochial concerns.

In modeling the behavior of individuals as driven by the goal of utility maximization—economics jargon for a personal sense of well-being—economists do not deny that people care about their families, friends, and community. But public choice, like the economic model of rational behavior on which it rests, assumes that people are guided chiefly by their own self-interests and, more important, that the motivations of people in the political process are no different from those of people in the steak, **HOUSING**, or car market. They are the same human beings, after all. As such, voters “vote their pocketbooks,” supporting candidates and ballot

propositions they think will make them personally better off; bureaucrats strive to advance their own careers; and politicians seek election or reelection to office. Public choice, in other words, simply transfers the rational actor model of economic theory to the realm of politics.

Two insights follow immediately from economists' study of collective choice processes. First, the individual becomes the fundamental unit of analysis. Public choice rejects the construction of organic decision-making units, such as "the people," "the community," or "society." Groups do not make choices; only individuals do. The problem then becomes how to model the ways in which the diverse and often conflicting preferences of self-interested individuals get expressed and collated when decisions are made collectively.

Second, public and private choice processes differ, not because the motivations of actors are different, but because of stark differences in the incentives and constraints that channel the pursuit of self-interest in the two settings. A prospective home buyer, for example, chooses among the available alternatives in light of his personal circumstances and fully captures the benefits and bears the costs of his own choice. The purchase decision is voluntary, and a bargain will be struck only if both buyer and seller are made better off. If, on the other hand, a politician proposes a project that promises to protect the new homeowner's community from flooding, action depends on at least some of his neighbors voting for a tax on themselves and others. Because the project's benefits and costs will be shared, there is no guarantee that everyone's welfare will be improved. Support for the project will likely be forthcoming from the owners of houses located on the floodplain, who expect to benefit the most. Their support will be strengthened if taxes are assessed uniformly on the community as a whole. Homeowners far from the floodplain, for whom the costs of the project exceed expected benefits, rationally will vote against the proposal; if they find themselves in the minority, they will be coerced into paying for it. Unless the voting rule requires unanimous consent, which allows any individual to veto a proposal that would harm him, or unless those harmed can relocate easily to another political jurisdiction, collective decision-making processes allow the majority to impose its preferences on the minority. Public choice scholars have identified even deeper problems with democratic decision-making processes, however.

The Institutions and Mechanisms of Public Choice

It has been recognized at least since the time of the Marquis de Condorcet (1785) that voting among three or more candidates or alternatives may fail to select the majority's most preferred outcome or may be prone to vote "cycles" producing no clear winner.¹ Indeed, Kenneth Arrow's "impossibility theorem" shows that there is no mechanism for making collective choices, other than dictatorship, that translates the preferences of diverse individuals into a well-behaved social utility function. Nor has any electoral rule been found whose results cannot be manipulated either by individuals voting insincerely—that is, casting their ballots strategically for less-preferred candidates or issues in order to block even worse outcomes—or by an agenda setter who controls the order in which votes are taken.

Elections

Studying collective decision-making by committees, Duncan Black deduced what has since been called the median-voter theorem. If voters are fully informed, if their preferred outcomes can be arrayed along one dimension (e.g., left to right), if each voter has a single most-preferred outcome, and if decisions are made by simple majority rule, then the median voter will be decisive. Any proposal to the left or right of that point will be defeated by one that is closer to the median voter's preferred outcome. Because extreme proposals lose to centrist proposals, candidates and parties in a two-party system will move to the center, and, as a result, their platforms and campaign promises will differ only slightly. Reversing 1964 presidential hopeful Barry Goldwater's catchphrase, majority-rule elections will present voters with an echo, not a choice. If the foregoing assumptions hold, the median voter's preferences also will determine the results of popular referenda. As a matter of fact, anticipating that immoderate proposals will be defeated, the designers of ballot initiatives will strive to adopt centrist language, in theory moving policy outcomes closer to the median voter's ideal point than might be expected if decisions are instead made by politically self-interested representatives.

Modeling the decision to vote in a rational choice context, Anthony Downs pointed out that the act of voting itself is irrational. That conclusion follows because the probability of an individual's vote determining an election's outcome is vanishingly small. One person's vote will tip the scales in favor of the preferred candidate or issue only if the votes of all other voters are evenly split. As the number of voters

becomes large, the chances of that happening quickly approach zero, and hence the benefits of voting are likely to be less than the costs. Public choice reasoning thus predicts low rates of voter participation if voters are rational. Indeed, if there is an unsolved puzzle, it is not why turnout in U.S. elections is so low, but why it is so high.

Downs and other public choice scholars also conclude that voters in democratic elections will tend to be poorly informed about the candidates and issues on the ballot. Voter ignorance is rational because the cost of gathering INFORMATION about an upcoming election is high relative to the benefits of voting. Why should a voter bother to become informed if his vote has a very small chance of being decisive? Geoffrey Brennan and Loren Lomasky, among others, have suggested that people vote because it is a low-cost way to express their preferences. In this view, voting is no more irrational than cheering for one's favorite SPORTS TEAM.

Legislatures

Ballot initiatives, referenda, and other institutions of direct democracy aside, most political decisions are made not by the citizenry itself, but by the politicians elected to represent them in legislative assemblies. Because the constituencies of these representatives typically are geographically based, legislative officeholders have strong incentives to support programs and policies that provide benefits to the voters in their home districts or states, no matter how irresponsible those programs and policies may be from a national perspective. Such "pork barrel" projects are especially likely to gain a representative's endorsement when they are financed by the taxpayers in general, most of whom reside, and vote, in other districts or states.

Legislative catering to the interests of the minority at the expense of the majority is reinforced by the logic of collective action. Small, homogeneous groups with strong communities of interest tend to be more effective suppliers of political pressure and political support (votes, campaign contributions, and the like) than larger groups whose interests are more diffuse. The members of smaller groups have greater individual stakes in favorable policy decisions, can organize at lower cost, and can more successfully control the free riding that otherwise would undermine the achievement of their collective goals. Because the vote motive provides reelection-

seeking politicians with strong incentives to respond to the demands of small, well-organized groups, representative democracy frequently leads to a tyranny of the minority. **GEORGE STIGLER**, Sam Peltzman, **GARY BECKER**, and others used that same reasoning to model the decisions of regulatory agencies as being influenced by special-interest groups' relative effectiveness in applying political pressure.

The logic of collective action explains why farmers have secured government subsidies at the expense of millions of unorganized consumers, who pay higher prices for food, and why textile manufacturers have benefited significantly from trade barriers at the expense of clothing buyers. Voted on separately, neither of those legislatively enacted special-interest measures would pass. But by means of logrolling bargains, in which the representatives of farm states agree to trade their votes on behalf of trade **PROTECTIONISM** in exchange for pledges of support for agricultural subsidies from the representatives of textile-manufacturing states, both bills can secure a majority. Alternatively, numerous programs of this sort can be packaged in omnibus bills that most legislators will support in order to get their individual pet projects enacted. The legislative pork barrel is facilitated by rational-voter ignorance about the adverse effects of legislative decisions on their personal well-being. It also is facilitated by electoral advantages that make it difficult for challengers to unseat incumbents, who, accordingly, can take positions that work against their constituents' interests with little fear of reprisal.

Bureaucracies

Owing to the benefits of specialization and division of labor, legislatures delegate responsibility for implementing their policy initiatives to various departments and agencies staffed by career bureaucrats, who secure their positions through civil service appointment rather than by democratic election. The early public choice literature on bureaucracy, launched by William Niskanen, assumed that these agencies would use the information and expertise they gained in administering specific legislative programs to extract the largest budget possible from relatively uninformed, inept legislators. Budget maximization was assumed to be the bureaucracy's goal because more agency funding translates into broader administrative discretion, more opportunities for promotion, and greater prestige for the agency's bureaucrats.

More recently, public choice scholars have adopted a “congressional dominance” model of bureaucracy. In that model, government bureaus are not free to pursue their own agendas. On the contrary, agency policy preferences mirror those of the members of key legislative committees that oversee particular areas of public policy, such as agriculture, **INTERNATIONAL TRADE**, and the judiciary. These oversight committees constrain bureaucratic discretion by exercising their powers to confirm political appointees to senior agency positions, to mark up bureau budget requests, and to hold public hearings. The available evidence does suggest that bureaucratic policymaking is sensitive to changes in oversight committee membership.

Other Institutions

Public choice scholars, such as Gary Anderson, Mark Crain, William Shughart, and Robert Tollison, have not neglected the study of the other major institutions of democratic governance: the president or chief executive officer and the “independent” judiciary. They model the occupants of these positions as self-interested people who, by exercising the power to veto bills, on the one hand, and by ruling on the constitutionality of laws, on the other, add stability to democratic decision-making processes and increase the durability of the favors granted to special-interest groups and, hence, the amounts the groups are willing to pay for them.

The Lessons of Public Choice

One key conclusion of public choice is that changing the identities of the people who hold public office will not produce major changes in policy outcomes. Electing better people will not, by itself, lead to much better government. Adopting the assumption that all individuals, be they voters, politicians, or bureaucrats, are motivated more by self-interest than by public interest evokes a Madisonian perspective on the problems of democratic governance. Like that founding father of the American constitutional republic, public choice recognizes that men are not angels and focuses on the importance of the institutional rules under which people pursue their own objectives. “In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself” (*Federalist*, no. 51).

Institutional problems demand institutional solutions. If, for example, democratic governments institutionally are incapable of balancing the public budget, a constitutional rule that limits increases in spending and taxes to no more than the private sector's rate of growth will be more effective in curbing profligacy than "throwing the rascals out." Given the problems endemic to majority-rule voting, public choice also suggests that care must be exercised in establishing the domains of private and collective choice; that it is not necessarily desirable to use the same voting rule for all collective decisions; and that the public's interest can be best protected if exit options are preserved by making collective choices at the lowest feasible level of political authority.

Politics without Romance

A Sketch of Positive Public Choice Theory and Its Normative Implications

Abstract: "Public choice theory," or "the economic theory of politics," has emerged only in the decades after World War II. In summary, this theory models the *realities* rather than the romance of political institutions. It commences with the utility-maximizing behavior of individuals who participate in their various public-choosing capacities, as voters, as legislators, as bureaucrats. It analyzes the effects of varying institutional constraints on generating alternative political outcomes.

Normatively, public choice forces the analyst to compare relevant institutional alternatives. In one sense, public choice is a "theory of governmental failure" comparable to the "theory of market failure" that emerged from theoretical welfare economics.

1. Introduction

In this lecture, I propose to summarize the emergence and the content of the "theory of public choice," or, alternatively, the economic theory of politics, or "the new political economy."¹ This area of research has become important only in the decades after World War II. Indeed in Europe and Japan, the the-

From Inaugural Lecture, Institute for Advanced Studies, Vienna, Austria, *IHS-Journal, Zeitschrift des Instituts für Höhere Studien, Wien* 3 (1979): B1-B11. Reprinted by permission of the publisher.

1. For an earlier, and differently organized, discussion, see James M. Buchanan, "From Private Preferences to Public Philosophy: The Development of Public Choice," in *The Economics of Politics* (London, 1978), 1-18; for a more technical survey, see D. Mueller, "Public Choice: A Survey," *Journal of Economic Literature* 14, no. 2 (1976): 395-433.

ory has come to command the attention of scholars only within the 1970's; developments in America stem from the 1950's and 1960's. As I hope that my remarks here will suggest, the theory of public choice is not without antecedents, and especially in the European thought of the 18th and 19th centuries. Ecclesiastes tells us that there is nothing new under the sun, and in a genuine sense, such a claim is surely correct, and especially in the so-called "social sciences." (I am reminded of this every week when I see my mathematically-inclined younger colleagues in economics rediscovering almost every wheel that older economists have ever talked about.) In terms of its impact on the realm of prevailing ideas, however, "public choice" is *new*, and this subdiscipline that falls halfway between economics and political science has turned around the thinking of many persons. If I am allowed to use Thomas Kuhn's overly-used word here, we can, I think, say that a new *paradigm* has been substituted for an old one. Or, to go somewhat further back, and to use Nietzsche's metaphor, we now look at some aspects of our world, and specifically our world of politics, through a different window.

My primary title for this lecture, "Politics without Romance," was chosen for its descriptive accuracy. Public choice theory has been the avenue through which a romantic and illusory set of notions about the workings of governments and the behavior of persons who govern has been replaced by a set of notions that embody more skepticism about what governments can do and what governors will do, notions that are surely more consistent with the political reality that we may all observe about us. I have often said that public choice offers a "theory of governmental failure" that is fully comparable to the "theory of market failure" that emerged from the theoretical welfare economics of the 1930's and 1940's. In that earlier effort, the system of private markets was shown to "fail" in certain respects when tested against the idealized criteria for efficiency in resource allocation and distribution. In the later effort, in public choice, government or political organization is shown to "fail" in certain respects when tested for the satisfaction of idealized criteria for efficiency and equity. What has happened is that today we find few informed scholars who would try to test markets against idealized models. The private sector-public sector decision that each community must make is now more likely to be discussed in more-meaningful terms, with organizational arrangements analyzed by comparisons between realistically modelled alternatives.

It seems to be nothing more than simple and obvious wisdom to compare social institutions as they might be expected actually to operate rather than to compare romantic models of how such institutions might be hoped to operate. But such simple and obvious wisdom was lost to the informed consciousness of Western man for more than a century. Nor is such wisdom today by any means universally accepted. The socialist mystique to the effect that the state, that politics, somehow works its way toward some transcendent "public good" is with us yet, in many guises, as we must surely acknowledge. And, even among those who reject such mystique, there are many who unceasingly search for the ideal that will resolve the dilemma of politics.

Especially at this early point in my lecture, however, I do not want to appear to place too much emphasis on the normative implications of public choice theory. These implications can stand on their own, and they can be allowed to emerge as they will or will not from the positive analysis. The *theory* of public choice, as such, is or can be a wholly positive theory, wholly scientific and *wertfrei* in the standard meanings of these terms. The implications for the comparative evaluation of institutions, noted above, have to do with methods of making such comparisons, not with specific results. I do not want to commit the naturalistic fallacy, and I make no claim that public choice theory, any more than economic theory, can tell a community of persons what they "should" choose to do.

2. Definition

Let me now be somewhat more concrete and try to define "public choice theory" more directly. Such a definition can perhaps best be clarified by reference to economic theory, if only because the latter is more familiar. What is economic theory? It is a body of analysis that offers an understanding, an explanation, of the complex exchange process that we call "an economy." It is a body of analysis that allows us to relate the behavior of individual participants in market activity, as buyers, sellers, investors, producers, entrepreneurs, to the results that are attained for the whole community, results that are not within the purposes or the knowledge of the separate participants themselves. (I should note here that Austria has a very proud and important heritage in the development of economic theory as I have here defined it, and I may say in passing that one of the most exciting and most encouraging

developments within economics in the United States today is the observed resurgence of interest in "Austrian economics," and notably as among young research scholars.)

Public choice theory essentially takes the tools and methods of approach that have been developed to quite sophisticated analytical levels in economic theory and applies these tools and methods to the political or governmental sector, to politics, to the public economy. As with economic theory, the analysis attempts to relate the behavior of individual actors in the governmental sector, that is, the behavior of persons in their various capacities as voters, as candidates for office, as elected representatives, as leaders or members of political parties, as bureaucrats (all of these are "public choice" roles) to the composite of outcomes that we observe or might observe. Public choice theory attempts to offer an understanding, an explanation, of the complex institutional interactions that go on within the political sector. I emphasize the word "complex" here, since the appropriate contrast to be made is with the approach that models government as some sort of monolith, with a being of its own, somehow separate and apart from the individuals who actually participate in the process.

3. Methodological Individualism

As my definition suggests, public choice theory is methodologically individualistic, in the same sense that economic theory is. The basic units are choosing, acting, behaving persons rather than organic units such as parties, provinces, or nations. Indeed, yet another label for the subject matter here is "An Individualistic Theory of Politics."

There is no formal connection between the methodological individualism that describes formal public choice theory and the motivations that are attributed to persons as they behave in their various public-choice capacities or roles listed above. It would be possible to construct a fully consistent and methodologically individualistic theory of politics on the romantic assumption that all persons in their political roles seek only to further their own conceptions of some "common good," and with utter and total disregard for their own more narrowly defined self-interest. Such a theory would not escape problems of reconciling differing persons' differing conceptions of just what defines "common good." But testable propositions might emerge from

such a theory, and empirical work might be commenced to test these propositions.

But most of the scholars who have been instrumental in developing public choice theory have themselves been trained initially as economists. There has been, therefore, a tendency for these scholars to bring with them models of man that have been found useful within economic theory, models that have been used to develop empirically testable and empirically corroborated hypotheses. These models embody the presumption that persons seek to maximize their own utilities, and that their own narrowly-defined economic well-being is an important component of these utilities. At this point, however, I do not want to enter into either a defense of or an attack on the usefulness of *Homo economicus*, either in economics or in any theory of politics. I would say only, as I have many times before, that the burden of proof should rest with those who suggest that wholly different models of man apply in the political and the economic realms of behavior. Logical consistency suggests that, at least initially, we examine the implications of using the *same* models in different settings.

As I have already noted, we commence with individuals as utility maximizers. And, for present purposes, we do not need to specify just what arguments are contained in a person's utility function. We can, at this stage, allow for saints as well as sinners. In one sense, we can simply define a person in terms of his set of preferences, his utility function. This function defines or describes a set of possible trade-offs among alternatives for potential choice, whether the latter be those between apples and oranges at the fruit stand or between peace and war for the nation.

Once we begin analysis in terms of preference or utility functions, we are led almost immediately to inquire about possible differences among persons. Since there seems to be no self-evident reason why separate persons should exhibit the same preferences, it seems best to commence with the presumption that preferences may differ. Within economic theory, such differences present no problem. Indeed, quite the opposite. If one person places a relatively higher value on apples as compared with oranges than another person, an exchange opportunity is presented. Both persons can gain utility by trade. Indeed this trading to mutual advantage is what economic theory is all about, no matter how esoteric its modern practitioners may make it seem to be in its detail.

4. Political Exchange

By any comparison with politics, economic theory is *simple*. The process of "political exchange" is necessarily more complex than that of economic exchange through orderly markets, and for two quite separate reasons. In the first place, basic "political exchange," the conceptual contract under which the constitutional order is itself established, must precede any meaningful economic interaction. Orderly trade in private goods and services can take place only within a defined legal structure that establishes individuals' rights of ownership and control of resources, that enforces private contracts, and that places limits on the exercise of governmental powers. In the second place, even within a well-defined and functioning legal order, "political exchange" necessarily involves *all* members of the relevant community rather than the two trading partners that characterize economic exchange.²

The two levels of "political exchange" provide a somewhat natural classification for two related but separate areas of inquiry, both of which fall within the corpus of public choice. The first area of inquiry may be called an "economic theory of constitutions."³ This theory has historical antecedents in the theory of social contract, and it also has modern philosophical generalization in the work of Rawls.⁴ The second area of inquiry involves the "theory of political institutions" as these might be predicted to work within a constitutional-legal structure. The subject matter incorporates theories of voting and voting rules, theories of electoral and party competition, and theories of bureaucracy.⁵

2. For a development of the distinction between political exchange at the constitutional and the postconstitutional levels, see James M. Buchanan, *The Limits of Liberty* (Chicago, 1975).

3. The development of such a theory was the primary purpose of the book that I wrote jointly with Tullock. See James M. Buchanan and Gordon Tullock, *The Calculus of Consent* (Ann Arbor, 1962).

4. John Rawls, *A Theory of Justice* (Cambridge, 1971).

5. In modern public choice theory, the theory of voting rules commences with Duncan Black, *Theory of Committees and Elections* (Cambridge, 1958). The theory of electoral, or party, competition stems largely from the work of Anthony Downs, *An Economic Theory of Democracy* (New York, 1957). The theory of bureaucracy in its modern sense was first developed in Gordon Tullock, *The Politics of Bureaucracy* (Washington, 1965).

5. The Economic Theory of Constitutions

As I have stated, this aspect of modern public choice theory is closely related to an important strand of ideas in traditional political theory or political philosophy, namely, the theory of the social contract or compact. The whole discussion here is directly relevant to the classic set of issues involving the *legitimacy* of political order. What gives legitimacy to governments, or to governors? What rights can some men possess to rule over other men?

At some basic philosophical level, the individualist must reject the notion that any such "rights of governance" exist. In this sense, I have often called myself a philosophical anarchist. Nonetheless, we are obligated to look squarely at the alternative social order that anarchy would represent, and without the romantic blinders that putative anarchists have always worn, then and now. And we look to Thomas Hobbes, whose 17th-century vision becomes very appealing to those of us who live in the late 20th century. Hobbes described the life of persons in a society without government, without laws, as "solitary, poor, nasty, brutish, and short." In this Hobbesian perspective, any person in such a jungle would value security to life and property so highly that any contract with a sovereign government would seem highly beneficial. The person would agree to abide by the laws laid down by the sovereign, even if he recognizes that there were essentially no limits that could be placed on the sovereign's use of these laws for its own exploitative purposes.

Montesquieu, John Locke, and the American Founding Fathers were more optimistic than Hobbes in their conception of constitutional contract as potentially binding on the activities of government. And I think that a reading of history will, to an extent at least, bear out their conception. Governments have been limited by constitutions, and part of the Western heritage to this day reflects the 18th-century wisdom that imposed some limits on governmental powers. But the 19th- and 20th-century fallacy in political thought was embodied in the presumption that electoral requirements were in themselves sufficient to hold government's Leviathan-like proclivities in check, the presumption that, so long as there were constitutional guarantees for free and periodic elections, the range and extent of governmental action would be controlled. Only in the middle of this century have we come to

recognize that such electoral constraints do not keep governments within the implied "contract" through which they might have been established, the "contract" which alone can give governments any claim to legitimacy in the eyes of citizens.

The theory of constitutions that makes up a central part of public choice represents, in part, a return to the 18th-, as opposed to the 19th- or 20th-, century perspective. The theory raises questions about how governments may be constrained, and about how governments should be constrained. What should governments be allowed to do? What is the appropriate sphere of political action? How large a share of national product should be available for political disposition? What sort of political decision-structures should be adopted at the constitutional stage? Under what conditions and to what extent should individuals be franchised?

These questions, and many others like them, clearly depend for answers on some positive, predictive analysis of how different political institutions will operate if, in fact, they are constitutionally authorized. An informed, and meaningful, theory of constitutions cannot be constructed until and unless there exists some theory of the operation of alternative political rules.

6. Postconstitutional Politics

In a postconstitutional setting, with a defined legal order, there will remain opportunities for mutually advantageous "political exchanges." That is to say, after the conceptualized constitutional "contract" has established what has been variously called the "protective," "minimal" or "night-watchman" state, there are still likely to be efficiency-enhancing complex trades among all persons in the community. The "productive state" may emerge to provide "public goods," goods that are nonexcludable as among separate beneficiaries and that may be more cheaply produced jointly than separately.

How should the complex political exchanges be organized so as to insure that all beneficiaries secure net gains in the process? Voluntaristic trade akin to the pairwise matching of buyers and sellers that characterizes private-goods market exchange may not be possible. A role for governmental action is suggested, but how are government decisions to be made and by whom? By what rules? And how might various rules be predicted to work?

The theory here, as it has developed, has involved two distinct types of

question. First, it has attempted to look at how differing individual preferences over joint outcomes are reconciled, or might be reconciled. That is, how do groups of persons reach collective decisions under differing procedural rules? This type of theory has not been concerned with government, as such. In effect, it is a theory of *demand* for government goods and services without an accompanying theory of *supply*. The second, and more recent, development has addressed the quite different set of questions relating to the behavior of persons who are themselves charged with powers of governance, with supplying the goods and services that might be demanded by the citizenry. It will be useful to summarize the strands of postconstitutional political analysis separately.

THEORY OF VOTING RULES

We may commence with the work of Black who asked the simple question: How do committees reach decisions under simple majority voting rules? Building on only bits and pieces of precursory work by Condorcet, Lewis Carroll, and a few others, Black was led to analyze the properties of majority voting, and he discovered the problem of the majority cycle, the problem that has occupied perhaps an undue amount of attention in public choice theory. There may exist situations where no single one of the possible alternatives for choice can command majority support over all other alternatives, despite the consistency of the preference sets of all members of the choosing group. In such a cyclical majority setting, there is no stable group decision attainable by majority rule; the group cannot make up its collective mind; it cannot decide.

Simultaneously with Black, and for a different purpose, Arrow was examining the desirable properties of a "social welfare function," and he was attempting to determine whether such a function could ever be constructed from a set of individual orderings.⁶ He reached the conclusion that no such function satisfying minimally acceptable properties could be found, and for basically the same reasons that Black developed more closely in connection with majority voting rules [Arrow]. Arrow's work is not narrowly within what we might call the "public choice tradition," since he was, and is, con-

6. Kenneth Arrow, *Social Choice and Individual Values* (New York, 1951).

cerned not with how institutions work but the logical structure of collective or social choice. Nonetheless, it was Arrow's work that exerted a major influence on the thinking of social scientists; his work was taken to have demonstrated that government cannot work, if work here is defined in terms of the standard economist's criteria for consistency in choice. Collectivities in which individual preferences differ cannot, à la Black, make up their collective or group mind. And, à la Arrow, such groups cannot be assigned an ordering that will array all possible outcomes that is itself both consistent and reflective of individual orderings. Since the 1950's, since Arrow and Black, social choice theorists have explored in exhaustive logical and mathematical detail possible ways and means of escaping from the implications of the Arrow impossibility theorem, but they have had little or no success. "Social choice theory" has itself become a major growth industry, with an equilibrium not yet in sight.

Let me return to the work of Black, who, when confronted with the prospect of majority rule cycles, discovered that under certain configurations of preferences, such cycles would not arise. If the alternatives for collective choice can be arrayed in such a fashion that individual orderings over these alternatives are single-peaked, for all voters in the group, there will be a unique majority outcome, one that will defeat any other outcome in a series of pairwise majority votes. This outcome or option will be that one which best satisfies or which is most preferred by the voter who is *median* among all voters, with respect to preferences over the options. The conditions required for single-peakedness are plausibly applicable in situations where the alternatives for collective choice are reducible to quantitative variations along a single dimension, for example, proposed amounts of public spending on a given public service. Consider a school board or committee of three members, one of whom prefers high spending on education, one of whom prefers medium spending, and the third of whom prefers low spending. So long as the high spender prefers medium to low spending, and so long as the low spender prefers medium to high spending, majority voting as within the three-member committee will produce a stable medium-spending outcome.

This tendency of majority voting rules to produce determinate outcomes that correspond to the preferences of the median voter under certain conditions has led to many studies, both analytical and empirical, notably in public-finance applications of public choice, and particularly with reference

to the budgetary decisions made in local governments. Median-voter models break down, however, even with simple budgetary allocation problems, when more than one dimension is introduced. If voters, or members of committee, consider simultaneously several issues or dimensions, such as, say, spending on education and spending on police, the cyclical majority problem returns. And, related to this return, the multiplicity of dimensions allows for vote trading and "log-rolling," the analysis of which has been important in public choice theory from its inception.

As I have already noted, the theory of voting and voting rules sketched here in summary is not a theory of government or of politics at all. It is, instead, a theory or set of theories about how groups of persons reach some decision or choice on what might be *demand*ed, by the group, from some supplying agent or agency. Implicitly, the analysis proceeds on the presumption that the goods or services demanded are supplied passively and that the motivations of suppliers may be neglected. It is as if all collective decisions are somehow analogous to the decision made by a group meeting in a closed room about the setting for the thermostat, the presumption being that, once a joint decision is made, the heating or cooling system will respond automatically and passively to the demands placed on it.

REPRESENTATION AND ELECTORAL COMPETITION

Once we so much as move beyond the simple committee or town-meeting setting, however, something other than the passive response of suppliers must be reckoned with in any theory of politics that can pretend to model reality. Even if we take only the single step from town-meeting democracy to representative democracy, we must introduce the possible divergence between the interests of the representative or agent who is elected or appointed to act for the group and the interests of the group members themselves.

It is at this point that electoral competition, as an institution, plays a role that has some similarities with that played by market competition in the economy. In the latter, the principle of consumer sovereignty prevails if sellers are sufficiently competitive. At the idealized limit, no single seller can exercise any power over buyers. But to what extent does a system of electoral competition generate comparable results? To what extent is voter sovereignty

analogous to consumer sovereignty? There are major differences that should be recognized, despite the underlying similarities. Persons or parties who seek to represent the interests of voters compete for approval or favor much in the manner as the sellers of products in imperfectly competitive markets for private goods and services. But politics differs categorically from markets in that, in political competition, there are mutually exclusive sets of losers and winners. Only one candidate or party wins; all others lose. Only one party is the governing party. One way of stating the basic difference here is to say that, in economic exchange, decisions are made at the margin, in terms of more or less, whereas in politics, decisions are made among mutually exclusive alternatives, in terms of all-or-none prospects. The voter may be disappointed when his candidate or party or policy proposal loses in a sense that is not experienced in market exchange.

At best electoral competition places limits on the exercise of discretionary power on the part of those who are successful in securing office. Re-election prospects tend to keep the self-interests of politicians within reasonable range of those of the median voter, but there is nothing to channel outcomes toward the needs of the non-median voting groups.

THEORY OF BUREAUCRACY

Even if we ignore the possible divergencies between the interests of legislative representatives, as elected agents of the voters, and those interests of the voters themselves, we remain without an effective model of government because we have not accounted for the behavior of those persons who actually *supply* the goods and services that are provided via governmental auspices. Voters elect members of legislatures or parliaments. Members of legislatures, through coalitions or through parties, make selections as among various policy alternatives or options. But the implementation of policy, the actual process of government, remains with persons who hold positions in the bureaucracy. How do these persons behave? How are the conflicts between their own interests and those of the voters reconciled?

Recent developments in public choice theory have demonstrated the limits of legislative control over the discretionary powers of the bureaucracy. Modern government is complex and many-sided, so much so that it would be impossible for legislatures to make more than a tiny fraction of all genu-

ine policy decisions. Discretionary power must be granted to bureaucrats over wide ranges of decision. Further, the bureaucracy can manipulate the agenda for legislative action for the purpose of securing outcomes favorable to its own interests. The bureaucracy can play off one set of constituents against others, insuring that budgets rise much beyond plausible efficiency limits.

Increasingly, public choice scholars have started to model governments in monopoly rather than competitive terms. Electoral competition has come more and more to be viewed as competition among prospective monopolists, all of whom are bidding for an exclusive franchise, with profit-maximizing assumed to characterize the behavior of the successful bidder. Governments are viewed as exploiters of the citizenry, rather than the means through which the citizenry secures for itself goods and services that can best be provided jointly or collectively. Both the modern analysis and the observed empirical record suggests that governments have, indeed, got out of hand.

7. Can Leviathan Be Limited?

The rapidly accumulating developments in the theory of public choice, ranging from sophisticated analyses of schemes for amalgamating individual preferences into consistent collective outcomes, through the many models that demonstrate with convincing logic how political rules and institutions fail to work as their idealizations might promise, and finally to the array of empirical studies that corroborate the basic economic model of politics—these have all been influential in modifying the way that modern man views government and political process. The romance is gone, perhaps never to be regained. The socialist paradise is lost. Politicians and bureaucrats are seen as ordinary persons much like the rest of us, and “politics” is viewed as a set of arrangements, a game if you will, in which many players with quite disparate objectives interact so as to generate a set of outcomes that may not be either internally consistent or efficient by any standards.

I do not want to claim, or to be taken to claim, too much for the contribution of public choice theory in turning attitudes around here, in being responsible for the paradigm shift. For social scientists, for scholars and intellectuals, the availability of an alternative model of political process probably

has been of some considerable importance. But for members of the general public, the simple observation of failure on the part of governments to deliver on their promises, these failures have been much more important in modifying attitudes than any set of ideas or any ideology.

I noted earlier that the fallacy of the 19th- and 20th-century political thought lay in an implicit faith that electoral constraints would alone be sufficient to hold the Leviathan-like proclivities of government in check. The experience in Western nations since World War II has exposed this fallacy for what it is. And we are now seeking to reimpose constitutional limits on government over and beyond those exercised through democratic electoral constraints. At least we are trying to do so in the United States. Beyond minimal efforts, I am not sure that there is a comparable movement at work in Europe. It seems to me highly doubtful that this objective can be successfully accomplished. Having come to command shares in national income or product that were undreamt of, even in the most roseate of the early democratic socialist predictions, modern governmental bureaucracies will not relinquish their relative positions in society without struggle.

Nonetheless, the effort is being made and will be made. In America, 1978 was the year of Proposition 13, when the voters of California turned back, by a two-to-one margin, the growth of government spending and taxing. This event sent political shock waves throughout the Western world. The United States is now (1979) inundated with various proposals, at all levels of government, designed to limit the expansion of governmental powers. "Bridling the passions of the sovereign"—this 18th-century slogan has resurfaced to command political respectability.

I have indicated that developments in public choice theory may have been in some small way influential in generating this shift in attitudes toward bureaucracies, politicians, and government. But the question remains as to what contribution public choice theory might make in the face of the developing distrust of traditional political institutions. It is here that the economic theory of constitutions, discussed earlier as a part of public choice analysis, becomes relatively the most important area of emphasis. Western societies face a task of *reconstruction*; basic political institutions must be re-examined and rebuilt so as to keep governments as well as citizens within limits of tolerance. But we are approaching a period when critical diagnosis is not enough. Criticism alone can generate chaos, whether this be in the form of

gradual breakdown or in the form of violent disruption. The reconstructive reform in our institutions can be accomplished without revolution of either the left or right, but this path toward the future requires that the public come to understand the limits of change as well as the value. Zealotry in the cause of anti-politics, anti-government, anti-institutions movements can result in a drift toward anarchistic terror, the jungle against which Hobbes warned us all. We must indeed keep the "miracle" of social order clearly in our mind as we seek ways and means of reforming arrangements that seem to have got out of hand. I think that public choice theory offers an analytical setting that allows us to discuss genuine reconstruction in our constitutions that may be made without major social costs.

DEMOCRACY, MARKETS, AND THE LEGAL ORDER:
NOTES ON THE NATURE OF POLITICS
IN A RADICALLY LIBERAL SOCIETY*

BY DON LAVOIE

On the extreme wing of libertarian ideology are the individualist anarchists, who wish to dispense with government altogether. The quasi-legitimate functions now performed by government, such as the administration of justice, can, the anarchists claim, be provided in the marketplace.

George H. Smith¹

The collapse of socialist regimes constitutes the defeat of the leading form of radicalism in this century. Radical socialist ideology in the West was parasitic on the survival and apparent success, at least in some dimensions, of what was called "really existing socialism," the Soviet-type system. The collapse of the system has exposed the fact that it never really succeeded in serving any but a narrow power elite in those societies. The long-run effect of this exposure, I believe, will be the extinction of the major ideological force of our time.

For many commentators, the end of socialism represents simply a victory for "the West," for a conservatism that declares the existing systems of Western "democratic-capitalist" states, such as the United States, the United Kingdom, Germany, and Japan, to be the best possible political-economic arrangement. For me, on the contrary, the end of socialism is an opportunity to reconsider the nonsocialist form of radicalism that was supplanted by the socialist episode, radical liberalism.

By "radical liberalism" I mean liberalism in its classical European sense, the ideology of the American and other "bourgeois" revolutions that held the oppositional high ground before the rise of socialism. We should recall that the original "left," the radicals of the eighteenth-century Enlightenment, were the French, English, and American liberals. John Locke, David Hume, Adam Smith, Jean-Baptiste Say, Thomas Jefferson, James Madison, et al., were bold critics of "the right," the mercantile state, and its systems of privilege. Their heroes were the likes of Algernon Sidney,

* I would like to thank Ellen Frankel Paul and the other contributors to this volume for helpful comments.

¹ George H. Smith, "Justice Entrepreneurship in a Free Market," in *Atheism, Ayn Rand, and Other Heresies* (Buffalo, NY: Prometheus Books, 1991), p. 295.

an uncompromising radical who, for example, debated the merits of regicide.² They aspired to a radicalization of economic and political liberalism, to the principled extension of the ideals of both democracy and markets.

Just as socialism transformed almost everything else in this century, it transformed liberalism, but I want to focus on the ideology in what we might call its pre- and post-socialist forms. The form in which it arose, before the socialist episode, aspired to be a genuine radicalism, and the form it may now be able to take in the aftermath of socialism will, I think, be radical again. Pre-socialist liberalism was, like the ideology if not the practice of socialism, highly distrustful of governments in regard to civil liberties and the conduct of war; but unlike socialist ideology, it was also distrustful of the state in regard to the economy. Many of the intellectual leaders in the emerging societies of Eastern Europe are unmistakably liberal in this classical, pre-socialist sense.³

Unfortunately, this classical-liberal radicalism failed. Although the original liberalism of Locke, Sidney, et al. was radical in spirit, it failed to achieve its own ideals. The view among even the most radical liberals was that democracy is a form of government, and that government is a necessary evil whose scope in society needs to be strictly limited, so that democracy has a necessarily constricted role at best. This essay suggests that the cost of this position on democracy was the loss of liberalism's radicalism, and that those who would like to re-radicalize the ideology today should reconsider the role of government and the nature of democracy.

I. DEMOCRACY AND MARKETS

Liberals from the newly liberated countries typically differ from Western liberals on what democracy and markets are, and on whether they ultimately fit with one another. The Eastern European liberals seem to idealize democracy and markets, and to think of them as fully complementary. Western liberals, who have experienced "really existing liberalism" in the democratic-capitalist societies, have certainly enjoyed more democracy and markets than the Eastern European liberals, and seem to be far less enthused about the ideals, and to think of them as in some sort of necessary tension with one another. Liberalism in this view is a pragmatic compromise between its own two ideals, neither of which can be radicalized—that is, taken to its logical extreme—without endangering the other. The ideals that won together in Eastern Europe have been having

² See Algernon Sidney, *Discourses Concerning Government* (1698; Indianapolis: Liberty Classics, 1990).

³ Classical liberals are well-represented throughout Eastern Europe; they include Vaclav Havel and many of Boris Yeltsin's economic advisors. But those I have particularly in mind are a number of young radical liberals I met in Warsaw, Moscow, and St. Petersburg.

trouble coexisting in the West, which thinks of itself as their natural home.

Conventional wisdom in the West would have it that it is we who understand the ideals better, and thus who see why in fact they fit only imperfectly with one another. When the Eastern European liberals experience liberal institutions in practice as we have, it is said, they will see that democracy involves empty campaign slogans and irresponsible governance, and that markets are no panacea for the ills of society. We feel a touch of embarrassment when we hear Eastern European liberals wax eloquent about democracy, as we think of the crass sideshows we call presidential elections. We have become jaded about democratic politics, the cynicism of electoral campaign promises, the corruption of popular government, and the manipulation of public opinion. We have doubts as well about a consumerist society that delivers wondrous gadgets but leaves our streets unsafe.

To be sure, nobody today denies that the imperfect liberalism we live in is superior to Communist totalitarianism. We do not begrudge the Eastern European liberals' celebrations for throwing off the system that tried to dispense altogether with bourgeois democracy and markets. But we tend to believe that their joy will come to be tempered by the hard reality that the liberal ideals are flawed.⁴

These notes are an attempt to rethink the liberal notions of democracy and markets from the point of view that it is the liberals in Eastern Europe who sense their true nature, and the true relationship between them.

I admit that residents of Western democratic-capitalist countries typically know more about important details of how a relatively democratic polity works, and of how market institutions work. But if our notions of political and economic liberalism are *informed* by our having lived in a really existing liberalism, they are also to some extent *imprisoned* in preconceptions based on that experience. We "know" from experience that taking democracy too far undermines markets and that taking markets too far undermines democracy. We know, for example, that if income distribution is left entirely to democratic processes, the resulting redistribution would seriously damage the market, and that if we insist on letting it be entirely market-driven then we would have to put significant limits on the scope of democracy. This view of markets and democracy as limiting one another is the source, I think, of liberalism's gradual drift into compromises with conservatism and socialism.⁵

⁴ A good example of the disillusion with democracy is expressed in Vaclav Havel's article "Paradise Lost," *New York Review of Books*, April 9, 1992.

⁵ The compromises have divided liberalism into two kinds, each of which bears little similarity to the original ideal. Some self-styled liberals favor conservative policies such as aggressive militarism; others favor socialist ones such as intrusive welfare statism. Gone is the principled opposition to government so characteristic of classical-liberal doctrine.

Our Western liberalism is old, tired, worn out, and compromised. Perhaps, then, it is those who have been denied the ideals of liberalism, by being forced to get by in a system that systematically tried to crush democratic and market processes, who know them in their essence, who know them *as ideals*. Maybe out of the newly liberated societies' enthusiasm for liberal values can be forged a more radical sort of liberalism, a liberalism that is more true to its own ideals.

Liberalism needs to reinterpret its notions of markets and democracy in such a way that they fundamentally fit with each other. The principles of political and economic liberalism can be understood in a manner that makes them essentially complementary, but this will require some profound changes in the way we think about both. Seeing democracy and markets as *essentially* complementary suggests the possibility that we do not need to balance them off one another, and that they can each be taken considerably further than we have yet taken them.

Liberalism lost in its confrontation with the ideology of socialism because it never really reconciled its own two ideals with one another, or even came to a very satisfactory understanding of what they are. Socialism arose in the late nineteenth and early twentieth centuries by taking the moral high ground away from liberalism, claiming to go radically beyond mere bourgeois democracy and exploitative capitalism. Marxism saw the conflict between liberalism's two ideals and proposed to radicalize the one by eliminating the other. It challenged liberalism for not going far enough with democracy by limiting it to the election of representatives to run government. Government under capitalism, Marx said, is always in the pocket of the capitalists. And I would have to admit that there is some truth to this charge. Any government, no matter how democratically formed, needs to watch the stock market, and if its policies seem to contradict the "wishes of Capital," so to speak, they will be revised.

Classical liberalism understood the institutional preconditions of markets better, I think, than it understood the nature of democracy. It accepted too narrow a formulation of democracy as merely a useful form of government, the very institution that most of its rhetoric criticized. It aspired not to achieve any high ideals with democratic government but merely to immunize the legal order from democratic government's manipulation. Government, whether democratic or not, needs to have its hands tied to keep it from undermining markets. The result was that liberalism lost to socialism the claim of being democracy's natural ideological home.

Socialism promised to do what liberalism could not: combine and radicalize economics and politics. It would replace a hollow, hypocritical system of voting—in which democracy is at the mercy of Capital—with a genuine, direct participation in the planning of economic activity. The economy would no longer be a separate force limiting democracy, but a direct consequence of conscious, rational, and democratic decision-making

processes. Next to this radical economic democracy, the old bourgeois ideals seemed ordinary and partial. What was the big deal about voting for a representative when you could collectively fashion your own history? What was the marvel of the market's invisible hand when visible, deliberately designed policies could engineer economic growth? Socialism succeeded in taking the wind out of liberalism's sails, scoffing at its achievements, confidently predicting its inevitable decline, and derisively trashing its most cherished values.

This whole democratic-socialist vision never bore much resemblance, of course, to really existing socialism, but the democratic vision and the repressive reality supported one another, indeed were absolutely necessary for one another. The vision served the really existing socialists by supplying them with a motivating ideology to convince enough citizens of the ideology's noble aspirations to give its advocates power, and to let them keep it for seventy years. Really existing socialism, in turn, served the visionaries by making it seem that eliminating, or at least suppressing, the market is an effective path to successful economic performance.⁶

Throughout the past century, liberalism in the West has been primarily challenged—and of course, gradually but deeply influenced—by radical ideals of the left. Liberalism compromised with both the right and the left throughout the century, until in some sense it became the establishment.⁷ It split off into warring factions of moderate conservatives who were embarrassed about democracy, and moderate social democrats who were embarrassed about markets. In the process it lost its idealism, lost its standpoint of principled opposition.

The unraveling of really existing socialism affords contemporary liberals the opportunity to pose challenges to the status quo of really existing liberalism from a wholly different radical standpoint. The established form of moderate liberalism, no longer threatened from the left, can now be productively challenged from another side, from a standpoint that tries, not to reject its principles, but to take them further than established liberalism ever dared.

It is time to reclaim the old liberal ideals of democracy and markets and give them back the dignity they had before socialism trashed them. But I do not think we should go back to the classical-liberal notions. We have learned a few lessons from the philosophical and economic illusions of

⁶ Western ideological socialism was also parasitic on really existing socialism in its notion of totality, which presumed that the standpoint of the proletariat was a kind of privileged, totalistic view of history which gave it meaning. The gradual loss of faith in this totality has meant a loss of historical meaning, and thus a collapse of the whole socialist perspective on the world. See Martin Jay, *Marxism and Totality: The Adventures of a Concept from Lukács to Habermas* (Berkeley: University of California Press, 1984).

⁷ For a concise critique of the decline of radical liberalism, see Albert Jay Nock, "Liberalism, Properly So Called," in *The State of the Union: Essays in Social Criticism* (1943; Indianapolis: Liberty Press, 1991).

the socialist epoch.⁸ What is needed is a fresh attempt to articulate a radical liberal vision that recovers not the details but the original essence of classical liberalism: democracy and markets.

Conventional, moderate liberalism advocates the two ideals of democracy and markets, but it does not truly embrace them. It all too quickly assumes that the existing institutional framework of Western democratic-capitalist societies constitutes a practical realization of liberal ideals. It defines markets and democracy as completely distinct values, articulated in the artificially separated domains of economics and political science. Democracy is a form of government in which citizens can vote for their leaders. Markets are apolitical forces driven by self-interested activities. One is in the private sector, the other is in the public sector. One is epitomized by the (impersonal) act of voting, the other is epitomized by the (impersonal) act of buying and selling. Markets are judged according to the efficiency of their exchange outcomes in giving consumers what they want. Democracy is judged according to the efficiency of its electoral outcomes in giving voters what they want.

This conventional understanding takes for granted a meaning of democracy and markets that does not correspond to the real processes that have made Western democratic capitalism so much more successful than the Soviet experiment.

Francis Fukuyama makes the dramatic claim that the collapse of the anti-democratic and anti-market Communist regimes represents the last gasp of liberalism's opponents.⁹ The pattern of history from the turn of the century to the thirties, when classical liberalism was overcome by the ideologies of fascism and Communism, has been reversed. Now that liberalism's right- and left-wing challengers have been utterly defeated, he argues, we have arrived at the End of History, in Hegel's sense. Western liberalism—by which he seems to mean the combination of a relatively democratic form of government with a relatively market-oriented economy—is simply the best possible political-economic system.

Fukuyama is right in seeing the end of Communism as a victory for economic and political "liberalism," but his vague use of the term conceals the fundamental problem. The manner in which democracy and markets are generally understood is such as to set them *necessarily* at odds with one another. The problem with conventional liberalism's combination of democracy and markets is that, the way they are each understood, the more one of them advances, the less room there is for the other. Radicalized democracy would seem to imply that decisions that now are left to the (unconscious) forces of the market, would instead be (consciously) undertaken by a democratic government. Radicalized free markets would seem to imply that decisions that are now taken by (persons on behalf of)

⁸ The next section will briefly summarize the two main correctives I believe a post-socialist liberalism needs to be built upon, pertaining to the illusions of modernism in philosophy and social engineering in economics.

⁹ Francis Fukuyama, "The End of History," *The National Interest*, Summer 1989, pp. 3–18.

democratically legitimated governments, would be left instead to the (impersonal) market. The ideals, as they are understood, cannot be taken too seriously, or they will collide head-on with one another.

It seems to me that the underlying notions of democracy and markets have more in common than the fact that totalitarian ideologies hated them both. The fact that they have been thought to be in fundamental conflict with one another might be a reflection of the incompleteness of our liberalism. Maybe we in the West have not understood either democracy or markets well enough. Perhaps the societies we live in are not really the living embodiments of political and economic liberalism that Fukuyama seems to imply they are.

As someone who considers our established political-economic system far from ideal on both political and economic grounds, I find Fukuyama's complacent attitude about Western systems disturbing. I too consider the collapse of socialism to signal a triumph of political and economic liberalism, but I want to insist that the liberalism that is triumphant is not what we in the West already have, but is an incomplete project. Liberalism has not realized its own political and economic aspirations. There is a great deal of history left to happen in the development of a *genuine* liberalism, that is, one which truly advances both democratic and market processes.

A reinterpretation of liberalism might take its cue from the collapse of the Soviet system, on the hunch that the totalitarians had an insight about the essence of liberalism from which we can learn: the insight that the ideals of democracy and markets are essentially complementary. The defeat of the Soviet system was a victory for *both* political *and* economic liberalism, for both democracy-oriented politics and market-oriented economics.

II. LIBERALISM AS OPENNESS

What, then, should we mean by democracy and markets, if we are to start not from our own jaded view of them but from the recent experience in Eastern Europe? In what direction does liberalism need to move in order to radicalize its views of democracy and markets? I think we need to correct for the Enlightenment prejudices in our economics and politics. In economics we need to purge our thinking of its Cartesian rationalism, which takes as its locus of analysis the isolated, asocial individual.¹⁰ In politics we need to keep that same rationalism from identifying democracy with explicit control over social outcomes by a conscious will.¹¹ In both cases what is needed is a theory of political culture. Our economics

¹⁰ See, for example, Charles Taylor's critique of atomistic liberalism in "Cross-Purposes: The Liberal-Communitarian Debate," in Nancy L. Rosenblum, ed., *Liberalism and the Moral Life* (Cambridge: Harvard University Press, 1989).

¹¹ See David L. Prychitko, "Socialism as Cartesian Legacy: The Radical Element within Hayek's *The Fatal Conceit*," *Market Process*, vol. 8 (1990).

needs to move beyond the model of the atomistic individual and take into account the cultural underpinnings of markets. Our politics needs to move beyond the model of the exercise of some kind of unified, conscious democratic will and understand democratic processes as distributed throughout the political culture.

The most important lesson to be learned from the experience of socialism is that economic development cannot be engineered but depends on the decentralized knowledge of market participants. The classic challenge the Austrian economists Ludwig von Mises and F. A. Hayek issued to socialism some seventy years ago shows why we need open competitive markets in order to marshal knowledge effectively. The price system involves what one might call a system of *distributed* intelligence. Market prices are our "eyes" on the economy, so that attempting to eliminate them, as traditional Marxism did, or to interfere with them, as all Western democratic-capitalist governments have, blinds or clouds our vision.¹² In principle, then, wherever possible, free-market competition should dictate economic change, and government should get out of the way.¹³

I suspect a similar line of argument can be made in regard to politics and our view of democracy. The force of public opinion, like that of markets, is not best conceived as a concentrated will representing the public, but as the *distributed* influence of political discourses throughout society. These open discourses are our eyes on the polity, and the attempt to resolve their differences into a single political will embodied in a monopoly institution destroys our political vision. We must not reduce our understanding of democracy to a view of the form of government which allows periodic elections. We should recognize, rather, that for a society to be democratic it is neither necessary nor sufficient for it to be ruled by a particular form of government. More important than whether the government permits regular elections is the issue of whether all the other institutions of human interaction are imbued with a democratic spirit, with an open political culture.

¹² On this critique of socialism and the view of markets as knowledge-conveyance and discovery mechanisms, see F. A. Hayek, ed., *Collectivist Economic Planning: Critical Studies on the Possibilities of Socialism* (London: George Routledge & Sons, 1935); Hayek, *The Fatal Conceit: The Errors of Socialism* (London: Routledge, 1988); and Don Lavoie, *Rivalry and Central Planning: The Socialist Calculation Debate Reconsidered* (New York: Cambridge University Press, 1985). For an interesting view along these lines of markets as themselves a kind of language, see Steven Horwitz, *Monetary Evolution, Free Banking, and Economic Order* (Boulder: Westview Press, 1992); and Horwitz, "Monetary Exchange as an Extra-Linguistic Social Communication Process," *Review of Social Economy*, forthcoming.

¹³ The chief difficulty with extending this critique of government to a radical position that seeks its elimination altogether is the well-known argument that there are certain "public goods," such as national defense (and, many would argue, courts), which cannot be supplied adequately by the market. See Jeffrey Rogers Hummel and Don Lavoie, "National Defense and the Public Goods Problem," in Robert Higgs, ed., *Arms, Politics, and the Economy: Historical and Contemporary Perspectives* (New York: Holmes & Meier, 1990), for a discussion that suggests that this line of argument may not necessarily establish a case for government provision.

What are the qualities of the political culture which characterize liberalism? What I think we should mean by democracy is the distinctive kind of *openness* in society which the Soviet system crushed, and which began to recover under the banner of *glasnost*.¹⁴ *Glasnost* is the making public of things. The Russian word translates better into "openness" than it does into "democracy." Some Western defenders of democratic governments have complained about the common translation into "democracy" on the grounds that openness is not the same thing as the holding of periodic elections, so that the *glasnost* movement should not be called a democratic movement at all. I suspect, on the contrary, that the movement captures the underlying essence of democracy better than our Western democratic institutions do.

It seems to me that this openness and publicness, not some particular theory of how to elect the personnel of government, is the essence of democracy. Like the market, a democratic polity exhibits a kind of distributed intelligence, not representable by any single organization which may claim to act on society's behalf. Democracy is not a quality of the conscious will of a representative organization that has been legitimated by the public, but a quality of the discursive process of the distributed wills of the public itself. The Soviet system had no democracy in the liberal sense, because it had no public opinion.

Traditional thinking about democracy has presupposed the need to assign to one monopoly institution the role of representing the democratic will, as expressing a boiled-down version of the distributed public opinion. But we can question what happens to democracy in the boiling-down process. We can question whether the nation-state, historically the most significant enemy of democratic values, is well-suited to this role as the primary vehicle for democracy. The force of public opinion is there in a free society whether or not a single representative body is set up to embody it. Is not the essence of democracy rather a matter of the openness of the system to bottom-up influence over social rules by the distributed wills of the public? The state can be undemocratic, in the sense of not open to electoral politics, as in Hong Kong, and yet the power of democratic forces can be great.

Democracy is all too often identified with a particular democratically legitimated institution, with the narrow idea of a government that risks itself to periodic elections. Radicalizing it is too often imagined as moving toward "direct democracy," voting directly for social outcomes. But there

¹⁴ For a more extensive argument along these lines, see Don Lavoie, "Glasnost and the Knowledge Problem: Rethinking Economic Democracy," *Cato Journal*, vol. 2, no. 3 (Winter 1992), pp. 435-55. The idea of openness has been elaborated by hermeneutical philosophy in its account of the conditions for mutual understanding in everyday life, in the humanities, and in science. See, for example, Richard J. Bernstein, *Beyond Objectivism and Relativism: Science, Hermeneutics, and Praxis* (Philadelphia: University of Pennsylvania Press, 1983); Hans-Georg Gadamer, *Truth and Method*, revised translation by J. Weinsheimer and D. Marshall (1960; New York: Crossroad, 1989); and Georgia Warnke, *Gadamer: Hermeneutics, Tradition, and Reason* (Cambridge: Polity Press, 1987).

is much more to democratic processes than voting, and much more to politics than government. Wherever human beings engage in direct discourse with one another about their mutual rights and responsibilities, there is a politics. I mean politics in the sense of the public sphere in which discourse over rights and responsibilities is carried on, much in the way Hannah Arendt discusses it.¹⁵ What was crushed by the Soviet system and revived under *glasnost* was not voting, but democratic discourse in all interpersonal relations, and most importantly, in public. Democracy should not be reduced to government institutions, but understood to apply to the whole range of our discourses with one another.

From this point of view, the common law is a good example of a democratic institution. A legal order that is subject to the influence of public opinion, and that evolves according to the application of the liberal principles of openness to human interaction, can be said to be democratic, no matter what its form of government. Democracy should not privilege what people *say* they want in the very imperfect mode of communication we call voting, over what they indicate they want in other ways, by their actions and their other communicative efforts. It should not privilege explicit, conscious action by a single institution that is supposed to "speak for" the public, over the tacit, distributed wisdom that is embedded in our evolved legal rules.¹⁶

And publicness, I think, is the essence of markets as well. Again we can take our cue about what markets are from the system that attempted to suppress them. The Soviet system had no markets in the liberal sense, because it had no fully public marketplaces. Activities which superficially bore resemblance to democratic politics, such as voting, existed, and activities which looked like market exchange activity, indeed, commodity production on an enormous scale, existed. What made Soviet elections and Soviet official, gray, and black markets only pale imitations of genuine democracy and markets was their utter lack of openness.

Markets are understood, by both individualist liberals and their critics, as apolitical confrontations of atomistic individuals. They are not only taken to be apolitical by definition, in the sense indicated by the language of the public and private sectors. They are thought to be unrelated even to the broader concept of politics as discourse.

Markets are taken to be external mechanisms that are disconnected from political discourse, either because they are understood as impersonalized, or because they are understood as narrowly materialistic. Impersonalized markets put such distance, or as Marx would have said,

¹⁵ See Hannah Arendt, *Between Past and Future: Eight Exercises in Political Thought* (1954; New York: Penguin, 1977).

¹⁶ On the common law, see F. A. Hayek, *Law, Legislation, and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy*, vol. 1, *Rules and Order* (London: Routledge & Kegan Paul, 1973); and Arthur R. Hogue, *Origins of the Common Law* (Indianapolis: Indiana University Press, 1966).

alienation, between agents that there is no possibility of democratic discourse. This line of critique remains a crucial element of the contemporary left. The neo-Marxian social theorist Jürgen Habermas, whose approach to democratic politics is very much in the spirit of what I have been saying, retains the traditional Marxist's distrust of markets as inherently undemocratic institutions. His worry that markets threaten to "colonize the life-world" derives from this widespread interpretation of markets, shared by their supporters as well as their critics, as essentially impersonalized mechanisms.¹⁷

To be sure, not everyone who advocates the spread of markets really sees them this way. As one liberal put it, the pro-market philosophy is frequently attacked with the "tired canard that classically liberal rights deny the essentially social nature of human beings, that they are crafted for self-sufficient 'monads' complete unto themselves."¹⁸ But is this charge really groundless? A significant component of liberal literature—certainly much of its economic analysis—projects exactly this view of individuals as asocial monads, whose preferences confront one another in impersonal markets.¹⁹ Liberalism was born in the Enlightenment, and its writings often show its modernist pedigree. Only recently have a significant number of liberals begun to take seriously the philosophical critique of modernism and the social nature of human beings.²⁰

Likewise, seeing markets as driven by narrowly materialistic motivations excludes the realm of democratic politics. Agents in markets are supposed to be motivated by the narrow pursuit of profit instead of noble ideals. Marketplaces are understood to be the locus of antisocial conflicts among bickering traders. People selfishly bickering over price cannot, it seems, be truly engaged in a democratic discourse over their mutual rights and responsibilities as citizens.

¹⁷ See Jürgen Habermas, *The Theory of Communicative Action*, vol. 1, *Reason and the Rationalization of Society* (Boston: Beacon Press, 1984), and vol. 2, *Lifeworld and System: A Critique of Functionalist Reason* (Boston: Beacon Press, 1987). For a particularly stark presentation of this image of markets as impersonal, see Elizabeth Anderson, "The Ethical Limitations of the Market," *Economics and Philosophy*, vol. 6 (1990), pp. 179–205.

¹⁸ See Loren E. Lomasky, "Duty Call," *Reason*, April 1992, p. 51.

¹⁹ For examples of analyses of economic phenomena that take culture seriously, see Mary Douglas and Baron Isherwood, *The World of Goods: Towards an Anthropology of Consumption* (London: Allen Lane, 1979); and Georg Simmel, *Essays on Interpretation in Social Science*, translated, edited, and introduced by G. Oakes (1907; Totowa, NJ: Rowman & Littlefield, 1978). Even writings in the Austrian school, although far less guilty of this modernist vice than neoclassical economics, evidence an acultural view of human agents. See, for example, my critique of Israel Kirzner along these lines in "The Discovery and Interpretation of Profit Opportunities: Culture and the Kirznerian Entrepreneur," in Brigitte Berger, ed., *The Culture of Entrepreneurship* (San Francisco: Institute for Contemporary Studies, 1991).

²⁰ The postmodern liberalism that is occasionally being presented in the pages of the journal *Critical Review* is beginning to correct for this atomistic element in traditional liberalism. See also G. B. Madison, *The Logic of Liberty* (New York: Greenwood Press, 1986), and Madison, "Getting Beyond Objectivism: The Philosophical Hermeneutics of Gadamer and Ricoeur," in Don Lavoie, ed., *Economics and Hermeneutics* (London: Routledge, 1991), pp. 34–58.

Liberals should not concede so much to the socialist view of the world. Markets are not essentially impersonal confrontations. Of course, modern markets make possible more distanced interactions with people. But Marx's claims that markets made people atomistic is on weak empirical grounds. Inside the firm, in business lunches, at street corners, interpersonal discourses are constantly going on in markets. In all those places there is a politics going on, a politics that can be more or less democratic.

Nor are markets inherently or typically a matter of crass, merely materialistic motivations. Critics often find repulsive the liberals' ideas of leaving such services as education or medicine, much less the provision of legal services, "to the market." The repulsion arises, I think, from the apolitical notion of individuals and markets. The services we buy and sell from one another are not necessarily "mere commodities," and our mutual relations are not necessarily distanced. On the contrary, many of the things we buy and sell are deeply imbued with social meaning. We pay for services to satisfy our desires for health, companionship, musical pleasure, peace of mind; and these goals are not necessarily cheapened just because they can be bought. Leaving a service to "the forces of supply and demand" does not remove it from human decision making, since everything will depend on exactly what it is that the suppliers and demanders are trying to achieve.

If we redefine markets and democracy in terms of the more fundamental value of openness, we may find that the radicalization of these principles poses a challenge to the traditional interpretation of liberalism.

III. POLITICAL CULTURE AND THE LEGAL ORDER

Nowhere is the conflict between traditional notions of democracy and markets more evident than in the political discourse within radical liberalism over the provision of legal services. Although historically most liberals have insisted that the legal system needs to be provided by government, there have been a few radical liberals in recent times who have challenged this view, and who suggest that legal services could be provided in a competitive market. Two particularly interesting examples of the so-called anarchist extreme of liberalism are economists Murray Rothbard²¹ and David Friedman,²² whose controversial and highly polemical works have provoked counterarguments by the philosophers Robert Nozick²³ and John Hospers.²⁴

²¹ Murray N. Rothbard, *For a New Liberty* (New York: Macmillan, 1973).

²² David Friedman, *The Machinery of Freedom: Guide to a Radical Capitalism* (New York: Harper & Row, 1973).

²³ Robert Nozick, *Anarchy, State, and Utopia* (New York: Basic Books, 1974).

²⁴ John Hospers, "Will Rothbard's Free-Market Justice Suffice? No," *Reason*, May 1973, pp. 18-23.

These debates may seem a bit arcane and remote from real-world problems, but the free-market anarchist positions represented by Rothbard and Friedman are not as absurd as they appear, and are worthy of serious attention.²⁵ As Bruce Benson's recent scholarship shows, there are many cases in history of legal systems working quite effectively without government.²⁶ The articulation of a utopian society that claims to eliminate politics altogether highlights the question this essay is raising about what we ought to mean by politics and by democracy. These debates over ways of establishing a legal order offer an opportunity to rethink the relationship between democratic politics and the market economy.

A radically liberal society might be imaginable in which there is nothing left for government, a monopoly of the use of force, to do. The legal services government now provides could be provided competitively, according to the laws of supply and demand. According to free-market anarchism, all the fundamental institutions necessary for the market to function—money, police protection, and even justice—would themselves be “for sale on the market.” Of course, to say justice would be “for sale on the market to the highest bidder” is to invite ridicule. If a court is deciding law according to which party to the dispute can pay better, then the “service” it is supplying does not deserve the name “justice.” But as with any good, everything depends on what specifically the suppliers and demanders actually want. It is imaginable that the demand for legal services could be well-defined, so that competitive pressures could force suppliers to offer fair adjudication according to widely understood principles of the rule of law.

Nozick's well-known critique of the free-market anarchists was a normative challenge, arguing that a competitive legal system could evolve step-by-step toward a monopoly government without ever violating in-

²⁵ I think that this anarchist policy conclusion is more reasonable than it must appear to most readers; however, I find the atomistic individualist perspective in which it is couched by Rothbard and Friedman unacceptable. This notion of free-market anarchism has to be distinguished, of course, from traditional left-wing anarchism, which does not necessarily share its hyper-individualism, but which has other serious problems. On left-wing anarchism, see Michael Bakunin, “Statism and Anarchy,” in Sam Dolgoff, ed., *Bakunin on Anarchy* (1873; New York: Vintage, 1971); and Marshall S. Shatz, ed., *The Essential Works of Anarchism* (New York: Bantam, 1971).

²⁶ The study by Bruce L. Benson, *The Enterprise of Law: Justice without the State* (San Francisco: Pacific Research Institute for Public Policy, 1990), raises the scholarly level of debate considerably above that of the Rothbard and Friedman polemics. It persuades me that a free-market anarchist society would be workable, at least under certain plausible cultural conditions; but I think it will convince very few readers, mainly because the cultural preconditions are not discussed. Free-market anarchism remains unpersuasive to most people not primarily because of any shortcomings of the arguments its proponents make, but because of shortcomings of our background notions of markets and democracy. Behind the objections most people have to the anarchist position is a fear that it would rob us of a deeply cherished value, democracy. In my own view, a radically market-oriented society with a severely limited or perhaps even abolished government could turn out to be a more “democratic” kind of system, properly understood, than the Western-style democracies we are used to.

dividual rights. Of more interest here is a different issue, not so much normative as positive, raised by Hospers's lesser-known critique: Doesn't the anarchists' whole case depend on the matter of ideology?²⁷ Whether Rothbard or Friedman's imagined schemes for competitive legal institutions—and indeed whether any particular government-supplied legal system—can work depends completely on what Hospers calls "ideology," and what I prefer to call the "political culture." It depends on what the general public in this particular society considers morally acceptable behavior. To this, Rothbard answers: Of course, everything *does* depend on such general beliefs.²⁸ I agree with this concession by Rothbard, but I think it suggests that radical liberals have been ignoring what is really the most important issue in the question of the state: the political culture.

Economist Tyler Cowen, commenting on this response by Rothbard, argues that it is cheating to invoke ideology in the case for the feasibility of anarchism. It is not surprising, he says, that if nearly everybody believes in liberal values, then a radically liberal society would be workable. In his own discussion of the issue, Cowen insists he will avoid using ideology as a *deus ex machina*.²⁹ But he then goes on to assume a political culture of self-interested, atomistic individuals who already believe in the legitimacy of the institution of government.

The source of the difficulty with the anarchists' argument, as well as the arguments of their critics, is, in my view, the economic vice of analyzing individual human beings as autonomous, cultureless "agents." In practice, each of the disputants presupposes a set of beliefs that seem reasonable to him, beliefs which his critics charge beg the question. The solution is not to pretend to avoid discussion of beliefs altogether, but to make the issue of such beliefs the central theme of political discourse.

What makes a legal system, *any* legal system, work is a shared system of belief in the rules of justice—a political culture. The culture is, in turn, an evolving process, a tradition which is continually being reappropriated in creative ways in the interpersonal and public discourses through which social individuals communicate. Anarchism seems workable to its advocates only because they implicitly assume a certain democratic political culture will prevail. Unless anarchists begin to say something about the kind of political culture that would be necessary for a stateless legal order, they will never get very far.

Everything depends here on what is considered acceptable social behavior, that is, on the constraints imposed by a particular political culture. Where slavery is considered offensive, those who attempt to practice it

²⁷ The term "ideology" is misleading here, since we are not interested in articulated systems of ideas but rather in the sorts of tacit beliefs that inform concrete practices.

²⁸ Murray Rothbard, "Will Rothbard's Free-Market Justice Suffice? Yes," *Reason*, May 1973, pp. 19-25.

²⁹ Tyler Cowen, "Law as a Public Good: The Economics of Anarchy," unpublished manuscript, George Mason University, 1991.

are easily overwhelmed by the horror of the public. Where it is thought by the general public to be justifiable, no amount of constitutional design will prevent it. Where taxes are accepted as morally defensible, they will be deployed; where they are equated with slavery, they will be impossible to collect. The feasibility of slavery or taxation does not fundamentally depend on the (concentrated) opinion of the designated representatives of the public, but on the (distributed) opinions of the public itself.

Leaving aside the practicability of the anarchist idea, though, the idea itself is relevant to the thesis of this essay in that it raises in a striking manner the question of democratic politics. The issue of the market supply of legal services is especially interesting, in that law lies at the intersection of the two great ideals of liberalism, democracy and markets. Law is at once the most important precondition of effective market processes and the most important topic of democratic political discourse. How should a liberal legal order be secured? Radical liberals appear caught on the horns of a dilemma. Is the provision of legal services one of the few legitimate functions of government, or is it susceptible to the usual liberal arguments against government and in favor of markets? If the provision of such services is left open to democratic influence, then markets may lose their institutional underpinnings; if it is immunized from democratic influence, then democracy may lose its significance.

Just as socialism resolved the conflict between democracy and markets by rejecting markets, liberalism ends up marginalizing democracy. The limited-government position to which classical liberals have historically adhered boxes in the role of the democratic state in order to ensure that market processes are not obstructed by the minimal government it permits. It thereby seems to put severe restrictions on the realm of democratic decision making. The anarchist position seems even worse. By trying to take a principled approach to free markets, anarchism winds up apparently rejecting politics, and therefore democracy, altogether. After all, as radical liberals say, if everything is decided by market forces, what is there to vote about?

In that question is contained, I suspect, a fundamental misreading of the nature of both market forces and democratic principles. First of all, as I have been saying, democracy is more an issue of open discourse than it is an issue of voting. And secondly, when decisions are "left to the market" there is plenty to talk about.

The provision of legal services for a liberal polity can be thought of non-politically, as the private-sector supply of legal services on the market, no different in principle from the supply of electricity. Here it is conceived as the impersonal satisfaction of the preferences of separate individuals, seemingly having nothing to do with culture. Or it can be thought of non-economically, as belonging to the public sector, to (democratic) government. Here it is a matter of explicit conscious control over social outcomes and thus an issue wholly separated from (and, of course, only apt to in-

terfere with) the decentralized market sphere. In the debates over the supply of justice services, the anarchists have tended to picture the legal order nonpolitically, and the limited governmentals to picture it non-economically. I think both of these ways of thinking about the legal order need to be challenged. Each is a one-sided way of viewing political economy, which should be seen as an inseparable whole.

Rothbard and Friedman are a case in point. They take the position that politics (and hence any positive notion of democracy) is by definition a matter of government, so that the whole topic is, as it were, summarily dismissed. There is no need for political discourse in the utopias of these authors, since agents simply “buy” justice services on an impersonal competitive market. Friedman’s approach leaves the enforcement, interpretation, and definition of rights to be “decided by the market.” In Rothbard’s case, enforcement and interpretation are left to private police and courts, but the legal rules are supposed to be derived from natural law, established once and for all by a deductive science of ethics.

In either case, there is no room in these utopias for politics. At most, political discourse is only needed in order to drive the process that brings about a radically liberal society, but once the free society exists, all the work of politics is over.³⁰ The definition of rights is decided without the need for discourse, either by the force of an impersonal market, or by the force of an unquestionable logic.

Liberals cannot resolve the issue of whether a legal system could be supplied by a free market because the issue depends on what is happening in the political culture, in the ongoing discourses about mutual rights and obligations, which individualist liberalism, in both limited-government and anarchist versions, utterly ignores. Radical liberals have been so intent on establishing a universal system of individual rights that they have failed to address the cultural conditions in which socialized individuals would demand this or that kind of legal services.

To say we should leave everything to be “decided by markets” does not, as radical liberals suppose, relieve liberalism of the need to deal with the whole realm of politics. And to severely limit or even abolish government does not necessarily remove the need for democratic processes in nongovernmental institutions.

The reason liberals in general have had trouble convincing others of the desirability of extending markets—and the reason anarchist liberals have had trouble convincing limited governmentals to extend them to law—

³⁰ Indeed, this may be giving these authors too much credit. Political discourse presupposes an open exploration of issues of mutual concern. It seems that for Rothbard and his followers, genuine political discourse is not even needed in order to *get* to the free society. Instead, it seems there needs to be what is essentially a religious-conversion experience. The definition of rights is not open to exploratory dialogue but presumed to have been accomplished once and for all in Rothbard’s *Ethics of Liberty* (Atlantic Highlands, NJ: Humanities Press, 1982).

is that they have all lacked an adequate theory of politics. Since markets are assumed to be essentially apolitical, their radicalization seems to imply the end of politics. Extending the market, according to individualist liberals, seems to mean that we would become the atomistic monads Marx thought we were becoming.

The weakness of both sides in the debates over anarchism is their neglect of what lies behind the legal order. Why does anybody obey the law, whether it is conceived as being supplied in a competitive or monopolistic manner? Limited-government advocates assume that it is the ultimate threat of force by a monopoly state that ensures that individuals will obey the law. Anarchists assume that there is a demand for genuine justice on the part of individual agents, so that competitive courts will profit most from behaving in a properly liberal manner. Both beg the question of the political culture. What gives legitimacy to a legal system is neither the force of threat by the police, nor the force of pure logic, but the force of public opinion, of the distributed political discourse about rights and responsibilities.

IV. CONCLUSION

What does all this have to do with contemporary realities of post-socialist societies? Neither limited-government nor anarchist forms of radical liberalism are likely to carry the day in the near future in places like Russia or Poland. A people so recently recovering from the excesses of a failed radicalism are apt to resist leaping directly to another utopian-sounding idealism.

Moreover, the special challenges of these societies, their severe economic problems, their rising and sometimes strident expressions of nationalism, make experimentation with any ideal policies difficult in the extreme. The argument could be made that the political culture of these societies has been systematically shaped in nonliberal ways for decades, so that neither markets nor democracy have much prospects for survival.

On the other hand, the case could be made that the political culture in the newly liberated societies is not far from that which would make a radical liberalism an attractive alternative. First of all, the fact that anti-liberal socialist ideology has been the state religion in those societies for many years should not be taken to mean that the bulk of the population has bought into the religion. The severe economic and political problems of these societies are widely understood to be the legacy of socialism. Nowhere can one find less tolerance for Marxian notions than in this part of the world. Nowhere are people as deeply and consistently suspicious of government. Nowhere are the institutions of markets and democracy valued as highly as where their absence is within vivid memory.

The spirit of nationalism that now sees its expression in violent clashes may yet be transformed into peaceful rivalry. Beneath the nationalism is

not so much a passionate love of the nation-state as a sincere pride in one's national culture, a pride which had been suppressed but never destroyed under the Soviet empire. Indeed, the reason for nationalistic strife may be related to the fact that we have not radicalized our notion of democracy. If democracy is conceived in terms of control over government, then violent efforts by different cultural groups to gain mastery over the state are to be expected. If democracy is understood, instead, as an element of the whole society, and if the role of government in both the economy and the polity is minimized—or eliminated—then the nationalistic struggles lose their point. If everything is decided by the market and by open political discourse, then what is there to fight about?

The understandable attitude that the newly liberated societies have now, that they cannot afford to experiment with any more radicalisms, is open to challenge. The moderate government-oriented liberalism that they seem to think is safe has been severely contaminated by the very socialism whose dangers these people understand all too well. It is safer to get as far away from socialism as possible than it is to embrace a liberalism that is compromised with socialism.

Thus, even in the face of the very real difficulties these societies are up against, an optimistic view of the future is possible. Radical liberalism may become a reality in Eastern Europe, and is more likely to take hold there than it is in the West. If one of these societies which survives the immediate challenges moves in the direction of radically liberal policies, the economic and political benefits that will reward them will be extremely attractive to the others, and to the rest of the world. And indeed, we in the West, who nowadays presume we know what democracy and markets are, may find ourselves learning from their example.

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Session II

Rent-Seeking

Readings

David R. Henderson, "Rent Seeking," *The Concise Encyclopedia of Economics*, (Library of Economics and Liberty: 2008).

Planet Money (podcast), "Episode 524: Mr. Jones' Act", Originally aired March 12, 2014.
<http://www.npr.org/sections/money/2016/08/05/488869138/episode-524-mr-jones-act>

Jeffrey Simpson, "Political hell hath no fury like dairy farmers aroused", *The Globe and Mail*, June 22, 2012.

Peter Jaworski, "Blame the Politicians: A Government Failure Approach to Political Ethics", 2013.

The Concise Encyclopedia of Economics

Rent Seeking

by David R. Henderson

"Rent seeking" is one of the most important insights in the last fifty years of economics and, unfortunately, one of the most inappropriately labeled. Gordon Tullock originated the idea in 1967, and Anne Krueger introduced the label in 1974. The idea is simple but powerful. People are said to seek rents when they try to obtain benefits for themselves through the political arena. They typically do so by getting a subsidy for a good they produce or for being in a particular class of people, by getting a tariff on a good they produce, or by getting a special **REGULATION** that hampers their competitors. Elderly people, for example, often seek higher **SOCIAL SECURITY** payments; steel producers often seek restrictions on imports of steel; and licensed electricians and doctors often lobby to keep regulations in place that restrict **COMPETITION** from unlicensed electricians or doctors.

But why do economists use the term "rent"? Unfortunately, there is no good reason. **DAVID RICARDO** introduced the term "rent" in economics. It means the payment to a factor of production in excess of what is required to keep that factor in its present use. So, for example, if I am paid \$150,000 in my current job but I would stay in that job for any salary over \$130,000, I am making \$20,000 in rent. What is wrong with rent seeking? Absolutely nothing. I would be rent seeking if I asked for a raise. My employer would then be free to decide if my services are worth it. Even though I am seeking rents by asking for a raise, this is not what economists mean by "rent seeking." They use the term to describe people's lobbying of government to give them special privileges. A much better term is "privilege seeking."

It has been known for centuries that people lobby the government for privileges. Tullock's insight was that expenditures on lobbying for privileges are costly and that these expenditures, therefore, dissipate some of the gains to the beneficiaries and cause inefficiency. If, for example, a steel firm spends one million dollars lobbying

and **ADVERTISING** for restrictions on steel imports, whatever money it gains by succeeding, presumably more than one million, is not a net gain. From this gain must be subtracted the one-million-dollar cost of seeking the restrictions. Although such an expenditure is rational from the narrow viewpoint of the firm that spends it, it represents a use of real resources to get a transfer from others and is therefore a pure loss to the economy as a whole.

Krueger (1974) independently discovered the idea in her study of poor economies whose governments heavily regulated their people's economic lives. She pointed out that the regulation was so extensive that the government had the power to create "rents" equal to a large percentage of national income. For India in 1964, for example, Krueger estimated that government regulation created rents equal to 7.3 percent of national income; for Turkey in 1968, she estimated that rents from import licenses alone were about 15 percent of Turkey's gross national product. Krueger did not attempt to estimate what percentage of these rents were dissipated in the attempt to get them. Tullock (1993) tentatively maintained that expenditures on rent-seeking in democracies are not very large.

Please listen to the Podcast:

Planet Money (podcast), "Episode 524: Mr. Jones' Act", Originally aired March 12, 2014.

<http://www.npr.org/sections/money/2016/08/05/488869138/episode-524-mr-jones-act>

June 22, 2012

Political hell hath no fury like dairy farmers aroused

By Jeffrey Simpson

Even as it enters new trade talks, Ottawa will protect supply management

If you think the theatre of 100,000 people in the streets every night in Quebec, coupled with pot-banging and endless (largely sympathetic) media coverage, was over the top, wait until any federal government threatens supply management.

Political hell hath no fury like dairy farmers aroused. They showed it four decades ago when they painted slogans on barn roofs across Quebec, descended on Ottawa, dumped milk over the head of agriculture minister Eugene Whelan and bullied the federal Liberal government into the racket that is supply management.

Dairy and poultry producers are found in many places across Canada, but their heartland is rural Quebec and Ontario. Ever since these farmers got supply management – an attempt to balance domestic supplies and demand, with small quotas for imports and no thought of exports – they have defended it with every available tool.

How vise-like is their grip? A few years ago, the House of Commons *unanimously* passed a motion instructing Canadian negotiators at international trade talks not to yield an inch of supply management's protections, including astronomically high tariffs on imports. Imagine, a unanimous motion from a body whose members would have trouble agreeing that today is Friday.

Urban MPs, whose constituents – especially low-income ones – are hosed by supply-management's high prices, and Western Canadian Conservative MPs, whose farming constituents play on the world stage, are rendered mute by their rural colleagues and by party leaders frightened of the supply-management lobby.

So no chink exists in the political armour defending supply management, either in Ottawa or at the provincial level. In Quebec, especially, the support is ubiquitous, in part because the producers are in a union – l'Union des producteurs agricoles du Québec – that is arguably the most powerful lobby group in Canada, along with the Canadian Association of Petroleum Producers. Any assault on supply management would be seen as an assault on Quebec, and we know what emotional wallop that punch brings.

The only pressure to change supply management has come from outside the country. The system has been regularly pilloried by Canada's trading partners, who rightly consider it highly protectionist. At various international trade negotiations, Canada has

been put under pressure to change the system. All that did was change quotas into sky-high tariffs and open up the protected market a little bit to more imports.

At those meetings, lobbyists for supply management always swarm the Canadian negotiating team. Every meeting is monitored, every statement parsed, every opportunity to presents the farmers' case exploited. And every government – Liberal or Conservative – has therefore entered negotiations singing the praises of worldwide free trade while singing another hymn to the virtues of protectionism for supply management.

Now, Canada has been allowed – after furious lobbying with the Americans – into the Trans-Pacific Partnership (a move deemed unlikely in this space last week) with the Prime Minister singing the songs of his predecessors. We need more free trade, sang Stephen Harper, and the TPP is one way to get at the burgeoning markets of Asia. But, he sang, we will protect supply management.

There are those who believe Mr. Harper actually wants to use the TPP to destroy supply management or at least to weaken it. As a free trader himself, he must see the absurdity of the protectionist racket that is supply management. But as a prime minister, he must also see the perils of arousing Quebec (and his own political base in rural Ontario).

So, chances are, he will try to use the TPP – and the free-trade deal with Europe – as a way of whittling away at the system.

Our friends in New Zealand and Australia didn't favour Canada joining the TPP because they knew Canada would obstruct progress on free trade in agriculture. Elements of the U.S. government didn't favour Canada's entry either, for reasons of supply management and other protectionist Canadian policies. It took the heaviest of lobbying by Mr. Harper and his staff to get Canada a seat at the table.

Having secured that seat, Canada will find supply management changes demanded by at least some of the other players. As usual, Canada will use every tactic to delay, frustrate and block any changes in order to keep dairy and poultry farmers off the streets of Montreal and Ottawa.

Blame the Politicians: A Government Failure Approach to Political Ethics
Draft for presentation at The Ethics of Lobbying Conference
November 22, 2013

1. *Jimmy and the Montebank.* Jimmy holds down the gate at the bank of goodies. He has been selected in a fair vote of all the townsfolk to be the gatekeeper. In the bank, behind the gate, is a vault of various kinds of goodies. These goodies are desirable. They have been collected from the townspeople. The townspeople have put their trust in Jimmy to select only the fairest, wisest, and most stupendous of the townspeople to sometimes get some goodies. Jimmy, as all gatekeepers before him, has reassured the people by taking an oath, promising to do a good job as a gatekeeper, of looking out for the town's interests and well-being in all of his decisions as a gatekeeper.

Along comes the montebank Wilburt. Wilburt tells Jimmy a story about a new program he is thinking of instituting, if only Wilburt could get some goodies. He tells Jimmy that his plan of unlimited energy for the townspeople is a good one, and that it will work. He parades some experts before Jimmy, all echoing and approving of Wilburt's confident expectations. Wilburt suggests that Jimmy might be able to keep his job as gatekeeper more easily if he were to have some goodies to run his re-election campaign, and so offers Jimmy some goodies in the future, which he'll have much more of if he could add to his own goodies some of the goodies in the vault.

But here is what Jimmy knows. There are many people trying to get goodies. In the past, some of them have lied. In the past, some of them have used clever tricks to dupe the gatekeepers. In the past, some have used selective evidence, and some have used experts of questionable integrity. In the past, some have tried to offer goodies to the gatekeepers if only they could get the goodies from inside the vault. In the past, some have run campaigns against gatekeepers who didn't deliver goodies to them, making re-election more difficult. In the past, some have used their own goodies to help support re-election campaigns of those gatekeepers who gave them some of the townspeople's goodies.

And here is what Jimmy has access to. He can contact experts. He can set up panels of experts. He can have hearings into proposals. He can speak with psychologists who know about confirmation bias, and other cognitive biases. He can talk to political scientists who study the role and impact of election

contributions on electoral outcomes. Jimmy can educate himself. Jimmy has an obligation to do so.

Wilburt really is a montebank. He is to be frowned upon. But Wilburt never agreed to help the townspeople. Wilburt never made any promises. Wilburt says it's not up to him to decide whether or not he should get goodies, he, just like everyone else, is making a proposal. Wilburt is a proposer, Jimmy is a decider.

2. *Supply-siders unite*. Below, I will be taking Wilburt's side to begin a conversation on this topic. When it comes to the moral evaluation of lobbying, cronyism, and rent seeking more broadly, our attention should be directed primarily at government actors -- from politicians to regulators -- rather than market actors. That this is not where we typically look is illustrated in the pages of this journal. Many of us are tempted to focus on the crony capitalists, on the lobbyists; on rent-seekers. But our time is more wisely and informatively spent focusing, instead, on the crony politicians, on the lobbied; on rent-distributors. We should focus on the supply-side, rather than the demand-side.

Where industry and government collaborate to produce a socially negative outcome, the most, and sometimes only, relevant role morality is that of the government actor. Government actors are always to blame. Market actors will also be to blame in most cases, but their share of the blame is less and, at times, they will meet conditions that excuse them from blame altogether. Below, I will try to make this strong claim as plausible as I can. Given the brief space, I will make a few simplifying assumptions, including focusing exclusively on political actors, rather than government actors more broadly.

2. *Political Ethics*. The focus on rent-seeking rather than rent-distributing behaviour is understandable. After all, an entire field, the field of business ethics, is devoted to discussing the moral requirements of market actors, especially managers of large, publicly-traded companies with many employees. Since the focus is on what a manager's obligations are, it is not surprising that the moral duties and obligations of government actors are largely ignored in this field.

Public Choice Economics is explicitly about government actors, but, as a field in economics, it is not primarily interested in moral duties and obligations -- the goal of the field is to predict, explain, and understand why, when and whether government actors will do something or other, not to discuss what duties and

obligations these actors have towards each other and their constituents. While business schools insist on specifically business ethics courses, and business ethics has several dedicated academic journals, the same cannot be said of political ethics within political science, political philosophy, and public administration departments. The field of political ethics is explored less often and in fewer places than the field of business ethics.

3. *Rent Seeking and Government Failure*. For purposes of this paper I will define rent seeking as any private gain-seeking behaviour that causes deadweight losses within idealized models.¹ This definition is normatively neutral, unlike several definitions that have been offered in the past.² The fact that some behaviour or activity generates losses in idealized models does not require real-world instances of that behaviour to generate any losses at all, and so it remains an open question whether or not this or that instance of rent-seeking is socially positive or negative. Rent seeking, on this definition, is not necessarily a government failure. We will need to do empirical work, rather than conceptual analysis, to discover the outcomes of any particular bit of rent-seeking.

Again, for purposes of this paper, I will follow the public choice conception of “government failure.” In the Public Choice tradition, government and market

¹ In an earlier proposal, I suggested that we ought to simplify the distinction by treating rent-seeking as private gain-seeking behaviour through politics, while reserving profit-seeking for the very same behaviour pursued within market institutions. I've become dissatisfied with my earlier effort for several reasons, especially because, as I then noted, it is both over- and under-inclusive. On my earlier definition, we cannot, for example, describe a family's fight over inheritance as an instance of rent-seeking (as we should), and we would be forced to describe efforts to, for example, institute private property regimes or efforts to eliminate red tape as rent-seeking. See Peter Martin Jaworski (forthcoming), “An Absurd Tax on our Fellow Citizens: The ethics of rent seeking in the market failures (or self-regulation) approach” *Journal of Business Ethics*, available online-first at <http://link.springer.com/article/10.1007/s10551-013-1734-y>

² James Buchanan, for example, defined it as follows: “the term rent seeking is designed to describe behavior in institutional settings where individual efforts to maximize value generate social waste rather than social surplus.” Buchanan, J. M. (1980), “Rent Seeking and Profit Seeking,” in J. M. Buchanan, R. D. Tollison and G. Tullock (eds.), *Toward a Theory of the Rent-Seeking Society* (Texas A&M University Press, College Station), at p. 4. More recently, R.D. Tollison defines it “as socially costly activities intended to transfer wealth, usually by securing government favors, such as tariffs, quotas, subsidies, price supports, licenses, and so on.” Tollison, R. D.: 1997, “Rent Seeking,” in D. Mueller (ed.), *Perspectives on Public Choice* (Cambridge University Press, Cambridge), p. 506. These definitions were criticized by John Boatright (2009) in “Rent seeking in a market with morality: Solving a puzzle about corporate social responsibility,” *Journal of Business Ethics*, vol. 88, no. 4. According to Boatright, this is a definitional trick that shifts our focus away from whether or not rent-seeking is ethical to a question about what gets to count as rent-seeking in the first place. Instances where rent-seeking leads to socially positive outcomes are ruled out by definition alone.

failure are *locational* modifiers. They tell you what institution failed.³ When government intervention generates an outcome that is less efficient than if they hadn't intervened, that's a government failure. When (free) markets fail to generate an efficient outcome, that's a failure in the market. There are a few reasons to prefer this conception over the transaction cost alternative, including the simple fact that the public choice conception is the more popular and more widely-understood conception. A separate and, for my purposes, more important reason is because it focuses our gaze on the actors that I think are most relevant for purposes of moral evaluation and judgement -- government actors. When markets fail, we should look to market actors or the market rules within which market actors operate for moral evaluation. When governments fail, we should switch our focus to government actors and the institutional rules within which government actors operate for moral assessment.

4. *Special Obligation*. In the story of Jimmy and Wilburt, if there is blame to dole out, we should look to Jimmy first. It seems plausible to blame Jimmy more than Wilburt. I think the same is true in a range of similar cases. So, suppose you are married. And suppose you cheat on your husband or wife with Sam, who is single. Further suppose that Sam knew that you were married. To be sure, you both acted wrongly, and you each should be blamed. However, it seems difficult to overlook the fact that while you both violated a general rule about not undermining the terms of important and special relationships, your act is still the more blameworthy. You made a promise to cherish, love, and honour your significant other. Sam did none of these things. Sam made no promise to anyone. Sam does not violate the terms of a special relationship of which he or she is a part.

Being a part or a party to a special relationship -- based on promise, contract, or the bonds of family and friendship -- engages special duties and obligations. We all have reason to avoid corrupting or undermining special relationships, but those of us who are a part of those relationships have additional or weightier

³ This conception of government and market failure differs from the transaction cost tradition's conceptions. In that tradition, the distinction between government and market failures is treated as a *causal* modifier. They tell us what kind of transaction has failed. There are market transactions, and then there are administered transactions. All administered transactions are non-market transactions, they are government transactions. Firms eliminate markets internally. Firms hire employees on long-term contracts, they do not turn to the market for labour on a day-to-day basis. Firms often manufacture many inputs themselves, rather than outsource each part to other firms. Many transactions, then, are administered rather than market transactions.

reason to respect the terms of those relationships. After all, we made promises, we signed contracts, we explicitly agreed to steel ourselves against temptation. If those agreements and promises are to be meaningful, they must carry additional weight. Otherwise, the promise and agreement is wholly redundant, since the general obligation would apply to all of us, and to all of us equally.

It is true that Sam should never have made any advances, but it is also true that you should have rebuffed Sam's advances. The same goes for Jimmy and Wilburt. Wilburt might like to think that he is merely a "proposer," while Jimmy is the "decider" -- and maybe Sam feels the same way too -- but both Wilburt and Sam are aware of Jimmy's and your prior relationships, and both are well aware that in making a tempting proposal they are seeking to corrupt those prior relationships.

5. *Special relationships.* Jimmy has a special relationship with his constituents. He owes them a duty to open the gate only where the benefit to be had for the townspeople is greater than the cost of losing some of the goodies behind the gate. When the reverse is true, when the cost to the townspeople swamps the benefits, we should begin our search for whom to blame with Jimmy. Rent-seeking typically has this feature -- while it benefits some specific group of people, sometimes very much, it causes or contributes to socially negative outcomes for a still larger group of people.

Of course, the truth about what is in the interest of the townspeople, and whether or not Wilburt's "proposal" is of benefit to the townspeople might be a matter of disagreement. While the town's economists may think Wilburt's plan will make the townspeople a little bit poorer, the townspeople may be ignorant. They may, like many voters, not know what is, in fact, in their interest. Or, if they know this, they may not know what policies would actually promote rather than harm their interests. So they may demand that Jimmy open the coffers even when doing so would be bad for them. Plenty of townspeople do just that.

6. *Delegate account.* Jimmy's obligation may be to only open the gates when the benefits outweigh the costs, but Jimmy's constituents may have the right to determine this for themselves. Jimmy's role morality may require him to function as a delegate. Sometimes called "Madisonian role morality,"⁴ the delegate

⁴ See Russell Hardin (2004), "Representing Ignorance," *Social Philosophy and Policy*, vol. 21 no. 01, pp 76-99, at p. 94.

account insists that politicians are to represent, to publicize and promote the expressed interests of their constituents, regardless of how informed or ignorant the constituents happen to be.

If this were the right view, then Jimmy and other politicians would have access to an excuse from being blamed for socially negative rent-seeking. In cases where the townspeople demand the gates be opened, then he can simply say that he did his delegate duty when he opened the coffers. That it was bad for the townspeople cannot be blamed on him, since it is not his job, on this view, to open the gates only when the very best evidence suggests that it would be of benefit to the townspeople. He needs to heed their demands, no matter how foolish.

And so it is with a whole host of subsidies and regulations. While economists disagree about a great number of things, they are mostly agreed that agricultural subsidies make things worse, while free and open trade between different countries makes things a lot better. But townspeople across Canada demand supply management for milk and wheat, despite the fact that it makes Canadians poorer, and townspeople across both the U.S. and Canada demand various restrictions, quotas, and tariffs on the importation of goods (and labour) from other countries. This, despite the fact that such restrictions make Americans and Canadians poorer. The typical citizen of either country does not know the relevant facts to help them vote their own interests, even when all they care about is voting strictly in their own interests.⁵

“You asked for it,” may very well turn out to be a plausible excuse when it is, in fact, what the townspeople asked for, and if a politician’s duty is to act as a delegate. Very well, if we adopt this view, and if it’s true that this is a good excuse, then sometimes the blame for government failure rests with those of us who demanded it, rather than with political actors or with market actors.

7. *Trustee account.* But many of us do not believe that a politician’s job is to merely function as a delegate on behalf of expressed interests.⁶ We take the role of politician to require a certain amount of discernment, of independent judgment.

⁵ See, for example, Samuel L. Popkin, *The Reasoning Voter: Communication and Persuasion in Presidential Campaigns*, 2d ed. (Chicago, IL: University of Chicago Press, 1994).

⁶ If this is our view, we would have reason to endorse more referenda on more aspects of our public life. That would be a more accurate, and possibly less expensive way of having our interests expressed and promoted.

We expect a politician not to act merely as a delegate, but also, at times or in general, to act as a “trustee.” This account of the role morality of politicians, sometimes called “Burkean representatives,”⁷ finds its most prominent early defender in Edmund Burke who argued that politicians are to independently judge and act on what they think is best, and to take into account not just the interests of their own constituents, but those of the nation as a whole.⁸ His account is partly motivated by the problem of citizen ignorance. Burkean representatives help to solve this problem by being professionals and experts of a sort. They have knowledge of how to represent, as well as how to implement, certain policy prescriptions. Rather than function merely in the way a proxy voter might at a meeting of shareholders, as a trustee they are to try to represent the interests we would have if we had access to more knowledge and had the ability and power to implement it. To aid her in this task, she hires a staff, and has access to the relevant experts, from political scientists and economists, to pollsters and public relations professionals. She is expected to fill gaps in her knowledge by seeking out the best evidence.

On the trustee account, “you asked for it” is not an excuse she can reach for because what her constituents ask for forms only a part, at times, of what policies or regulations she has most reason to defend and promote. But we may object that Burke’s trustee account is overly broad. We may insist on the abandonment of Burke’s second normative criterion, that of taking account of the interests of the nation as a whole, in favour of a narrower conception that only considers the people within the politician’s geographic jurisdiction. This narrower trustee conception would give us a different excuse.

Jimmy’s townspeople may not care very much about the neighbouring towns. They may not care very much about the municipality of which they are a part.

⁷ See Russell Hardin (2004), at p. 77.

⁸ Edmund Burke (1790) wrote: “Parliament is not a *congress* of ambassadors from different and hostile interests; which interests each must maintain, as an agent and advocate, against other agents and advocates; but parliament is a *deliberative* assembly of *one* nation, with *one* interest, that of the whole; where, not local purposes, not local prejudices, ought to guide, but the general good, resulting from the general reason of the whole. You choose a member indeed; but when you have chosen him, he is not member of Bristol, but he is a member of *parliament*. If the local constituent should have an interest, or should form an hasty opinion, evidently opposite to the real good of the rest of the community, the member for that place ought to be as far, as any other, from any endeavour to give it effect.” Edmund Burke, “Speech to the Electors of Bristol,” Nov. 3, 1774, in *The Founder’s Constitution*, Chapter 13, Document 7, Works 1: 446-448, at 448.

Suppose each town sends a representative to a municipal council. Suppose further that the municipality has a gate behind which they store goodies, portions of which they take from each of the townspeople in the various towns. Jimmy may accurately assess his town's interest in the securing of a subsidy for Genuine Motors, a car company that employs a quarter of his town. Suppose he knows that it would lead to socially negative outcomes for the municipality as a whole, while being a significant benefit to his constituents.

"It's good for my constituents" might work as an excuse on the narrow trustee conception, if we think that the relevant constituency just is the group of people who reside within the representative's jurisdiction and not those outside of it. If this is the account that we endorse, then again the blame redounds to those of us who fail to care enough about neighbouring towns, or the country as a whole. Neither political nor market actors would be to blame.

8. *Party-centered account.* A third variant of political ethics tells us that politicians are not to be regarded as representatives of their constituencies or of the people, but of their political parties. They are party functionaries, whose primary role is to secure election for their political party. They owe an allegiance to the party and, despite what they may publicly say, their primary role is to ensure that their political party gets into power, and remains in power.

On this view, one excuse that might be offered is this: "It's good for my party." Certain special interests may align more closely with one political party, rather than another. So, for example, from 1989 to 2014 the International Brotherhood of Electrical Workers was the sixth biggest political donor group in the U.S. They spent over \$45 million, 92% of which went to candidates and PACs aligned with the Democratic Party, with 2% to Republicans. The American Federation of State, County and Municipal Employees, the second biggest donor group, gave just over \$60 million. The Democratic Party was the beneficiary of 81% of that total, Republicans at 1%. The National Rifle Association, number 52 on the list, spent over \$19 million, 82% of which went to Republican Party candidates and PACs, 17% to those aligned with the Democratic Party.⁹ If we take the party-centered approach, we may believe that a politician has reason to acquiesce in the face of rent-seeking by the special interests that contribute a great deal to their political party.

⁹ See "Heavy Hitters: Top All-Time Donors, 1989-2014," OpenSecrets.org, accessed at <https://www.opensecrets.org/orgs/list.php> (March 5, 2014).

7. *General justification.* None of the above three views are independently justified. We do not elect politicians as delegates or trustees for its own sake. And it is hard to see why the rest of us should endorse a system where politicians aim towards gaining and preserving political power as such. The delegate, trustee, and party-centered views are views about the role morality of political actors. Role moralities are functionally determined. A role serves a particular function within a broader system or organization. The justification of a role is parasitic on the justification of the organizational structure or the system as a whole.

There are many possible justifications of our political systems, but in what follows I will simplify by focusing on just one, that of promoting, or at least not hampering, the general welfare, including economic efficiency. This may be a controversial simplifying assumption, but I think it is well motivated. Even if we seek to defend the greater value of liberty or equality independently of their impact on economic efficiency, we would be hard pressed to cling to those views in the face of evidence that pursuit of these values would make us poorer and wretched over time.

A fruitful analogue to Joseph Heath's market failures approach to business ethics¹⁰ could be called the government failures approach to political ethics. We have an adversarial political system just as we have an adversarial market system. Businesses pursue their self-interest in competition with other self-interested businesses, and we permit tough tactics based on the empirical belief that a competitive business environment leads to greater benefits for most of us, most of the time. Competition and private property help the price system deliver the relevant information about relative satisfaction from consumption, and incentivizes market actors to deliver positive social outcomes in terms of wealth creation, wealth expansion, and the satisfaction of more of our desires than other realistic and available means of organizing our economic life. They are moved to act in our interest and promote the common good although promoting the common good is no part of their intention. We do not endorse the individual actions of individual proprietors and entrepreneurs, we endorse the outcomes that are the unintended result of those actions in a competitive business environment.

¹⁰ See Joseph Heath (2004), "A market failures approach to business ethics," in *Studies in Economic Ethics and Philosophy* (vol. 9) Berlin: Springer. See also Joseph Heath (2006), "Business ethics without stakeholders," *Business Ethics Quarterly*, vol. 16, no. 4, pp. 533-557.

So, too, might we think of our political system in similar ways. The system pits several political parties against one another, and pits individual politicians against one another when they fight for nominations to stand for election under one or another party banner. This kind of competition between different political aspirants can be regarded as a useful way of checking corruption, of promoting transparency, of getting representatives to be responsive to the needs of various individuals and groups in society, and so on. We can limit the extent to which we rely on political actors' good intentions and good character by relying on the way in which an adversarial political system directs people's venal and vainglorious instincts in socially beneficial directions.

In approving of this system, we approve of the roles that people get to play within that system, provided that the general justification of the system is firmly before our eyes. If we could abandon the system of free enterprise in favour of an alternative that better met the normative criteria that, on this view, justifies it, we should. On this view, we don't blinkers when we affix our gaze on private property rights and on the right of individual market actors to contract however they will with their own property. Maximization of shareholder value as a normative commitment of managers is not independently justified. These are to be regarded as of merely instrumental value, in securing the goal of market efficiency. Something similar can be said of our political system. Free and fair elections, the formation of individuals into political parties with a brand identity, the right of each of us to express our political preferences in public without legal hindrance, and so on, should be conceived, on this view, as instrumentally valuable, rather than independently justified. They are not God-given rights, or rights discovered in nature through reason, they are, instead, to be regarded as useful instruments for the attainment of the goal of our general welfare, including economic efficiency.

If they are of instrumental value, then what should a manager do when confronted with the possibility of improving the bottom line of the company she manages at the expense of market efficiency? That is, what should a manager do when improving the bottom line means contributing to or generating a market failure? The answer should be obvious -- she would do wrong, and be blameworthy, if she chose her company's bottom line. Many strategies are available to her for promoting profitability and maximizing shareholder value, but being an accessory to market failure is not. The "promise," if it is a promise, to

maximize shareholder value obtains and has weight only under ordinary or normal market conditions. It becomes completely weightless when the purpose of the practice within which it plays a part and is justified is at stake. Maximizing shareholder value can be regarded as a heuristic in cases of ignorance, but the banner under which managers ought to rally is the banner that reads, “do what’s best for my company, except in cases where doing that makes me an accessory to market failure.” Market failure is a limiting condition on the pursuit of profit.

Just as there are predictable causes of market failure that we urge managers to avoid, so there are predictable causes of government failure as well. The government failure approach would urge that party politicians pursue their party’s electoral self-interest in a way that avoids government failure. For the same reason, government failure would serve as a limiting condition for the trustee view as well.¹¹

They should, then, rebuff rent-seekers, deny goodies to lobbyists, attend to the possibility of regulatory capture, avoid perpetuating a system of crony capitalism, and so on, whenever those activities would cause or contribute to government failure. They may owe their electoral victories to their political party, or to one or another special interest group, or to their constituents more broadly, but they, too, must rally under the banner “do what’s best for my constituents or political party, except in cases where doing that makes me an accessory to government failure.” Government failure functions as a limiting condition on the legitimacy and authority of the system of politics we have, and on the individual legitimacy and authority of the politicians.

8. *Excuses, excuses.* In order not to be confused, I want to again emphasize that the supply-side view does not exonerate the actors on the demand-side. The claim is not that they can push for socially wasteful policies, and do nothing wrong thereby. Michael DeBow thought it was a funny implication of Milton Friedman’s view that managers had a moral responsibility to lobby for handouts even when they knew that it would have negative social consequences.¹² If that is the implication of the view, then the view is false. If it is wrong for me to do x, it

¹¹ On the delegate view, it is the citizens who have the responsibility of becoming sufficiently informed in order to vote competently, including voting in a way that avoids government failure. For a defense of this view see Jason Brennan (2011), “The Right to a Competent Electorate,” *The Philosophical Quarterly*, vol. 61, no. 245, pp. 700-724.

¹² Michael DeBow (1992), “The ethics of rent seeking? A new perspective on corporate social responsibility,” *Journal of Law and Commerce*, vol. 12, no. 01, pp. 1-21.

doesn't suddenly become right for me to do x if I am an agent acting on your behalf. Agents inherit the moral constraints that apply to their principals.

But sometimes it is hard to describe rent-seeking as blameworthy, and, at other times, it seems plausible to suggest that while there is pro tanto reason to avoid engaging in behaviour that has a negative social impact, there may be exculpatory conditions that excuse rent-seeking.

Public choice economists sometimes illustrate rent-seeking by using the dollar auction. The dollar auction works like this. I dangle a dollar bill in front of a group of people, and invite people to bid on the dollar in increments of, say, 10 cents. I inform them, however, that they have to pay their highest bid, regardless of whether or not they are the highest bidder. Here's what happens: People end up bidding more than a dollar for the dollar.

The game is rigged. All of the participating bidders lose. The game generates socially destructive behaviour, but it is hard to describe the bidders as the blameworthy agents in this scenario. The only truly blameworthy one is me, the dollar-dangler. The problem here is on the supply, not on the demand-side. It's not that students want to bid for the dollar that makes them blameworthy, it's that I'm busy dangling it in front of them that makes me blameworthy.

Maybe you find that unpersuasive. Maybe you think the truth is that no one should bid, or that you should let only one person bid. But now suppose that the dollar I dangle in front of you was once partly yours. I took 20 cents from your pocket, and 20 cents from each of the pockets of four other students. And suppose that each of you are competing against each other and the dollar will make a very big difference to whoever ends up with it. In fact, whoever ends up with the dollar will use that dollar to try to outcompete you.¹³

This kind of dollar auction is corrupt. On the market, many companies operate in similarly corrupt environments. When you run a business, often your competition is already getting political privileges that tilt the playing field in their direction. Some of your tax dollars go towards contracts that benefit your competition at your (and other companies') expense. You can sit idly by and be exploited, or you can seek rents in self-defense. If rent-seeking is sometimes excusable then in those cases we cannot apportion blame for the social waste generated by it to

¹³ I'm grateful to Jason Brennan for this way of describing the corrupt dollar auction.

crony politicians and crony capitalists equally. Those who run the dollar auctions, those who distribute the rents, are, in those cases, the only blameworthy parties.

9. *Politics and Self-defense.* Above, I offered three excuses politicians can turn to when they are accessories to government failure: “You asked for it,” “It’s good for my constituents,” and “It’s good for my party.” “You asked for it” excuses the politician on the delegate view, while implicating us as (incompetent) voters. I offered reasons to abandon this view above. But even if we accept it, we can still insist that an agent ought not follow through on her principal’s demands when the principal demands what is unethical. On the delegate view, there appears to be at least some reason for the agent to sometimes become a conscientious objector. If the principal has no moral right to demand the distribution of a rent that causes or contributes to government failure, then the agent has reason not to represent that demand in public. So even on this view the excuse may fail.

“It’s good for my constituents” is supposed to be an excuse on the narrow trustee view, while “It’s good for my party” is an excuse on the party-centered view. These responses would only function as good excuses if a politician were morally permitted to pursue the good of her constituents or political party even in cases of government failure. But it is not. For this reason, none of these excuses should carry any water. The role morality of the politician-as-trustee and politician-as-party-functionary, being parasitic on the general justification of the political system, can only generate prima facie duties, and can only be used to ground promises that are not inconsistent with the general justification. Promises and prima facie duties lose their moral weight and their status as legitimate excuses in contexts where the promise or prima facie duty conflicts with the justification of the system.

Above, however, we also considered and found justified an excuse for socially negative rent-seeking when a market actor enters an already-corrupt market. Can it not be said that sometimes politicians are also excused when they act in self-defense in an already-corrupt political system? Might there not be a symmetrical case to be made for excusing a political actor for the same reasons?

Justifications of self-defense depend, in part, on the reality and significance of the threat, weighed against the value of what is being defended. When a market actor enters an already-corrupt business environment, the threat to him is real. At least in some cases, the consequences of not engaging in rent-seeking is a

significant loss of potential income, and sometimes the loss of the business itself. If the difference between seeking rents and not seeking rents was a matter of somewhat lower profits, we would rightly expect them to avoid seeking rents. Contributing to corruption is not justified when the price of keeping your hands clean is low.

The very same cannot be said of political actors. First, the threat appears to be less real than commonly thought. A politician may worry that she is vulnerable to the threat of campaign spending against her should she rebuff rent-seeking companies. It may be a perceived threat, but the evidence is either inconclusive, or it leans on the side of campaign spending having a small effect. Some have suggested that spending money on political campaigns is a consumption good, rather than an “investment.” This is the view of, for example, Stephen Ansolabehere, John de Figueiredo and James Snyder Jr. expressed in a paper titled, interestingly enough, “Why is there so little money in U.S. Politics?”¹⁴ If this is right, then worries by the Democratic Party about losing campaign contributions from the International Brotherhood of Electrical Workers, or by the Republican Party of losing funding from the National Rifle Association, have less of a foundation.

Could a politician be excused for failing to know that there is no significant threat? If you’re making decisions on behalf of other people -- if you are an agent for your constituents -- you need to know that the threat is real before doing something that could negatively affect them. Even if you are an agent on behalf of your political party, you still have a strong duty to avoid government failure. Avoiding that failure requires you to look into whether this threat is real or imagined.

Apart from the empirical literature, we can also take a closer look at the composition of the political class. The political class may represent our interests, but they do not represent us in the sense of sharing our socioeconomic status.¹⁵ A significant number of them have training as lawyers. Others are themselves former business people. A majority of U.S. senators and house members hold

¹⁴ See Stephen Ansolabehere, John de Figueiredo, and James M. Snyder Jr. (2003), *Journal of Economic Perspectives*, vol. 17, no. 01, pp. 105-130.

¹⁵ OpenSecrets.org compiles an annual list of the average net worth of U.S. senators and members of Congress. In 2011, the average net worth of a U.S. senator was \$14,013,596, while the average net worth of a member of U.S. Congress was \$6,594,859.

advanced degrees.¹⁶ The composition suggests that the claim of ignorance or excusable inadvertence is undermotivated and, frankly, implausible. The political class does not consist of unsophisticated rubes. It consists of sophisticated actors, either themselves sufficiently competent to navigate threats or capable of adequately selecting experts to fill gaps in their knowledge about whether a threat is real or perceived.

Second, the significance of the threat is less pronounced. The demand that a market actor do something else or refuse to participate in a corrupt market falls flat. It falls flat because he may be unable to escape participating in a corrupt environment, or the requirement asks too much of him. Instead of running a business, he can be an employee of a business. But if he works as an employee within a corrupt market, he contributes indirectly to that corruption, and he benefits in the form of wages from that corruption. To escape a corrupt market may require him to avoid several kinds of industries, or, if crony capitalism is sufficiently widespread, the country. That is asking too much.

But the same cannot be said for political actors. Recall that a successful excuse of self-defense not only requires a genuine threat, but also something sufficiently significant that is worth defending. Here, what is being defended is the chance of reelection.¹⁷ Asking a political actor to refuse to participate in corrupt practices may at best threaten her status and station as a political actor. But we do not put up with coercive institutions so as to enable people to live out their dreams of becoming political actors with a certain amount of celebrity. We can say to the politician “avoid politics” without thereby asking her to sacrifice something of comparable significance. It is possible that she would then participate in a corrupt business environment as a business person or employee, but this would change the charge from one of violating a strong duty that underpins the legitimacy and authority of the position, to the lesser charge of participating in corruption.

¹⁶ In the U.S., and according to CQ Roll Call, 77 per cent of senators and 52 per cent of House members in the 112th Congress held advanced degrees. The majority of senators listed “Law” as their prior occupation (52), 36 listed “Public service/politics” as their prior profession, while 28 listed “Business.” The majority of House members listed “Business” (181) as their prior occupation, with “public service/politics” (172), and “Law” (148) coming in second and third. See “Demographics of the 112th Congress,” *CQ Today*, vol. 46, special “Guide to the New Congress” issue, (November 4, 2010), pp. 14-15.

¹⁷ Those who are not now in positions of political power do not have the ability to dole out rents, so it cannot be a threat against election. It may be interesting to inquire into whether or not it would be permissible for a politician to promise rents to certain companies in order to avoid being the target of negative campaign spending, without delivering on those promises once elected. It does strike me as permissible to do this, but I will not pursue this further here.

10. *Conclusion.* I've argued that government failures are a problem with rent-distributing behaviour, rather than rent-seeking behaviour. That while there is a lot of blame to go around, most if not all of it should fall on the shoulders of the lobbied, rather than the lobbyists, on the politicians, rather than the crony capitalists they help to enrich at our expense. At the very least, when we see government failures, we should direct our gaze to the supply-side, to political actors and look for blame amongst the political class.

Political actors are not merely the gatekeepers, they are also rule-makers. Unlike market actors who are not charged with the task of setting up the rules of the game, political actors, as a group, are so charged. It is part of their portfolio of responsibilities. There may be many cases where both the lobbyists and the lobbied collude to make things worse for the rest of us, but, when in doubt, we should blame the politicians. Crony capitalism, rent-seeking, regulatory capture, and government failure in general is a problem with our politics, not with our markets.

Session III

The Collective Action Problem

Readings

Russell Hardin, "The Free Rider Problem", *The Stanford Encyclopedia of Philosophy* (Spring 2013 Edition), Edward N. Zalta (ed.).

Elinor Ostrom, "Collective Action and the Evolution of Social Norms", *Journal of Economic Perspectives*, Vol. 14, No. 3 (Summer 2000), pp. 137-158.

Tim Harford, "Do you believe in sharing?", *Financial Times*, 2013.

The Free Rider Problem

First published Wed May 21, 2003

In many contexts, all of the individual members of a group can benefit from the efforts of each member and all can benefit substantially from collective action. For example, if each of us pollutes less by paying a bit extra for our cars, we all benefit from the reduction of harmful gases in the air we breathe and even in the reduced harm to the ozone layer that protects us against exposure to carcinogenic ultraviolet radiation (although those with fair skin benefit far more from the latter than do those with dark skin). If all of us or some subgroup of us prefer the state of affairs in which we each pay this bit over the state of affairs in which we do not, then the provision of cleaner air is a collective good for us. (If it costs more than it is worth to us, then its provision is not a collective good for us.)

Unfortunately, my polluting less does not matter enough for anyone—especially me—to notice. Therefore, I may not contribute my share toward not fouling the atmosphere. I may be a *free rider* (or *freerider*) on the beneficial actions of others. This is a compelling instance of the *logic of collective action*, an instance of such grave import that we pass laws to regulate the behavior of individuals to force them to pollute less.

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1. The Logic of Collective Action

The strategic structure of the logic of collective action is that of the *n-prisoner's dilemma* (Hardin 1971, 1982a). If n is 2 and the two members are able to coordinate on whether they act together, there can be no free rider unless one of the members is de facto altruistic. As represented in Game 1, prisoner's dilemma for two players is essentially the model of exchange (Hardin 1982b). Suppose that, in the status quo, I have a car and you have \$5000 but that both of us would prefer to have what the other has. Of course, each of us would rather have the holdings of both of us: both the money and the car. The second best outcome for both of us would be for you to have my car in exchange for my having your money. The status quo is a worse state of affairs for both of us than that in which we succeed in exchanging. In the matrix, the outcomes are ordinally ranked from best (1) to worst (4) for each player. For example, the outcome (upper

right cell) in which you yield the money and I keep the car is worst (4) for you as the Row player and best (1) for me as the Column player.

		Column	
		Yield car	Keep car
Row	Yield \$5000	2,2	4,1
	Keep \$5000	1,4	3,3

Game 1: Prisoner's Dilemma or Exchange

As an n -prisoner's dilemma for $n \gg 2$, collective action is therefore essentially large-number exchange. Each of us exchanges a bit of effort or resources in return for benefiting from some collective provision. The signal difference is that I can cheat in the large-number exchange by free riding on the contributions of others, whereas such cheating in the two-person case would commonly be illegal, because it would require my taking from you without giving you something you prefer in return.

In some collective provisions, each contribution makes the overall provision larger; in some, there is a tipping point at which one or a few more contributions secure the provision—as is true, for example, in elections, in which a difference of two more votes out of a very large number can change defeat into victory. Even in the latter case, however, the expected value of each voter's contribution is the same *ex ante*; there is no particular voter whose vote tips the outcome. Let us, however, neglect the tipping cases and consider only those cases in which provision is, if not an exactly linear function of the number of individual contributions or of the amount of resources contributed, at least a generally increasing function and not a tipping or step function at any point. In such cases, if n is very large and you do not contribute to our collective effort, the rest of us might still benefit from providing our collective good, so that you benefit without contributing. You are then a free rider on the efforts of the rest of us.

Unfortunately, each and every one of us might have a positive incentive to try to free ride on the efforts of others. My contribution—say, an hour's work or a hundred dollars—might add substantially to the overall provision. But my personal share of the increase from my own contribution alone might be vanishingly small. In any case of interest, it is true that my benefit from having all of us, including myself, contribute is far greater than the status quo benefit of having no one contribute. Still, my benefit from my own contribution may be negligible. Therefore I and possibly every one of us have incentive not to contribute and to free ride on the contributions of others. If we all attempt to free ride, however, there is no provision and no 'ride.'

The scope for free riding can be enormous. Suppose our large group would benefit from providing ourselves some good at cost to each of us. It is likely to be true that some subgroup, perhaps much smaller than the whole group, would already benefit if even only its own members contribute toward the larger group's good. Suppose this is true for $k \ll n$. This k -subgroup now faces its own collective action problem, one that is perhaps complicated by the sense that the large number of free riders are getting away with something unfairly. If one person in an exchange tried to free ride, the other person would most likely refuse to go along and the attempted free ride would fail. But if $n - k$ members of our group attempt to free ride, the rest of us cannot punish the free riders by refusing to go along without harming our own interests.

1.1 History

The free rider problem and the logic of collective action have been recognized in specific contexts for millennia. Arguably, Glaucon in Plato's *Republic* (bk. 2, 360b-c) sees the logic in his argument against obedience to the law if only one can escape sanction for violations. First-time readers of Plato are often astonished that dear old Socrates seems not to get the logic but insists that it is our interest to obey the law independently of the incentive of its sanctions.

Adam Smith's argument for the invisible hand that keeps sellers competitive rather than in collusion is a fundamentally important and benign—indeed, beneficial—instance of the logic of collective action. He says that each producer “intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of [the individual's intended end]. By pursuing his own interest he frequently promotes that of society more effectually than when he really intends to promote it” (Smith [1776] 1976, bk. 4, chap. 2, p. 456). The back of the invisible hand swats down efforts at price collusion, thereby pushing producers to be innovative.

David Hume grasps the generality of the problem clearly. He says:

Two neighbours may agree to drain a meadow, which they possess in common; because 'tis easy for them to know each other's mind; and each must perceive, that the immediate consequence of his failing in his part, is, the abandoning the whole project. But 'tis very difficult, and indeed impossible, that a thousand persons shou'd agree in any such action; it being difficult for them to concert so complicated a design, and still more difficult for them to execute it; while each seeks a pretext to free himself of the trouble and expence, and wou'd lay the whole burden on others. (Hume [1739-40] 1978, bk. 3, part 2, sect. 8, p. 538).

John Stuart Mill ([1848] 1965, book 5, chap. 11, sect. 12) expresses the logic very clearly in his defense of laws to require maximum hours of work. He supposes that all workers would be better off if the workday were reduced from, say ten to nine hours a day for all, but that every individual worker would be better off working the extra hour if most others do not. The only way for them to benefit from the shorter workday, therefore, would be to make it illegal to work longer than nine hours a day.

Vilfredo Pareto stated the logic fully and for the general case:

If *all* individuals refrained from doing A, every individual as a member of the community would derive a certain advantage. But now if all individuals less *one* continue refraining from doing A, the community loss is very slight, whereas the one individual doing A makes a personal gain far greater than the loss that he incurs as a member of the community. (Pareto 1935, vol. 3, sect. 1496, pp. 946-7)

Pareto's argument is framed for the negative case, such as the example of pollution above, but it fits positive provisions as well. Unfortunately, his argument is buried in a large four-volume magnum opus that is a rambling discussion of many and varied topics, and it seems to have had little or no influence on further discussion.

Finally, the logic of collective action has long been generalized in a loose way in the notion of the free rider problem. And it is captured in the popular slogan, "Let George do it," in which George typically stands in for the rest of the world.

Despite such frequent and widespread recognition of the logic, it was finally generalized analytically by Mancur Olson only in 1965 in his *Logic of Collective Action*. The odd mismatch of individual incentives and what may loosely be called collective interests is the independent discovery of two game theorists who invented the prisoner's dilemma for two persons (see Hardin 1982a, 24-5) and of various philosophers and social theorists who have noted the logic of collective action in various contexts. In Olson's account, what had been a fairly minor issue for economists became a central issue for political scientists and social theorists more generally. From early in the twentieth century, a common view of collective action in pluralist group politics was that policy on any issue must be, roughly, a vector sum of the forces of all of the groups interested in the issue (Bentley 1908). In this standard vision, one could simply count the number of those interested in an issue, weight them by their intensity and the direction they want policy to take, and sum the result geometrically to say what the policy must be. Olson's analysis abruptly ended this long tradition; and group theory in politics took on, as the central task, trying to understand why some groups organize and others do not.

Among the major casualties of Olson's revision of our views of groups is Karl Marx's analysis of class conflict. Although many scholars still elaborate and defend Marx's vision, others now reject it as failing to recognize the contrary incentives that members of the working class face. (Oddly, Marx himself arguably saw the cross-cutting—individual vs. group—incentives of capitalists, the other major group in his account.) This problem had long been recognized in the thesis of the embourgeoisement of the working class: Once workers prosper enough to buy homes and to benefit in other ways from the current level of economic development, they may have so much to lose from revolutionary class action that they cease to be potential revolutionaries.

In essence, the theories that Olson's argument demolished were all grounded in a fallacy of composition. We commit this fallacy whenever we suppose the characteristics of a group or set are the characteristics of the members of the group or set or vice versa. In the theories that fail Olson's test the fact that it would be in the collective interest of some group to have a particular result, even counting the costs of providing the result, is turned into the assumption that it would be in the interest of each individual in the group to bear the individual costs of contributing to the group's collective provision. If the group has an interest in contributing to provision of its good, then individual members are (sometimes wrongly) assumed to have an interest in contributing.

Sometimes, this assumption is merely shorthand for the recognition that all the members of a group are of the same mind on some issue. For example, a group of anti-war marchers are of one mind with respect to the issue that gets them marching. There might be many who are along for the entertainment, to join a friend or spouse, or even to spy on the marchers, but the modal motivation of the individuals in the group might well be the motivation summarily attributed to the group. But very often the move from individual to group intentions or vice versa is wrong.

This fallacious move between individual and group motivations and interests pervades and vitiates much of social theory since at least Aristotle's opening sentence in the *Politics*. He says,

We see that every city-state is a community of some sort, and that every community is established for the sake of some good (for everyone performs every action for the sake of what he takes to be good). (Aristotle 1998, *Politics*, book 1, chap. 1, p. 1)

Even if we grant his parenthetical characterization of individual reasons for action, it does not follow that the collective creation of a city-state is grounded in the same motivations, or in any collective motivation at all. Most likely, any actual city-state is the product in large part of unintended consequences.

Argument from the fallacy of composition seems to be very appealing even though completely wrong. Systematically rejecting the fallacy of composition in social theory, perhaps especially in normative theory, has required several centuries, and invocation of the fallacy is still pervasive.

2. Public Goods

Olson based his analysis on Paul Samuelson's theory of public goods. Samuelson (1954) noted that some goods, once they are made available to one person, can be consumed by others at no additional marginal cost; this condition is commonly called jointness of supply or nonrivalness of consumption, because your consumption of the good does not affect mine, as your eating a lovely dinner would block my eating it. Therefore, in standard price theory, in which price tends to equate to marginal cost, such goods should have a zero price. But if they are priced at zero, they will generally not be provided. In essence, price theory commends free riding on the provision of such goods. This might sound like merely a cute logical problem; but standard examples include radio broadcasts, national defense, and clean air. If any of these is provided for anyone, they are de facto provided for everyone in the relevant area or group.

There is a second feature of Samuelson's public goods that would make them problematic in practice: the impossibility of exclusion. Once supplied at all, it is supposedly impossible to exclude anyone from the consumption of a public good. It is often noted that this feature is analytically interesting but empirically often beside the point. States often forcibly exclude people from enjoying such public goods as radio broadcasts. Others can be provided through the use of various devices that enable providers to charge the beneficiaries and to exclude those who do not pay, as for example, by advertising that imposes a cost on television viewers or the use of cable rather than broadcasting over the air to provide television programming at a substantial price. Exclusion is merely a problem of technology, not of logic. With present technology,

however, it may be too expensive to exclude many people and we may therefore want the state to provide many goods so that we can avoid the costs of exclusion.

There are some compelling cases of goods that are both joint in supply and nonexcludable. National defense that protects cities against attack from abroad, for example, is for all practical purposes a good with both these features. But the full logic of public goods is of little practical interest for many important contexts. Indeed, what are often practically and politically interesting are goods that are in fact provided collectively, independently of whether they have either of the defining features of public goods. We can even provide purely private consumptions through collective choice. For example, most welfare programs transfer ordinary private consumption goods or resources for obtaining these. Although technically these are not public goods in Samuelson's sense, we can refer to them as collective goods and we can treat provision of them as essentially problems of collective action.

Olson notes that very many politically provided goods, such as highways and public safety, roughly have the qualities of Samuelson's public goods and therefore face the problem of free riding that undercuts supply of the goods. Note that the supply of such goods by the state overcomes the free rider problem because voters can vote on whether everyone is required to pay toward the provision, as in the case of national defense. If I am voting whether the good is to be provided, I cannot free ride and I need not worry that anyone else can either. We can all vote our overall preferences between supply at the relevant individual cost versus no supply and no cost of provision, so that democratic choice turns our problem into a simple coordination—if we are all in agreement that a relevant good should be collectively provided.

From the analysis of the de facto logic of collective action that would block the spontaneous provision of many fundamentally important classes of collective goods we can go on to argue for what is now often called the public-goods theory of the state (Baumol 1952, 90-93; more generally see Hardin 1997). The public-goods account gives us a clear normative justification of the state in welfarist terms: The state resolves many centrally important and potentially pervasive free rider problems. It does not give us an explanatory account of the origins of the state, although it could arguably contribute to the explanation of the maintenance of a state once it exists. It might do so through support for the state's collective provisions and, therefore, support for the state. Unfortunately, as libertarians are quick to note, giving the state power to resolve certain free rider problems also gives it the power to do many other things that could not be justified with similar normative arguments.

3. Self-Interest Theory

The modern view of the fallacy of composition in social choice is a product of the understanding of politics as self-interested. That understanding begins partially with Niccolò Machiavelli, who advised the prince to act from his own self-interest. A century later, Hobbes did not bother to advise acting from self-interest because he supposed virtually everyone naturally does so. From that assumption, he went on to give us the first modern political theory of the state, an explanatory political theory that is not merely a handbook for the prince and that is not grounded in normative assumptions of religious commitment. To some extent, therefore, one could credit

Hobbes with the invention of social science and of explanatory, as opposed to hortatory, political theory.

Hobbes's argument for the state is an argument from mutual advantage. We all benefit if there is a powerful state in place to regulate behavior, thereby enabling us to invest efforts in producing things to make our lives better and to enable us to exchange with each other without fear that others will wreck our efforts. Some scholars see this resolution as a matter of mutual cooperation in a grand prisoner's dilemma. This is strategically or game theoretically wrong because putting a state in place is a matter of coordination on one or another sovereign, not a matter of exchange among us or between us and the sovereign. Once that state is in place, it might be true that I would rather free ride on the better behavior of my fellow citizens, who are generally law-abiding. But I generally cannot succeed in doing so, because there is police power to coerce me if necessary.

What I cannot free ride on is the creation of a state. I want the state, just as everyone who sees it as mutually advantageous wants it. Suppose that somehow, perhaps using the ring of Gyges to make me invisible as Glaucon proposed, I could get away with theft or other crimes. Even then, I would still want the state to have the power to coerce people into order because if they are not orderly, they will produce nothing for me to steal. If it is true, as Hobbes supposes, that having a state is mutually advantageous, it follows that we all want it; and none of us can free ride on *whether* there is a state. Either there is one or there is not, and if there is one, then I am potentially subject to its powers of legal coercion. On balance, I would want there to be an effective state for the protections it gives me against others despite its potential for coercing me into good behavior.

When we vote on a policy, as discussed above, we de facto change our problem from a collective-action prisoner's dilemma into a simple coordination problem by ruling out individual idiosyncrasies in our choices. We have only collective choice: provision for all or provision for none. Although the state is itself not the resolution of a giant prisoner's dilemma or collective action, as is sometimes supposed, it can be used to resolve prisoner's dilemma interactions. Suppose you and I both want cleaner air but that each of us would free ride on the efforts of others to clean the air. State policy can block free riding, if necessary at metaphorical gunpoint. We both prefer the general effort to provide cleaner air and we both pay our share toward the cost of providing it.

4. Explaining Collective Action

The facts that there is a lot of collective action even in many large-number contexts in which the individuals do not have rich relationships with each other and that, therefore, many people are not free riding in relevant contexts suggest at least three possibilities. First, there are ways to affect the incentives of group members to make it their interest to contribute. Second, motivations other than self-interest may be in play. Third, the actors in the seemingly successful collective actions fail to understand their own interests. Each of these possibilities is important and interesting, and the latter two are philosophically interesting. Each is also supported by extensive empirical evidence.

In the first category are the *by-product theory* proposed by Olson and the possibility that *political entrepreneurs*, at least partially acting in their own interest, can engineer provisions. In the by-product theory, I might contribute to my group's effort because the group ties my contribution to provision of some private good that I want, such as participation in the Sierra Club's outdoor activities or, in the early days of unions, low-cost group-insurance benefits not available in the market. Such private goods can commonly be provided in the market, so that their usefulness may eventually be undercut. Indeed, firms that provide insurance benefits to their employees thereby undercut one of the appeals of union membership. The general decline of American unions in recent decades is partially the result of their success in resolving problems for workers in ways that do not require continuing union effort.

When collective goods can be supplied by government or some other agency, political entrepreneurs might organize the provision. For example, Senator Howard Metzenbaum worked to get legislation on behalf of the poor and of unions, although he was certainly not poor and was not himself a working member of a union. Yet he benefited from his efforts in support of these groups if they voted to keep him in office. Because there is government, collective action of many kinds is far more likely than we might expect from the dismal logic of collective action.

Turn now to the assumption of self-interest. In generalizing from the motive of self-interest to the explanation and even justification of actions and institutions, Hobbes wished to reduce political theory to an analog of geometry or physics, so that it would be a deductive science. All of the statements of the logic of collective action above are grounded in an assumption of the self-interested incentives of the actors. When the number of members of a group that would benefit from collective action is small enough, we might expect cooperation that results from extensive interaction, mutual monitoring, and even commitments to each other that trump or block narrowly self-interested actions. But when the group is very large, free riding is often clearly in the interest of most and perhaps all members.

Against the assumption of purely self-interested behavior, we know that there are many active, more or less well funded groups that seek collective results that serve interests other than those of their own members. For a trivial example, none of the hundreds of people who have been members of the American League to Abolish Capital Punishment is likely to have had a personal stake in whether there is a death penalty (Schattschneider 1960, 26). In our time, thousands of people are evidently willing to die for their causes (and not simply to risk dying—we already do that when we merely drive to a restaurant for dinner). Perhaps some of these people act from a belief that they will receive an eternal reward for their actions, so that their actions are consistent with their interests.

Finally turn to the possible role of misunderstanding in leading people to act for collective provisions. Despite the fact that people regularly grasp the incentive to free ride on the efforts of others in many contexts, it is also true that the logic of collective action is hard to grasp in the abstract. The cursory history above suggests just how hard it was to come to a general understanding of the problem. Today, there are thousands of social scientists and philosophers who do understand it and maybe far more who still do not. But in the general population, few people grasp it. Those who teach these issues regularly discover that some students insist that the logic is wrong, that it is, for example, in the interest of workers to pay dues voluntarily to unions

or that it is in one's interest to vote. If the latter is true, then about half of voting-age Americans evidently act against their own interests every quadrennial election year. It would be extremely difficult to assess how large is the role of misunderstanding in the reasons for action in general because those who do not understand the issues cannot usefully be asked whether they do understand. But the evidence of misunderstanding and ignorance is extensive (Hardin 2002).

5. Democracy

The logic of collective action has become one of the richest areas of research and theory in rational choice theory in the social sciences and philosophy. Much of that literature focuses on the explanation of varied social actions and outcomes, including spontaneous actions, social norms, and large institutions. One of its main areas is efforts to explain behavior in elections. In general, voting seems clearly to be a case of collective action for the mutual benefit of all those who support a particular candidate or whose interests would be furthered by that candidate's election. If voting entails costs to individuals whereas the benefit from voting is essentially a collective benefit only very weakly dependent on any individual's vote, individuals may find it in their interest not to vote (Downs 1957). When the number of voters on one side of an election is in the tens of millions, no individual's vote is likely to matter at all. Even though it is not narrowly in their own individual interest to do so if there are any costs to be borne in going to the polls to vote and in learning enough about various candidates to know which ones would further a voter's interests, millions of people vote. This is one of the most notorious failures of the rational choice literature. A standard response to the phenomenon of massive voting is to note how cheap the action is and how much public effort is expended in exhorting citizens to vote. But it seems likely that much of the voting we see is normatively motivated.

Both the voting that does happen and the non-voting or free riding that accompanies it as well as the level of ignorance of voters call simple normative theories or views of democracy into question. "The will of the people" is a notoriously hallowed phrase that is vitiated by logical fallacy and that is generally meaningless as a supposed characterization of democracy, in which decisions are majoritarian and not unanimous (Kant [1796] 1970, 101; Maitland [1875] 2000, 101-112). It might on rare occasion be true that the people are in virtually unanimous agreement on some important policy so that they share the same will on that issue. But generally, there is a diversity of views and even deep conflict over significant policies in modern pluralist democracies. In large societies, democracy is invariably representative democracy except on issues that are put to direct popular vote in referendums. Even this term, "representative," is gutted by logical fallacy. My representative on some governmental body is apt to work on behalf of my interests some of the time and against them some of the time. Even those for whom I vote often work against my interests; and if they should be said to represent me, they often do a very bad job of it.

Note that, as mentioned earlier, the election of a candidate is a good whose provision is a step function of the number of votes. If there are n votes cast, then half of $n - 1$ votes spells defeat and half of $n + 1$ spells victory. If, as Mayor Daley did with the Chicago votes in the US presidential election of 1960, I could withhold my vote until all others have been counted, my vote might actually tip the result to victory for my candidate. In actual fact, the typical voter casts a vote in a state of ignorance about the final count. I might readily expect the margin to be very large or I

might expect it to be very narrow. But I am unlikely to expect it to be tied, so that my own vote would be decisive. Hence, although the actual provision is a step function, my vote or my free riding must be based on some sense of the expected effect of my vote, and that must generally be minuscule for any election in a large electorate. With extremely high probability, my vote is likely to have no effect.

6. Free Riding and Morality

The fact that people do organize for collective purposes is often taken to imply the normative goodness of what they seek. If the by-product theory is correct, however, this conclusion is called into question. For example, we might join a union merely to obtain insurance at the inexpensive group rate even though we vote against all its strike proposals, would never join a picket line, and might even be hostile to the idea of unions. Or we might go to a political demonstration for varied reasons other than agreement with the ostensible object of the demonstration; for example pro-war proponents might join in a peace march on a glorious day to hear performances by outstanding singers in a large public park—something they might happily have paid to do.

Also, free riding on the provision of a collective good is often characterized as morally wrong. H.L.A. Hart (1955, 185-6) says that, if others are cooperating for mutual benefit and I benefit from their cooperation, then I have an obligation to do my share. John Rawls ([1971] 1999, 96) cites this argument favorably. Robert Nozick (1974, 90-95) dismisses the claim, as would anyone who thinks with Hume that we cannot deduce an ought from an is (Hume [1739-40] 1978, book 3, part 1, sect. 1, p. 469). Nozick notes that Hart's position would entail the possibility that others could impose an obligation on me merely by their acting cooperatively to provide some good from which I also benefit. One might conclude that free riding in some instance is wrong, but this cannot follow merely from the fact that it is free riding, as Hart and Rawls wrongly presume. Rawls ([1971] 1999, 98) also says that, unlike public officials who have taken an oath, citizens have no obligation to obey the government, although they surely can benefit substantially from its actions. This view seems to be consistent with his reading of Hart.

Some people insist, of course, that we have a moral duty to vote, although it is extremely difficult to ground that duty in any more basic and compelling set of principles. People sometimes even argue from a loose generalization argument, and ask, "What if everybody failed to vote?" or, in the language here, "What if everybody chose to free ride on the voting of others?" The practical answer to that question, of course, is that everybody does not choose to free ride, only some do, and that it is exceedingly unlikely that everyone will choose to do so. But if I think almost no one else will vote, I should probably conclude that it is therefore then in my interest to vote (that day has yet to come). Perhaps there is some number of citizens, k , such that, if fewer than k citizens vote, democracy will fail. If so, half of all citizens seems likely to be a number significantly greater than k . Local elections in the US often turn out far less than half the eligible citizens and presidential elections turn out a bit more than half. One may question just what kind of democracy the US has, but it seems in some significant ways to work.

The generalization argument here is a variant of the fallacy of composition and it is logically specious in its presumed implication. Yet many people assert such an argument in collective

action contexts, and they may very well be motivated by the apparent moral authority of the argument. An alternative question here would be something like: “What if everybody failed to take into account the effect of their own vote on the election?” The answer is that roughly half of Americans may well fail to take into account the effect of their own votes on elections, and they vote. The rest ride free.

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Collective Action and the Evolution of Social Norms

Elinor Ostrom

With the publication of *The Logic of Collective Action* in 1965, Mancur Olson challenged a cherished foundation of modern democratic thought that groups would tend to form and take collective action whenever members jointly benefitted. Instead, Olson (1965, p. 2) offered the provocative assertion that no self-interested person would contribute to the production of a public good: “[U]nless the number of individuals in a group is quite small, or unless there is coercion or some other special device to make individuals act in their common interest, *rational, self-interested individuals will not act to achieve their common or group interests.*” This argument soon became known as the “zero contribution thesis.”

The idea that rational agents were not likely to cooperate in certain settings, even when such cooperation would be to their mutual benefit, was also soon shown to have the structure of an *n*-person prisoner’s dilemma game (Hardin 1971, 1982). Indeed, the prisoner’s dilemma game, along with other social dilemmas, has come to be viewed as the canonical representation of collective action problems (Lichbach, 1996). The zero contribution thesis underpins the presumption in policy textbooks (and many contemporary public policies) that individuals cannot overcome collective action problems and need to have externally enforced rules to achieve their own long-term self-interest.

The zero contribution thesis, however, contradicts observations of everyday life. After all, many people vote, do not cheat on their taxes, and contribute effort

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to voluntary associations. Extensive fieldwork has by now established that individuals in all walks of life and all parts of the world voluntarily organize themselves so as to gain the benefits of trade, to provide mutual protection against risk, and to create and enforce rules that protect natural resources.¹ Solid empirical evidence is mounting that governmental policy can frustrate, rather than facilitate, the private provision of public goods (Montgomery and Bean, 1999). Field research also confirms that the temptation to free ride on the provision of collective benefits is a universal problem. In all known self-organized resource governance regimes that have survived for multiple generations, participants invest resources in monitoring and sanctioning the actions of each other so as to reduce the probability of free riding (Ostrom, 1990).

While these empirical studies have posed a severe challenge to the zero contribution theory, these findings have not yet been well integrated into an accepted, revised theory of collective action. A substantial gap exists between the theoretical prediction that self-interested individuals will have extreme difficulty in coordinating collective action and the reality that such cooperative behavior is widespread, although far from inevitable.

Both theorists and empirical researchers are trying to bridge this gap. Recent work in game theory—often in a symbiotic relationship with evidence from experimental studies—has set out to provide an alternative micro theory of individual behavior that begins to explain anomalous findings (McCabe, Rassenti and Smith, 1996; Rabin, 1993; Fehr and Schmidt, 1999; Selten, 1991; Bowles, 1998). On the empirical side, considerable effort has gone into trying to identify the key factors that affect the likelihood of successful collective action (Feeny et al., 1990; Baland and Platteau, 1996; Ostrom, forthcoming).

This paper will describe both avenues of research on the underpinnings of collective action, first focusing on the experimental evidence and potential theoretical explanations, and then on the real-world empirical evidence. This two-pronged approach to the problem has been a vibrant area of research that is yielding many insights. A central finding is that the world contains multiple types of individuals, some more willing than others to initiate reciprocity to achieve the benefits of collective action. Thus, a core question is how potential cooperators signal one another and design institutions that reinforce rather than destroy conditional cooperation. While no full-blown theory of collective action yet exists, evolutionary theories appear most able to explain the diverse findings from the lab and the field and to carry the nucleus of an overarching theory.

¹ See Milgrom, North and Weingast (1990) and Bromley et al. (1992). An extensive bibliography by Hess (1999) on diverse institutions for dealing with common pool resources can be searched on the web at (<http://www.indiana.edu/~workshop/wsl/wsl.html>) or obtained on a CD-ROM disk.

Laboratory Evidence on Rational Choice in Collective Action Situations

Most studies by political economists assume a standard model of rational individual action—what I will call a rational egoist. A wide range of economic experiments have found that the rational egoist assumption works well in predicting the outcome in auctions and competitive market situations (Kagel and Roth, 1995). While subjects do not arrive at the predicted equilibrium in the first round of market experiments, behavior closely approximates the predicted equilibrium by the end of the first five rounds in these experiments. One of the major successes of experimental economics is to demonstrate the robustness of microeconomic theory for explaining market behavior.

In regard to collective action situations, on the other hand, the results are entirely different. Linear public good experiments are widely used for examining the willingness of individuals to overcome collective action problems. In a linear public good experiment, each individual is endowed with a fixed set of assets and must decide how many of these assets to contribute to a public good. When an individual makes a contribution of, say, 10 units to the public good, each of the participants in the group, including that individual, receive a benefit of, say, five units apiece. In this setting, the optimal outcome for the group of players as a whole is for everyone to contribute all of their endowments to provide the public good (if a group of 10 people, each individual contribution of 10 will have a social payoff of 50!). However, the unique equilibrium for rational egoists in a single-shot game is that everyone contributes zero, since each individual has access to benefits of the public good funded by the contributions of others, without paying any costs.²

If the public goods game is played for a finite number of rounds, zero is also the predicted equilibrium for every round. Rational egoists will reason that zero contribution is the equilibrium in the last round, and because they expect everyone to contribute zero in the last round, they also expect everyone to contribute zero in the second-to-last round, and eventually by backward induction they will work their way to the decision not to contribute to the public good in the present. Of course, these predictions are based on the assumptions that all players are fully rational and interested only in their own immediate financial payoff, that all players

² In a linear public good game, utility is a linear function of individual earnings,

$$U_i = U_i[(E - x_i) + A \cdot P(\sum x_i)],$$

where E is an individual endowment of assets, x_i is the amount of this endowment contributed to provide the good, A is the allocation formula used to distribute the group benefit to individual players, and P is the production function. In a linear public good game, A is specified as $1/N$ and $0 < 1/N < P < 1$ (but both of these functions vary in other types of collective action). So long as $P < 1$, contributing to the collective good is never an optimal strategy for a fully self-interested player.

understand the structure of the game fully and believe that all other players are fully rational, and that no external actor can enforce agreements between the players.

Since the first public good experiments were undertaken by Dawes, McTavish and Shaklee (1977), a truly huge number of such experiments has been undertaken under various conditions (see Davis and Holt, 1993; Ledyard, 1995; and Offerman, 1997, for an overview). By now seven general findings have been replicated so frequently that these can be considered the core facts that theory needs to explain.

1) Subjects contribute between 40 and 60 percent of their endowments to the public good in a one-shot game as well as in the first round of finitely repeated games.

2) After the first round, contribution levels tend to decay downward, but remain well above zero. A repeated finding is that over 70 percent of subjects contribute nothing in the announced last round of a finitely repeated sequence.

3) Those who believe others will cooperate in social dilemmas are more likely to cooperate themselves. A rational egoist in a public good game, however, should not in any way be affected by a belief regarding the contribution levels of others. The dominant strategy is a zero contribution no matter what others do.

4) In general, learning the game better tends to lead to more cooperation, not less. In a clear test of an earlier speculation that it just took time for subjects to learn the predicted equilibrium strategy in public good games, Isaac, Walker and Williams (1994) repeated the same game for 10 rounds, 40 rounds, and 60 rounds with experienced subjects who were specifically told the end period of each design. They found that the rate of decay is inversely related to the number of decision rounds. In other words, instead of learning *not* to cooperate, subjects learn how to cooperate at a moderate level for ever-longer periods of time!

5) Face-to-face communication in a public good game—as well as in other types of social dilemmas—produces substantial increases in cooperation that are sustained across all periods including the last period (Ostrom and Walker, 1997).³ The strong effect of communication is not consistent with currently accepted theory, because verbal agreements in these experiments are not enforced. Thus, communication is only “cheap talk” and makes no difference in predicted outcomes in social dilemmas. But instead of using this opportunity to fool others into cooperating, subjects use the time to discuss the optimal joint strategy, to extract promises from one another, and to give verbal tongue-lashings when aggregate contributions fall below promised levels. Interestingly, when communication is implemented by allowing subjects to signal promises to cooperate through their

³ Even more startling, Bohnet and Frey (1999) find that simply allowing subjects to see the other persons with whom they are playing greatly increases cooperation as contrasted to completely anonymous situations. Further, Frank, Gilovich and Regan (1993) find that allowing subjects to have a face-to-face discussion enables them to predict who will play cooperatively at a rate significantly better than chance.

computer terminals, much less cooperation occurs than in experiments allowing face-to-face communication.

6) When the structure of the game allows it, subjects will expend personal resources to punish those who make below-average contributions to a collective benefit, including the last period of a finitely repeated game. No rational egoist is predicted to spend anything to punish others, since the positive impact of such an action is shared equally with others whether or not they also spend resources on punishing. Indeed, experiments conducted in the United States, Switzerland, and Japan show that individuals who are initially the least trusting are more willing to contribute to sanctioning systems and are likely to be transformed into strong cooperators by the availability of a sanctioning mechanism (Fehr and Gächter, forthcoming). The finding that face-to-face communication is more efficacious than computerized signaling is probably due to the richer language structure available and the added intrinsic costs involved in hearing the intonation and seeing the body language of those who are genuinely angry at free riders (Ostrom, 1998a).

7) The rate of contribution to a public good is affected by various contextual factors including the framing of the situation and the rules used for assigning participants, increasing competition among them, allowing communication, authorizing sanctioning mechanisms, or allocating benefits.

These facts are hard to explain using the standard theory that all individuals who face the same objective game structure evaluate decisions in the same way!⁴ We cannot simply resort to the easy criticism that undergraduate students are erratic. Increasing the size of the payoffs offered in experiments does not appear to change the broad patterns of empirical results obtained.⁵ I believe that one is forced by these well-substantiated facts to adopt a more eclectic (and classical) view of human behavior.

Building a Theory of Collective Action with Multiple Types of Players

From the experimental findings, one can begin to put together some of the key assumptions that need to be included in a revised theory of collective action.

⁴ Although the discussion here focuses on collective action and public good games in particular, a broader range of experiments exists in which the rational egoist's prediction pans out badly. These include the ultimatum game, the dictator game, the trust game, and common-pool resources games with communication.

⁵ Most of these experiments involve ultimatum games but the findings are quite relevant. Cameron (1995), for example, conducted ultimatum experiments in Indonesia and thereby was able to use sums that amounted to three months' wages. In this extremely tempting situation, she still found that 56 percent of the Proposers allocated between 40 and 50 percent of this very substantial sum to the Responder.

Assuming the existence of two types of “norm-using” players—“conditional cooperators” and “willing punishers”—in addition to rational egoists, enables one to start making more coherent sense out of the findings of the laboratory experiments on contributions to public goods.

Conditional cooperators are individuals who are willing to initiate cooperative action when they estimate others will reciprocate and to repeat these actions as long as a sufficient proportion of the others involved reciprocate. Conditional cooperators are the source of the relatively high levels of contributions in one-shot or initial rounds of prisoner’s dilemma and public good games. Their initial contributions may encourage some rational egoists to contribute as well, so as to obtain higher returns in the early rounds of the game (Kreps et al., 1982). Conditional cooperators will tend to trust others and be trustworthy in sequential prisoner’s dilemma games as long as the proportion of others who return trust is relatively high. Conditional cooperators tend to vary, however, in their tolerance for free riding. Some are easily disappointed if others do not contribute, so they begin to reduce their own contributions. As they reduce their contributions, they discourage other conditional cooperators from further contributions. Without communication or institutional mechanisms to stop the downward cascade, eventually only the most determined conditional cooperators continue to make positive contributions in the final rounds.

The first four findings are consistent with an assumption that conditional cooperators are involved in most collective action situations. Conditional cooperators are apparently a substantial proportion of the population, given the large number of one-shot and finitely repeated experiments with initial cooperation rates ranging from 40 to 60 percent. Estimating that others are likely to cooperate should increase their willingness to cooperate. Further, knowing the number of repetitions will be relatively long, conditional cooperators can restrain their disappointment with free riders and keep moderate levels of cooperation (and joint payoffs) going for ever-longer periods of time.

The fifth and sixth findings depend on the presence of a third type of player who is willing, if given an opportunity, to punish presumed free riders through verbal rebukes or to use costly material payoffs when available. Willing punishers may also become willing rewarders if the circle of relationships allows them to reward those who have contributed more than the minimal level. Some conditional cooperators may also be willing punishers. Together, conditional cooperators and willing punishers create a more robust opening for collective action and a mechanism for helping it grow. When allowed to communicate on a face-to-face basis, willing punishers convey a considerable level of scorn and anger toward others who have not fully reciprocated their trust and give substantial positive encouragement when cooperation rates are high. Even more important for the long-term sustainability of collective action is the willingness of some to pay a cost to sanction others. The presence of these norm-using types of players is hard to dispute given the

empirical evidence. The key question now is: How could these norm-using types of players have emerged and survived in a world of rational egoists?

Emergence and Survival of Multiple Types of Players in Evolutionary Processes

Evolutionary theories provide useful ways of modeling the emergence and survival of multiple types of players in a population. In a strict evolutionary model, individuals inherit strategies and do not change strategies in their lifetime. In this approach, those carrying the more successful strategies for an environment reproduce at a higher rate. After many iterations the more successful strategies come to prominence in the population (Axelrod, 1986). Such models are a useful starting point for thinking about competition and relative survival rates among different strategies.⁶

Human evolution occurred mostly during the long Pleistocene era that lasted for about 3 million years, up to about 10,000 years ago. During this era, humans roamed the earth in small bands of hunter-gatherers who were dependent on each other for mutual protection, sharing food, and providing for the young. Survival was dependent not only on aggressively seeking individual returns but also on solving many day-to-day collective action problems. Those of our ancestors who solved these problems most effectively, and learned how to recognize who was deceitful and who was a trustworthy reciprocator, had a selective advantage over those who did not (Barkow, Cosmides and Tooby, 1992).

Evolutionary psychologists who study the cognitive structure of the human brain conclude that humans do not develop general analytical skills that are then applied to a variety of specific problems. Humans are not terribly skilled at general logical problem solving (as any scholar who has taught probability theory to undergraduates can attest). Rather, the human brain appears to have evolved a domain-specific, human-reasoning architecture (Clark and Karmiloff-Smith, 1991). For example, humans use a different approach to reasoning about deontic relationships—what is forbidden, obligated, or permitted—as contrasted to reasoning about what is true and false. When reasoning about deontic relationships, humans tend to check for violations, or cheaters (Manktelow and Over, 1991). When reasoning about whether empirical relationships are true, they tend to use a confirmation strategy (Oaksford and Chater, 1994). This deontic effect in human reasoning has repeatedly been detected even in children as young as three years old and is not associated with overall intelligence or educational level of the subject (Cummins, 1996).

Thus, recent developments in evolutionary theory and supporting empirical research provide strong support for the assumption that modern humans have inherited a propensity to learn social norms, similar to our inherited propensity to learn grammatical rules (Pinker, 1994). Social norms are shared understandings

⁶ For examples of strict evolutionary models involving collective action, see Nowak and Sigmund (1998), Sethi and Somanathan (1996) and Epstein and Axtell (1996).

about actions that are obligatory, permitted, or forbidden (Crawford and Ostrom, 1995). Which norms are learned, however, varies from one culture to another, across families, and with exposure to diverse social norms expressed within various types of situations. The intrinsic cost or anguish that an individual suffers from failing to use a social norm, such as telling the truth or keeping a promise, is referred to as guilt, if entirely self-inflicted, or as shame, when the knowledge of the failure is known by others (Posner and Rasmusen, 1999).

The Indirect Evolutionary Approach to Adaptation Through Experience

Recent work on an *indirect* evolutionary approach to the study of human behavior offers a rigorous theoretical approach for understanding how preferences—including those associated with social norms—evolve or adapt (Güth and Yaari, 1992; Güth, 1995). In an indirect evolutionary model, players receive objective payoffs, but make decisions based on the transformation of these material rewards into intrinsic preferences. Those who value reciprocity, fairness, and being trustworthy add a subjective change parameter to actions (of themselves or others) that are consistent or not consistent with their norms. This approach allows individuals to start with a predisposition to act in a certain way—thus, they are not rational egoists who only look forward—but it also allows those preferences to adapt in a relatively short number of iterations given the objective payoffs they receive and their intrinsic preferences about those payoffs.

Social dilemmas associated with games of trust, like sequential prisoner's dilemma games, are particularly useful games for discussing the indirect evolutionary approach. In such games, if two players trust each other and cooperate, they can both receive a moderately high payoff. However, if one player cooperates and the other does not, then the one who did not cooperate receives an even higher payoff, while the other receives little or nothing. For a rational egoist playing this game, the choice is not to trust, because the expectation is that the other player will not trust, either. As a result, both players will end up with lower payoffs than if they had been able to trust and cooperate. When considering such games, it is useful to remember that most contractual relationships—whether for private or public goods—have at least an element of this basic structure of trying to assure mutual trust. An indirect evolutionary approach explains how a mixture of norm-users and rational egoists would emerge in settings where standard rational choice theory assumes the presence of rational egoists alone.

In this approach, social norms may lead individuals to behave differently in the same objective situation depending on how strongly they value conformance with (or deviance from) a norm. Rational egoists can be thought of as having intrinsic payoffs that are the same as objective payoffs, since they do not value the social norm of reciprocity. Conditional cooperators (to take only one additional type of player for now) would be modeled as being trustworthy types and would have an additional parameter that adds value to the objective payoffs when reciprocating trust with trustworthiness. By their behavior and resulting interaction, however,

different types of players are likely to gain differential objective returns. In a game of trust where players are chosen from a population that initially contains some proportion of rational egoists and conditional cooperators, the level of information about player types affects the relative proportion of rational egoists and conditional cooperators over time. With complete information regarding types, conditional cooperators playing a trustworthy strategy will more frequently receive the higher payoff, while rational egoists will consistently receive a lower payoff, since others will not trust them.

Only the trustworthy type would survive in an evolutionary process with complete information (Güth and Kliemt, 1998, p. 386). Viewed as a cultural evolutionary process, new entrants to the population would be more likely to adopt the preference ordering of those who obtained the higher material payoffs in the immediate past (Boyd and Richerson, 1985). Those who were less successful would tend to learn the values of those who had achieved higher material rewards (Börgers and Sarin, 1997).⁷ Where a player's type is common knowledge, rational egoists would not survive. Full and accurate information about all players' types, however, is a very strong assumption and unlikely to be met in most real world settings.

If there is no information about player types for a relatively large population, preferences will evolve so that only rational egoists survive.⁸ If information about the proportion of a population that is trustworthy is known, and no information is known about the type of a specific player, Güth and Kliemt (1998) show that first players will trust second players as long as the expected return of meeting trustworthy players and receiving the higher payoff exceeds the payoff obtained when neither player trusts the other. In such a setting, however, the share of the population held by the norm-using types is bound to decline. On the other hand, if there is a noisy signal about a player's type that is at least more accurate than random, trustworthy types will survive as a substantial proportion of the population. Noisy signals may result from seeing one another, face-to-face communication, and various mechanisms that humans have designed to monitor each other's behavior.

Evidence Testing the Indirect Evolutionary Approach

An indirect evolutionary approach is able to explain how a mixture of contingent cooperators and rational egoists would emerge in settings where traditional

⁷ Eshel, Samuelson and Shaked (1998) develop a learning model where a population of Altruists who adopt a strategy of providing a local public good interacts in a local neighborhood with a population of Egoists who free ride. In this local interaction setting, Altruists' strategies are imitated sufficiently often in a Markovian learning process to become one of the absorbing states. Altruists interacting with Egoists outside a circular local neighborhood are not so likely to survive.

⁸ This implies that, in a game where players know only their own payoffs and not the payoffs of others, they are more likely to behave like rational egoists. McCabe and Smith (1999) show that players tend to evolve toward the predicted, subgame perfect outcomes in experiments where they have only private information of their own payoffs and to cooperative outcomes when they have information about payoffs and the moves made by other players (see also McCabe, Rassenti and Smith, 1996).

game theory predicts that only rational egoists should prevail. The first six of the seven core findings summarized above were in part the stimulus for the development of the indirect evolutionary theory and the seventh is not inconsistent (see below for further discussion of it). Given the recent development of this approach, direct tests of this theory are not extensive. From the viewpoint of an indirect evolutionary process, participants in a collective action problem would start with differential, intrinsic preferences over outcomes due to their predispositions toward norms such as reciprocity and trust. Participants would learn about the likely behavior of others and shift their behavior in light of the experience and the objective payoffs they have received. Several recent experiments provide evidence of these kinds of contingent behaviors and behavioral shifts.⁹

In a one-shot, sequential, double-blind prisoner's dilemma experiment, for example, the players were asked to rank their preferences over the final outcomes after they had made their own choice, but before they knew their partner's decision. Forty percent of a pool of 136 subjects ranked the cooperative outcome (C,C) higher than the outcome if they defect while the other cooperates (D,C), and 27 percent were indifferent between these outcomes, even though their individual payoff was substantially higher for them in the latter outcome (Ahn, Ostrom and Walker, 1998).¹⁰ This finding confirms that not all players enter a collective action situation as pure forward-looking rational egoists who make decisions based solely on individual outcomes. Some bring with them a set of norms and values that can support cooperation.

On the other hand, preferences based on these norms can be altered by bad experiences. After 72 subjects had played 12 rounds of a finitely repeated prisoner's dilemma game where partners were randomly matched each round, rates of cooperation were very low and many players had experienced multiple instances where partners had declined to cooperate, only 19 percent of the respondents ranked (C,C) above (D,C), while 17 percent were indifferent (Ahn et al., 1999). In this setting, the norms supporting cooperation and reciprocity were diminished, but not eliminated, by experience.

In another version of the prisoner's dilemma game, Cain (1998) first had players participate in a "dictator game"—in which one player divides a sum of money and the other player must accept the division, whatever it is—and then a prisoner's dilemma game. Stingy players, defined as those who retained at least 70 percent of their endowment in the earlier dictator game, tended to predict that all players would defect in the prisoner's dilemma game. Nice players, defined as those

⁹ Further, Kikuchi, Watanabe and Yamagishi (1996) have found that those who express a high degree of trust are able to predict others' behavior more accurately than those with low levels of trust.

¹⁰ To examine the frequency of nonrational egoist preferences, a group of 181 undergraduates was given a questionnaire containing a similar payoff structure on the first day of classes at Indiana University in January 1999. They were asked to rank their preferences. In this nondecision setting, 52 percent reflected preferences that were not consistent with being rational egoists; specifically, 27 percent ranked the outcome (C,C) over (D,C) and 25 percent were indifferent.

that gave away at least 30 percent of their endowment, tended to predict that other nice players would cooperate and stingy players would defect. Before playing the prisoner's dilemma game, players were told whether their opponent had been "stingy" or "nice" in the dictator game. Nice players chose cooperation in the prisoner's dilemma game 69 percent of the time when they were paired with other nice players and 39 percent of the time when they were paired with stingy players.

Finally, interesting experimental (as well as field) evidence has accumulated that externally imposed rules tend to "crowd out" endogenous cooperative behavior (Frey, 1994). For example, consider some paradoxical findings of Frohlich and Oppenheimer (1996) from a prisoner's dilemma game. One set of groups played a regular prisoner's dilemma game, some with communication and some without. A second set of groups used an externally imposed, incentive-compatible mechanism designed to enhance cooperative choices. In the first phase of the experiment, the second set gained higher monetary returns than the control groups, as expected. In the second phase of the experiment, both groups played a regular prisoner's dilemma game. To the surprise of the experimenters, a higher level of cooperation occurred in the control groups that played the regular prisoner's dilemma in both phases, especially for those who communicated on a face-to-face basis. The greater cooperation that had occurred due to the exogenously created incentive-compatible mechanism appeared to be transient. As the authors put it (p. 180), the removal of the external mechanism "seemed to undermine subsequent cooperation and leave the group worse off than those in the control group who had played a regular . . . prisoner's dilemma."

Several other recent experimental studies have confirmed the notion that external rules and monitoring can crowd out cooperative behavior.¹¹ These studies typically find that a social norm, especially in a setting where there is communication between the parties, can work as well or nearly as well at generating cooperative behavior as an externally imposed set of rules and system of monitoring and sanctioning. Moreover, norms seem to have a certain staying power in encouraging a growth of the desire for cooperative behavior over time, while cooperation enforced by externally imposed rules can disappear very quickly. Finally, the worst of all worlds may be one where external authorities impose rules but are only able to achieve weak monitoring and sanctioning. In a world of strong external monitoring and sanctioning, cooperation is enforced without any need for internal norms to develop. In a world of no external rules or monitoring, norms can evolve to support cooperation. But in an in-between case, the mild degree of external monitoring discourages the formation of social norms, while also making it attrac-

¹¹ Bohnet, Frey and Huck (1999) set up a sequential prisoner's dilemma, but add a regulatory regime where a "litigation process" is initiated if there is a breach of performance. Cardenas, Stranlund and Willis (2000) describe an experiment based on harvesting from a common-pool resource conducted in three rural villages in Columbia where exogenous but imperfect rule enforcement generated less cooperation than allowing face-to-face communication.

tive for some players to deceive and defect and take the relatively low risk of being caught.

The Evolution of Rules and Norms in the Field

Field studies of collective action problems are extensive and generally find that cooperation levels vary from extremely high to extremely low across different settings. (As discussed above, the seventh core finding from experimental research is that contextual factors affect the rate of contribution to public goods.) An immense number of contextual variables are also identified by field researchers as conducive or detrimental to endogenous collective action. Among those proposed are: the type of production and allocation functions; the predictability of resource flows; the relative scarcity of the good; the size of the group involved; the heterogeneity of the group; the dependence of the group on the good; common understanding of the group; the size of the total collective benefit; the marginal contribution by one person to the collective good; the size of the temptation to free ride; the loss to cooperators when others do not cooperate; having a choice of participating or not; the presence of leadership; past experience and level of social capital; the autonomy to make binding rules; and a wide diversity of rules that are used to change the structure of the situation (see literature cited in Ostrom, forthcoming).

Some consistent findings are emerging from empirical field research. A frequent finding is that when the users of a common-pool resource organize themselves to devise and enforce some of their own basic rules, they tend to manage local resources more sustainably than when rules are externally imposed on them (for example, Tang, 1992; Blomquist, 1992; Baland and Platteau, 1996; Wade, 1994). Common-pool resources are natural or humanly created systems that generate a finite flow of benefits where it is costly to exclude beneficiaries and one person's consumption subtracts from the amount of benefits available to others (Ostrom, Gardner and Walker, 1994). The users of a common-pool resource face a first-level dilemma that each individual would prefer that others control their use of the resource while each is able to use the resource freely. An effort to change these rules is a second-level dilemma, since the new rules that they share are a public good. Thus, users face a collective action problem, similar in many respects to the experiments discussed above, of how to cooperate when their immediate best-response strategies lead to suboptimal outcomes for all. A key question now is: How does evolutionary theory help us understand the well-established finding that many groups of individuals overcome both dilemmas? Further, how can we understand how self-organized resource regimes, that rarely rely on external third-party enforcement, frequently outperform government-owned resource regimes that rely on externally enforced, formal rules?

The Emergence of Self-Organized Collective Action

From evolutionary theory, we should expect some individuals to have an initial propensity to follow a norm of reciprocity and to be willing to restrict their own use of a common pool resource so long as almost everyone reciprocates. If a small core group of users identify each other, they can begin a process of cooperation without having to devise a full-blown organization with all of the rules that they might eventually need to sustain cooperation over time. The presence of a leader or entrepreneur, who articulates different ways of organizing to improve joint outcomes, is frequently an important initial stimulus (Frohlich, Oppenheimer and Young, 1971; Varughese, 1999).¹²

If a group of users can determine its own membership—including those who agree to use the resource according to their agreed-upon rules and excluding those who do not agree to these rules—the group has made an important first step toward the development of greater trust and reciprocity. Group boundaries are frequently marked by well-understood criteria, like everyone who lives in a particular community or has joined a specific local cooperative. Membership may also be marked by symbolic boundaries and involve complex rituals and beliefs that help solidify individual beliefs about the trustworthiness of others.

Design Principles of Long-Surviving, Self-Organized Resource Regimes

Successful self-organized resource regimes can initially draw upon locally evolved norms of reciprocity and trustworthiness and the likely presence of local leaders in most community settings. More important, however, for explaining their long-term survival and comparative effectiveness, resource regimes that have flourished over multiple generations tend to be characterized by a set of design principles. These design principles are extensively discussed in Ostrom (1990) and have been subjected to extensive empirical testing.¹³ Evolutionary theory helps to explain how these design principles work to help groups sustain and build their cooperation over long periods of time.

We have already discussed the first design principle—the presence of clear boundary rules. Using this principle enables participants to know who is in and who is out of a defined set of relationships and thus with whom to cooperate. The second design principle is that the local rules-in-use restrict the amount, timing,

¹² Empirical studies of civil rights movements, where contributions can be very costly, find that organizers search for ways to assure potential participants of the importance of shared internal norms and that many others will also participate (Chong, 1991). Membership in churches and other groups that jointly commit themselves to protests and other forms of collective action is also an important factor (Opp, Voss and Gern, 1995).

¹³ The design principles that characterize long-standing common-pool resource regimes have now been subject to considerable further empirical studies since they were first articulated (Ostrom, 1990). While minor modifications have been offered to express the design principles somewhat differently, no empirical study has challenged their validity, to my knowledge (Morrow and Hull, 1996; Asquith, 1999; Bardhan, 1999; Lam, 1998).

and technology of harvesting the resource; allocate benefits proportional to required inputs; and are crafted to take local conditions into account. If a group of users is going to harvest from a resource over the long run, they must devise rules related to how much, when, and how different products are to be harvested, and they need to assess the costs on users of operating a system. Well-tailored rules help to account for the perseverance of the resource itself. How to relate user inputs to the benefits they obtain is a crucial element of establishing a fair system (Trawick, 1999). If some users get all the benefits and pay few of the costs, others become unwilling to follow rules over time.

In long-surviving irrigation systems, for example, subtly different rules are used in each system for assessing water fees used to pay for maintenance activities, but water tends to be allocated proportional to fees or other required inputs (Bardhan, 1999). Sometimes water and responsibilities for resource inputs are distributed on a share basis, sometimes on the order in which water is taken, and sometimes strictly on the amount of land irrigated. No single set of rules defined for all irrigation systems in a region would satisfy the particular problems in managing each of these broadly similar, but distinctly different, systems (Tang, 1992; Lam, 1998).

The third design principle is that most of the individuals affected by a resource regime can participate in making and modifying their rules. Resource regimes that use this principle are both able to tailor better rules to local circumstances and to devise rules that are considered fair by participants. The Chisasibi Cree, for example, have devised a complex set of entry and authority rules related to the fish stocks of James Bay as well as the beaver stock located in their defined hunting territory. Berkes (1987, p. 87) explains that these resource systems and the rules used to regulate them have survived and prospered for so long because effective "social mechanisms ensure adherence to rules which exist by virtue of mutual consent within the community. People who violate these rules suffer not only a loss of favor from the animals (important in the Cree ideology of hunting) but also social disgrace." Fair rules of distribution help to build trusting relationships, since more individuals are willing to abide by these rules because they participated in their design and also because they meet shared concepts of fairness (Bowles, 1998).

In a study of 48 irrigation systems in India, Bardhan (1999) finds that the quality of maintenance of irrigation canals is significantly lower on those systems where farmers perceive the rules to be made by a local elite. On the other hand, those farmers (of the 480 interviewed) who responded that the rules have been crafted by most of the farmers, as contrasted to the elite or the government, have a more positive attitude about the water allocation rules and the rule compliance of other farmers. Further, in all of the villages where a government agency decides how water is to be allocated and distributed, frequent rule violations are reported and farmers tend to contribute less to the local village fund. Consistent with this is the finding by Ray and Williams (1999) that the deadweight loss from upstream farmers stealing water on government-owned irrigation systems in Maharashtra,

India, approaches one-fourth of the revenues that could be earned in an efficient water allocation and pricing regime.

Few long-surviving resource regimes rely only on endogenous levels of trust and reciprocity. The fourth design principle is that most long-surviving resource regimes select their own monitors, who are accountable to the users or are users themselves and who keep an eye on resource conditions as well as on user behavior. Further, the fifth design principle points out that these resource regimes use *graduated sanctions* that depend on the seriousness and context of the offense. By creating official positions for local monitors, a resource regime does not have to rely only on willing punishers to impose personal costs on those who break a rule. The community legitimates a position. In some systems, users rotate into this position so everyone has a chance to be a participant as well as a monitor. In other systems, all participants contribute resources and they hire monitors jointly. With local monitors, conditional cooperators are assured that someone is generally checking on the conformance of others to local rules. Thus, they can continue their own cooperation without constant fear that others are taking advantage of them.

On the other hand, the initial sanctions that are imposed are often so low as to have no impact on an expected benefit-cost ratio of breaking local rules (given the substantial temptations frequently involved). Rather, the initial sanction needs to be considered more as information both to the person who is "caught" and to others in the community. Everyone can make an error or can face difficult problems leading them to break a rule. Rule infractions, however, can generate a downward cascade of cooperation in a group that relies only on conditional cooperation and has no capacity to sanction (for example, Kikuchi et al., 1998). In a regime that uses graduated punishments, however, a person who purposely or by error breaks a rule is notified that others notice the infraction (thereby increasing the individual's confidence that others would also be caught). Further, the individual learns that others basically continue to extend their trust and want only a small token to convey a recognition that the mishap occurred. Self-organized regimes rely more on what Margaret Levi calls "quasi-voluntary" cooperation than either strictly voluntary or coerced cooperation (Levi, 1988). A real threat to the continuance of self-organized regimes occurs, however, if some participants break rules repeatedly. The capability to escalate sanctions enables such a regime to warn members that if they do not conform they will have to pay ever-higher sanctions and may eventually be forced to leave the community.

Let me summarize my argument to this point. When the users of a resource design their own rules (Design Principle 3) that are enforced by local users or accountable to them (Design Principle 4) using graduated sanctions (Design Principle 5) that define who has rights to withdraw from the resource (Design Principle 1) and that effectively assign costs proportionate to benefits (Design Principle 2), collective action and monitoring problems are solved in a reinforcing manner (Agrawal, 1999).

Individuals who think a set of rules will be effective in producing higher joint

benefits and that monitoring (including their own) will protect them against being a sucker are willing to undertake conditional cooperation. Once some users have made contingent self-commitments, they are then motivated to monitor other people's behavior, at least from time to time, to assure themselves that others are following the rules most of the time. Conditional cooperation and mutual monitoring reinforce one another, especially in regimes where the rules are designed to reduce monitoring costs. Over time, further adherence to shared norms evolves and high levels of cooperation are achieved without the need to engage in very close and costly monitoring to enforce rule conformance.

The operation of these principles is then bolstered by the sixth design principle that points to the importance of access to rapid, low-cost, local arenas to resolve conflict among users or between users and officials. Rules, unlike physical constraints, have to be understood to be effective. There are always situations in which participants can interpret a rule that they have jointly made in different ways. By devising simple, local mechanisms to get conflicts aired immediately and resolutions that are generally known in the community, the number of conflicts that reduce trust can be reduced. If individuals are going to follow rules over a long period of time, some mechanism for discussing and resolving what constitutes a rule infraction is necessary to the continuance of rule conformance itself.

The capability of local users to develop an ever-more effective regime over time is affected by whether they have minimal recognition of the right to organize by a national or local government. This is the seventh design principle. While some resource regimes have operated for relatively long times without such rights (Ghate, 2000), participants have had to rely almost entirely on unanimity as the rule used to change rules. (Otherwise, any temporarily disgruntled participant who voted against a rule change could go to the external authorities to threaten the regime itself!) Unanimity as a decision rule for changing rules imposes high transaction costs and prevents a group from searching for better matched rules at relatively lower costs.

Users frequently devise their own rules without creating formal, governmental jurisdictions for this purpose. In many in-shore fisheries, for example, local fishers devise extensive rules defining who can use a fishing ground and what kind of equipment can be used (Acheson, 1988; Schlager, 1994). As long as external governmental officials give at least minimal recognition to the legitimacy of such rules, the fishers themselves may be able to enforce the rules. But if external governmental officials presume that only they can make authoritative rules, then it is difficult for local users to sustain a self-organized regime (Johnson and Libecap, 1982).

When common pool resources are somewhat larger, an eighth design principle tends to characterize successful systems—the presence of governance activities organized in multiple layers of nested enterprises. The rules appropriate for allocating water among major branches of an irrigation system, for

example, may not be appropriate for allocating water among farmers along a single distributory channel. Consequently, among long-enduring self-governed regimes, smaller-scale organizations tend to be nested in ever-larger organizations. It is not unusual to find a large, farmer-governed irrigation system, for example, with five layers of organization each with its own distinct set of rules (Yoder, 1992).

Threats to Sustained Collective Action

All economic and political organizations are vulnerable to threats, and self-organized resource-governance regimes are no exception. Both exogenous and endogenous factors challenge their long-term viability. Here we will concentrate on those factors that affect the distribution of types of participants within a regime and the strength of the norms of trust and reciprocity held by participants. Major migration (out of or into an area) is always a threat that may or may not be countered effectively. Out-migration may change the economic viability of a regime due to loss of those who contribute needed resources. In-migration may bring new participants who do not trust others and do not rapidly learn social norms that have been established over a long period of time. Since collective action is largely based on mutual trust, some self-organized resource regimes that are in areas of rapid settlement have disintegrated within relatively short times (Baland and Platteau, 1996).

In addition to rapid shifts in population due to market changes or land distribution policies, several more exogenous and endogenous threats have been identified in the empirical literature (Sengupta, 1991; Bates, 1987; and literature cited in Ostrom, 1998b; Britt, 2000). These include: 1) efforts by national governments to impose a single set of rules on all governance units in a region; 2) rapid changes in technology, in factor availability, and in reliance on monetary transactions; 3) transmission failures from one generation to the next of the operational principles on which self-organized governance is based; 4) turning to external sources of help too frequently; 5) international aid that does not take account of indigenous knowledge and institutions; 6) growth of corruption and other forms of opportunistic behavior; and 7) a lack of large-scale institutional arrangements that provide fair and low-cost resolution mechanisms for conflicts that arise among local regimes, educational and extension facilities, and insurance mechanisms to help when natural disasters strike at a local level.

Contextual variables are thus essential for understanding the initial growth and sustainability of collective action as well as the challenges that long-surviving, self-organized regimes must try to overcome. Simply saying that context matters is not, however, a satisfactory theoretical approach. Adopting an evolutionary approach is the first step toward a more general theoretical synthesis that addresses the question of how context matters. In particular, we need to address how context affects the presence or absence of conditional cooperators and willing punishers

and the likelihood that the norms held by these participants are adopted and strengthened by others in a relevant population.

Conclusion

Both laboratory experiments and field studies confirm that a substantial number of collective action situations are resolved successfully, at least in part. The old-style notion, pre-Mancur Olson, that groups would find ways to act in their own collective interest was not entirely misguided. Indeed, recent developments in evolutionary theory—including the study of cultural evolution—have begun to provide genetic and adaptive underpinnings for the propensity to cooperate based on the development and growth of social norms. Given the frequency and diversity of collective action situations in all modern economies, this represents a more optimistic view than the zero contribution hypothesis. Instead of pure pessimism or pure optimism, however, the picture requires further work to explain why some contextual variables enhance cooperation while others discourage it.

Empirical and theoretical work in the future needs to ask how a large array of contextual variables affects the processes of teaching and evoking social norms; of informing participants about the behavior of others and their adherence to social norms; and of rewarding those who use social norms, such as reciprocity, trust, and fairness. We need to understand how institutional, cultural, and biophysical contexts affect the types of individuals who are recruited into and leave particular types of collective action situations, the kind of information that is made available about past actions, and how individuals can themselves change structural variables so as to enhance the probabilities of norm-using types being involved and growing in strength over time.

Further developments along these lines are essential for the development of public policies that enhance socially beneficial, cooperative behavior based in part on social norms. It is possible that past policy initiatives to encourage collective action that were based primarily on externally changing payoff structures for rational egoists may have been misdirected—and perhaps even crowded out the formation of social norms that might have enhanced cooperative behavior in their own way. Increasing the authority of individuals to devise their own rules may well result in processes that allow social norms to evolve and thereby increase the probability of individuals better solving collective action problems.

■ *Earlier versions of this paper have been presented at seminars at the Workshop in Political Theory and Policy Analysis, Indiana University; Department of Political Science, Gothenburg University; and the Beijer Institute of Ecological Economics, at the Royal Swedish Academy of Sciences in Stockholm. I appreciate the helpful comments made by Iris Bohnet, Juan-Camilo Cardenas, J. Bradford De Long, Bruno Frey, Werner Güth, Roy Gardner, Steffen Huck, Alan Krueger, Fabrice Lehoucq, Frank Maier-Rigaud, Mike McGinnis, Timothy Taylor, Jimmy*

Walker, and the outstanding editing by Patty Dalecki. Support by the Ford Foundation, the MacArthur Foundation, and the National Science Foundation (Grant #SBR 9521918) is gratefully acknowledged.

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Financial Times Magazine

Do you believe in sharing?

How do people work together at all? A story of two researchers who attacked the question in very different ways – and with very different results

AUGUST 30, 2013 by: Tim Harford

While delivering his Nobel lecture in 2007, Al Gore declared: “Today, we dumped another 70 million tons of global-warming pollution into the thin shell of atmosphere surrounding our planet, as if it were an open sewer.”

It’s a powerful example of the way we tend to argue about the impact of the human race on the planet that supports us: statistical or scientific claims combined with a call to action. But the argument misses something important: if we are to act, then how? Who must do what, who will benefit and how will all this be agreed and policed?

To ask how people work together to deal with environmental problems is to ask one of the fundamental questions in social science: how do people work together at all? This is the story of two researchers who attacked the question in very different ways – and with very different results.

“The Tragedy of the Commons” is a seminal article about why some environmental problems are so hard to solve. It was published in the journal *Science* in 1968 and its influence was huge. Partly this was the zeitgeist: the late 1960s and early 1970s was an era of big environmental legislation and regulation in the US. Yet that cannot be the only reason that the “tragedy of the commons” has joined a very small group of concepts – such as the “prisoner’s dilemma” or the “selfish gene” – to have escaped from academia to take on a life of their own.



Ecologist Garrett Hardin, photographed in 1968

The credit must go to Garrett Hardin, the man who coined the phrase and wrote the article. Hardin was a respected ecologist but “The Tragedy of the Commons” wasn’t an ecological study. It wasn’t really a piece of original research at all.

“Nothing he wrote in there had not been said by fisheries economists,” says Daniel Cole, a professor at Indiana University and a scholar of Hardin’s research. The key idea, indeed, goes back to Aristotle. Hardin’s genius was in developing a powerful, succinct story with a memorable name.

The story goes as follows: imagine common pasture, land owned by everyone and no one, “open to all” for grazing livestock. Now consider the incentives faced by people bringing animals to feed. Each new cow brought to the pasture represents pure private profit for the individual herdsman in question. But the commons cannot sustain an infinite number of cows. At some stage it will be overgrazed and the ecosystem may fail. That risk is not borne by any individual, however, but by society as a whole.

With a little mathematical elaboration Hardin showed that these incentives led inescapably to ecological disaster and the collapse of the commons. The idea of a communally owned resource might be appealing but it was ultimately self-defeating.

It was in this context that Hardin deployed the word “tragedy”. He didn’t use it to suggest that this was sad. He meant that this was inevitable. Hardin, who argued that much of the natural sciences was grounded by limits – such as the speed of light or the force of gravity – quoted the philosopher Alfred North Whitehead, who wrote that tragedy “resides in the solemnity of the remorseless working of things”.

...



Ostrom in 2009, the year she received the Nobel prize

Lin Ostrom never believed in “the remorseless working of things”. Born Elinor Awan in Los Angeles in 1933, by the time she first saw Garrett Hardin present his ideas she had already beaten the odds.

Lin was brought up in Depression-era poverty after her Jewish father left her Protestant mother. She was bullied at school – Beverly Hills High, of all places – because she was half-Jewish. She divorced her first husband, Charles Scott, after he discouraged her from pursuing an academic career, where she suffered discrimination for years. Initially steered away from mathematics at school, Lin was rejected by the economics programme at UCLA. She was only – finally – accepted on a PhD in political science after observing that UCLA’s political science department hadn’t admitted a woman for 40 years.

She persevered and secured her PhD after studying the management of fresh water in Los Angeles. In the first half of the 20th century, the city’s water supply had been blighted by competing demands to pump fresh water for drinking and farming. By the 1940s, however, the conflicting parties had begun to resolve their differences. In both her PhD, which she completed in 1965, and subsequent research, Lin showed that such outcomes often came from private individuals or local associations, who came up with their own rules and then lobbied the state to enforce them. In the case of the Los Angeles water producers, they drew up contracts to share their resources and the city’s water supply stabilised.

It was only when Lin saw Hardin lecture that she realised that she had been studying the tragedy of the commons all along. It was 1968, the year that the famous article was published. Garrett Hardin was 53, in the early stages of a career as a campaigning public intellectual that would last the rest of his life. Lin was 35, now Ostrom: she had married Vincent Ostrom, a respected political scientist closer to Hardin’s age, and together they had moved to Indiana University. Watching Hardin lecture galvanised her. But that wasn’t because she was convinced he was right. It was because she was convinced that he was wrong.

In his essay, Hardin explained that there was no way to manage communal property sustainably. The only solution was to obliterate the communal aspect. Either the commons could be nationalised and managed by the state – a Leviathan for the age of environmentalism – or the commons could be privatised, divided up into little parcels and handed out to individual farmers, who would then look after their own land

responsibly. The theory behind all this is impeccable and, despite coming from a biologist, highly appealing to anyone with an economics training.

But Lin Ostrom could see that there must be something wrong with the logic. Her research on managing water in Los Angeles, watching hundreds of different actors hammer out their messy yet functional agreements, provided a powerful counterexample to Hardin. She knew of other examples, too, in which common resources had been managed sustainably without Hardin's black-or-white solutions.

The problem with Hardin's logic was the very first step: the assumption that communally owned land was a free-for-all. It wasn't. The commons were owned by a community. They were managed by a community. These people were neighbours. They lived next door to each other. In many cases, they set their own rules and policed those rules.

This is not to deny the existence of the tragedy of the commons altogether. Hardin's analysis looks prescient when applied to our habit of pumping carbon dioxide into the atmosphere or overfishing the oceans. But the existence of clear counter-examples should make us hesitate before accepting Hardin's argument that tragedy is unstoppable. Lin Ostrom knew that there was nothing inevitable about the self-destruction of

"common pool resources", as economists call them. The tragedy of the commons wasn't a tragedy at all. It was a problem – and problems have solutions.

If Garrett Hardin and Lin Ostrom had reached different conclusions about the commons, perhaps that was because their entire approaches to academic research were different. Hardin wanted to change the world; Ostrom merely wanted to describe it.

That goal of description, though, was a vast project. Common pool resources could be found all over the planet, from the high meadows of Switzerland to the lobster fisheries of Maine, from forests in Sri Lanka to water in Nepal. Hardin's article had sliced through the complexity with his assumption that all commons were in some sense the same. But they aren't.



Lin Ostrom with her husband and collaborator, Vincent, during a 2004 workshop

To describe even a single case study of governing a common resource is a challenge (Lin's PhD was devoted to the West Basin water district of Los Angeles). Vincent Ostrom, Lin's husband, had developed the idea of "polycentricity" in political science: polycentric systems have multiple, independent and overlapping sources of power and authority.

By their very nature, they are messy to describe and hard to compare with each other. Unfortunately for any tidy-minded social scientist, they are also everywhere.

Complicating the problem further was the narrow focus of academic specialities. Lin was encouraged that many people had been drawn, like her, to the study of common pool resources. But they were divided by discipline, by region and by subject: the sociologists didn't talk to the economists; the India specialists didn't talk to the Africanists; and the fishery experts didn't know anything about forestry. As Ostrom and her colleagues at the University of Indiana looked into the problem they discovered more than a thousand separate case studies, each sitting in isolation.

Undeterred, they began to catalogue them, seeking to explain the difference between the successful attempts to manage environmental resources and the failures. There were the Swiss farmers of the village of Törbel, who had a system of rules, fines and local associations that dated from the 13th century to govern the use of scarce Alpine pastures and firewood. There were the fishermen of Alanya, in Turkey, who took part in a lottery each September to allocate fishing rights for the year ahead.

Over time, Ostrom developed a set of what she called "design principles" for managing common resources, drawn from what worked in the real world. She used the phrase

hesitantly since, she argued, these arrangements were rarely designed or imposed from the top down; they usually evolved from the bottom up.

These principles included effective monitoring; graduated sanctions for those who break rules; and cheap access to conflict-resolution mechanisms (the fishermen of Alanya resolved their disputes in the local coffee house). There are several others. Ostrom wanted to be as precise as she could, to move away from the hand-waving of some social scientists. But there were limits to how reductive it was possible to be about such varied institutions. Lin's only golden rule about common pool resources was that there are no panaceas.

Her work required a new set of intellectual tools. But for Ostrom, this effort was central to her academic life because knowledge itself – when you thought about it – was a kind of common pool resource as well. It could be squandered or it could be harvested for the public good. And it would only be harvested with the right set of rules.

Ostrom's research project came to resemble one of the local, community-led institutions that she sought to explain. In 1973, the Ostroms established something called the “Workshop in Political Theory and Policy Analysis”. Why not a school or a centre or a department? It was partly to sidestep bureaucracy. “The university didn't know what a workshop was,” says Michael McGinnis, a professor of political science at Indiana University and a colleague of the Ostroms. “They didn't have rules for a workshop.”

But there was more behind the name than administrative guile. Vincent and Lin believed that the work they did was a kind of craft. (The couple had built their own home and made much of their own furniture, under the guidance of a local craftsman – the experience made an impression.) The students who attended didn't call themselves students or researchers. They called themselves “workshoppers”.

The workshop under the Ostroms seems to have been a remarkable place, brightened up by Lin's sparkling laugh and garish tops. (The laugh was a reliable sign that she was in the building, available to be buttonholed by students.) At reunions, Ostrom would lead the singing of folk songs; it was that kind of place. The Ostroms never had children but the workshoppers did – and those children called Lin “Grandma”.

...

The logic of Garrett Hardin's 1968 essay is seductive but to read the text itself is a shock. Hardin's policy proposals are extreme. He believed that the ultimate tragedy of the

commons was overpopulation – and the central policy conclusion of the article was, to quote Hardin, that “freedom to breed is intolerable”.

In a 1974 essay, “Living on a Lifeboat”, he argued that it was pointless sending aid to starving people in Ethiopia. That would only make the real problem worse – the real problem being, of course, overpopulation.

Hardin robustly defended his views. In a 1987 interview with The New York Times, he opined, “There’s nothing more dangerous than a shallow-thinking compassionate person.

God, he can cause a lot of trouble.” But perhaps it was Hardin who was the one failing to think deeply enough. The logic of “The Tragedy of the Commons” worked well to frame a class of environmental problems. The danger was when Hardin leapt to drastic conclusions without looking at how other, similar-looking problems were being solved, again and again, by communities all over the world.

Nor has Hardin’s needle-sharp focus on overpopulation stood the test of time. When he published “The Tragedy of the Commons” in 1968, the growth rate of world population was higher than it had ever been – a rate at which population would double every 30 years. No wonder Hardin was alarmed. But birth rates have fallen dramatically. The world continues to face some severe environmental problems. However, it’s far from clear that “freedom to breed” is one of them.

There was no great public showdown between Lin Ostrom and Garrett Hardin, but Hardin did return to speak at Indiana University in 1976. The Ostroms invited him and some graduate students to dinner. Barbara Allen, now a professor at Carleton College, was one of them. She recalls that “the conversation was vigorous” as Hardin laid out his ideas for government-led initiatives to reduce the birth rate in the US, while Lin and Vincent worried about the unintended consequences of such top-down panaceas.

Allen recalls two other details: the way that Lin made space for her students to enter the argument and her joy in a new kitchen gadget she was using to make hamburgers for everyone. She loved “the odd delights of everyday life”, Allen later wrote, and loved to celebrate what worked.

Hardin, by contrast, seems to have been more of a pessimist about technology.

“Technology does solve problems,” he told an interviewer in 1990, “but always at a cost.”

Lin Ostrom was a more optimistic character altogether. When she won the Nobel memorial prize for economics in 2009, she was the first woman to do so. She was quick to comment: “I won’t be the last.”

Some of her most recent research addressed the problem of climate change (<http://www.ft.com/intl/in-depth/climate-change>). Scientifically speaking, greenhouse gas emissions are a global pollutant, and so efforts have focused on establishing global agreements. That, said Ostrom, is a mistake. Common pool problems were usually too complex to solve from the top down; a polycentric approach was necessary, with people developing ideas and enforcing behaviour at a community, city, national and regional level.

Ostrom barely slowed down when she was diagnosed with pancreatic cancer in 2011. She kept going until the final days, leaving voicemail messages for Vincent who, at the age of 90, was deaf and beginning to become confused. (Her students would type them up and print them out in large fonts for him to read.) When Lin died last June, at the age of 78, she was reviewing a student’s PhD thesis. She’d been annotating the text, which lay on the table beside her hospital bed. Vincent died two weeks later. The couple left almost everything to the workshop.

Garrett Hardin and his wife Jane also died together, in September 2003. After 62 years of marriage, and both suffering from very poor health, they killed themselves. Perhaps strangely for a man who thought overpopulation was the world’s ultimate problem, Garrett Hardin had four children. But there may be a certain kind of logic in that. Hardin always felt that overpopulation was inevitable. He died the way he lived – a resolute believer in the remorseless working of things.

Session IV

The Collective Choice Problem

Readings

Kenneth J. Arrow, "A Difficulty in the Concept of Social Welfare", *The Journal of Political Economy*, Vol. 58, No. 4. (Aug., 1950), pp. 328-346.

Russell Roberts, "If you're paying, I'll have top sirloin", *The Wall Street Journal*, 1995.

A DIFFICULTY IN THE CONCEPT OF SOCIAL WELFARE

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I. INTRODUCTION

IN A capitalist democracy there are essentially two methods by which social choices can be made: voting, typically used to make "political" decisions, and the market mechanism, typically used to make "economic" decisions. In the emerging democracies with mixed economic systems, Great Britain, France, and Scandinavia, the same two modes of making social choices prevail, though more scope is given to the method of voting and to decisions based directly or indirectly on it and less to the rule of the price mechanism. Elsewhere in the world, and even in smaller social units within the democracies, the social decisions are sometimes made by single individuals or small groups and sometimes (more and more rarely in this modern world) by a widely encompassing set of traditional rules for making the so-

cial choice in any given situation, e.g., a religious code.

The last two methods of social choice, dictatorship and convention, have in their formal structure a certain definiteness absent from voting or the market mechanism. In an ideal dictatorship, there is but one will involved in choice; in an ideal society ruled by convention, there is but the divine will or perhaps, by assumption, a common will of all individuals concerning social decisions, so that in either case no conflict of individual wills is involved. The methods of voting and of the market, on the other hand, are methods of amalgamating the tastes of many individuals in the making of social choices. The methods of dictatorship and convention are, or can be, rational in the sense that any individual can be rational in his choice. Can such consistency be attributed to collective modes of choice, where the wills of many people are involved?

It should be emphasized here that the present study is concerned only with the formal aspects of the foregoing question. That is, we ask if it is formally possible to construct a procedure for passing from a set of known individual tastes to a pattern of social decision-making, the procedure in question being required to satisfy certain natural conditions. An illustration of the problem is the following well-known "paradox of voting." Suppose there is a community consisting of three voters

¹ This paper is based on research carried on at the RAND Corporation, a project of the United States Air Force, and at the Cowles Commission for Research in Economics and is part of a longer study, "Social Choice and Individual Values," to be published by John Wiley & Sons as a Cowles Commission monograph. A version was read at the December, 1948, meeting of the Econometric Society. I am indebted to A. Kaplan, University of California at Los Angeles, and J. W. T. Youngs, University of Indiana, for guidance in formulating the problem, and to A. Bergson and A. G. Hart, Columbia University, and T. C. Koopmans, Cowles Commission and the University of Chicago, who have read the manuscript and made valuable comments on both the presentation and the meaning. Needless to say, any error or opacity remaining is the responsibility of the author.

and this community must choose among three alternative modes of social action (e.g., disarmament, cold war, or hot war). It is expected that choices of this type have to be made repeatedly, but sometimes not all of the three alternatives will be available. In analogy with the usual utility analysis of the individual consumer under conditions of constant wants and variable price-income situations, rational behavior on the part of the community would mean that the community orders the three alternatives according to its collective preferences once for all and then chooses in any given case that alternative among those actually available which stands highest on this list. A natural way of arriving at the collective preference scale would be to say that one alternative is preferred to another if a majority of the community prefer the first alternative to the second, i.e., would choose the first over the second if those were the only two alternatives. Let *A*, *B*, and *C* be the three alternatives, and 1, 2, and 3 the three individuals. Suppose individual 1 prefers *A* to *B* and *B* to *C* (and therefore *A* to *C*), individual 2 prefers *B* to *C* and *C* to *A* (and therefore *B* to *A*), and individual 3 prefers *C* to *A* and *A* to *B* (and therefore *C* to *B*). Then a majority prefers *A* to *B*, and a majority prefers *B* to *C*. We may therefore say that the community prefers *A* to *B* and *B* to *C*. If the community is to be regarded as behaving rationally, we are forced to say that *A* is preferred to *C*. But, in fact, a majority of the community prefers *C* to *A*.² So the method just outlined for passing from individual to collective tastes fails to satisfy the condition of rationality as we ordinarily understand it. Can we find other methods of aggregating individual tastes which

imply rational behavior on the part of the community and which will be satisfactory in other ways?³

If we adopt the traditional identification of rationality with maximization of some sort, then the problem of achieving a social maximum derived from individual desires is precisely the problem which has been central to the field of welfare economics.⁴ However, the search for a clear definition of optimum social welfare has been plagued by the difficulties of interpersonal comparisons. The emphasis, as is well known, has shifted to a weaker definition of optimum, namely, the determination of all social states such that no individual can be made better off without making someone worse off. As Professors Bergson, Lange, and Samuelson have argued, though, the weaker definition cannot be used as a guide to social policy; the second type of welfare economics is only important as a prelimi-

² It may be added that the method of decision sketched above is essentially that used in deliberative bodies, where a whole range of alternatives usually comes up for decision in the form of successive pairwise comparisons. The phenomenon described in the text can be seen in a pure form in the disposition of the proposals before recent Congresses for federal aid to state education, the three alternatives being no federal aid, federal aid to public schools only, and federal aid to both public and parochial schools.

³ The problem of collective rationality has been discussed by Professor Frank H. Knight, but chiefly in terms of the socio-psychological prerequisites; see "The Planful Act: The Possibilities and Limitations of Collective Rationality," in *Freedom and Reform* (New York: Harper & Bros., 1947), pp. 335-69, esp. pp. 346-65).

⁴ See P. A. Samuelson, *Foundations of Economic Analysis* (Cambridge, Mass.: Harvard University Press, 1947), chap. viii; A. Bergson (Burk), "A Reformulation of Certain Aspects of Welfare Economics," *Quarterly Journal of Economics*, LII (1938), 310-34; O. Lange, "The Foundations of Welfare Economics," *Econometrica*, X (1942), 215-28; M. W. Reder, *Studies in the Theory of Welfare Economics* (New York, 1947), chaps. i-v.

nary to the determination of a genuine social maximum in the full sense. E.g., under the usual assumptions, if there is an excise tax imposed on one commodity in the initial situation, it can be argued that the removal of the tax accompanied by a suitable redistribution of income and direct tax burdens will improve the position of all individuals in the society. But there are, in general, many redistributions which will accomplish this end, and society must have some criterion for choosing among them before it can make any change at all. Further, there is no reason for confining the range of possible social actions to those which will injure no one as compared with the initial situation, unless the status quo is to be sanctified on ethical grounds. All we can really say is that society ought to abolish the excise tax and make some redistribution of income and tax burdens; but this is no prescription for action unless there is some principle by which society can make its choice among attainable income distributions, i.e., a social indifference map.

Voting can be regarded as a method of arriving at social choices derived from the preferences of individuals. Another such method of more specifically economic content is the compensation principle, as proposed by Mr. Kaldor:⁵ in a choice between two alternative economic states x and y , if there is a method of paying compensations under state x such that everybody can be made better off in the state resulting from making the compensations under x than they are in state y , then x should be chosen in preference to y , *even if the*

compensation is not actually paid. Apart from the ethical difficulties in the acceptance of this principle,⁶ there is a formal difficulty which was pointed out by Professor Scitovsky:⁷ it is possible that simultaneously x should be preferred to y and y be preferred to x . Just as in the case of majority voting, this method of aggregating individual preferences may lead to a pattern of social choice which is not a linear ordering of the social alternatives. Note that in both cases the paradox need not occur; all that is said is that there are preference patterns which, if held by the individual members of the society, will give rise to an inconsistent pattern of social choice. Unless the trouble-breeding individual preference patterns can be ruled out by a priori assumption, both majority voting and the compensation principle must be regarded as unsatisfactory techniques for the determination of social preferences.

The aim of the present paper is to show that these difficulties are general. For *any* method of deriving social choices by aggregating individual preference patterns which satisfies certain natural conditions, it is possible to find individual preference patterns which give rise to a social choice pattern which is not a linear ordering. In particular, this is very likely to be the case if, as is frequently assumed, each individual's preferences among social states are derived purely from his personal consumption-leisure-saving situation in each.⁸ It is assumed that individuals act rationally, in the sense that their be-

⁵ See W. J. Baumol, "Community Indifference," *Review of Economic Studies*, XIV (1946-47), 44-48.

⁷ T. Scitovsky, "A Note on Welfare Propositions in Economics," *Review of Economic Studies*, IX (1942), 77-88.

⁸ See, e.g., Samuelson, *op. cit.*, pp. 222-24; Bergson, *op. cit.*, pp. 318-20; Lange, *op. cit.*, p. 216.

⁵ N. Kaldor, "Welfare Propositions of Economics and Interpersonal Comparisons of Utility," *Economic Journal*, XLIX (1939), 549-652; see also J. R. Hicks, "The Foundations of Welfare Economics," *Economic Journal*, XLIX (1939), 698-701 and 711-12.

havior in alternative situations can be described by an indifference map. It is further assumed that utility is not measurable in any sense relevant to welfare economics, so that the tastes of an individual are completely described by a suitable preference pattern or indifference map.

II. DEFINITIONS AND NOTATION

I. A NOTATION FOR PREFERENCES AND CHOICE

In this paper I shall be interested in the description of preference patterns both for the individual and for society. It will be found convenient to represent preference by a notation not customarily employed in economics, though familiar in mathematics and particularly in symbolic logic. We assume that there is a basic set of alternatives which could conceivably be presented to the chooser. In the theory of consumers' choice, each alternative would be a commodity bundle; in the theory of the firm, each alternative would be a complete decision on all inputs and outputs; in welfare economics, each alternative would be a distribution of commodities and labor requirements. These alternatives are mutually exclusive; they are denoted by small letters, x, y, z, \dots . On any given occasion the chooser has available to him a subset S of all possible alternatives, and he is required to choose one out of this set. The set S is a generalization of the well-known opportunity curve; thus, in the theory of consumer's choice under perfect competition, it would be the budget plane. It is assumed further that the choice is made in this way: Before knowing the set S , the chooser considers in turn all possible pairs of alternatives, say x and y , and for each pair he makes one and only one of three decisions: x is preferred to y , x is indifferent to y , or y is

preferred to x . The decisions made for different pairs are assumed to be consistent with one another, so that, for example, if x is preferred to y and y to z , then x is preferred to z ; similarly, if x is indifferent to y and y to z , then x is indifferent to z . Having this ordering of all possible alternatives, the chooser is now confronted with a particular opportunity set S . If there is one alternative in S which is preferred to all others in S , then the chooser selects that one alternative.⁹

Preference and indifference are relations between alternatives. Instead of working with two relations, it will be slightly more convenient to use a single relation, "preferred or indifferent." The statement, " x is preferred or indifferent to y ," will be symbolized by xRy . The letter R , by itself, will be the name of the relation and will stand for a knowledge of all pairs such that xRy . From our previous discussion, we have, for any pair of alternatives x and y , either that x is preferred to y or y to x or that the two are indifferent. That is, we have assumed that any two alternatives are comparable. But this assumption may be written symbolically,

Axiom I: For all x and y , either xRy or yRx .

Note that Axiom I is presumed to hold when $x = y$, as well as when x is distinct from y , for we ordinarily say that x is indifferent to itself for any x , and this implies xRx . Note also that the

⁹ It may be that there is a subset of alternatives in S , such that the alternatives in the subset are each preferred to every alternative not in the subset, while the alternatives in the subset are indifferent to one another. This case would be one in which the highest indifference curve which has a point in common with a given opportunity curve has at least two points in common with it (the well-known case of multiple maxima). In this case, the best thing to say is that the choice made in S is the whole subset; the first case discussed is one in which the subset in question, the choice, contains a single element.

word "or" in the statement of Axiom I does not exclude the possibility of both xRy and yRx . That word merely asserts that at least one of the two events must occur; both may.

The property mentioned above of consistency in the preferences as between different pairs of alternatives may be stated more precisely, as follows: if x is preferred or indifferent to y and y is preferred or indifferent to z , then x must be either preferred or indifferent to z . In symbols,

Axiom II: For all x , y , and z , xRy and yRz imply xRz .

A relation satisfying both Axiom I and Axiom II is termed a weak ordering or sometimes simply an ordering. It is clear that a relation having these two properties taken together does create a ranking of the various alternatives. The adjective "weak" refers to the fact that the ordering does not exclude indifference, i.e., Axioms I and II do not exclude the possibility that for some distinct x and y , both xRy and yRx .

It might be held that the two axioms in question do not completely characterize the concept of a preference pattern. For example, we ordinarily feel that not only the relation R but also the relations of (strict) preference and of indifference satisfy Axiom II. It can be shown that, by defining preference and indifference suitably in terms of R , it will follow that all the usually desired properties of preference patterns obtain.

Definition 1: xPy is defined to mean not yRx .

The statement " xPy " is read, " x is preferred to y ."

Definition 2: xIy means xRy and yRx .

The statement " xIy " is read, " x is in-

different to y ." It is clear that P and I , so defined, correspond to the ordinary notions of preference and indifference, respectively.

Lemma: a) For all x , xRx .

b) If xPy , then xRy .

c) If xPy and yPz , then xPz .

d) If xIy and yIz , then xIz .

e) For all x and y , either xRy or yPx .

f) If xPy and yRz , then xPz .

All these statements are intuitively self-evident from the interpretations placed on the symbols.

For clarity, we shall avoid the use of the terms "preference scale" or "preference pattern" when referring to R , since we wish to avoid confusion with the concept of preference proper, denoted by P . We shall refer to R as an "ordering relation" or "weak ordering relation" or, more simply, as an "ordering" or "weak ordering." The term "preference relation" will refer to the relation P .

Suppose that we know the choice which would be made from any given pair of alternatives; i.e., given two alternatives x and y from which the chooser must select, we know whether he would take x or y or remain indifferent between them. Since choosing x from the pair x , y implies that x is preferred to y , and similarly with a choice of y , a knowledge of the choice which would be made from any two given alternatives implies a knowledge of the full preference scale; from earlier remarks this, in turn, implies a knowledge of the choice which would be made from any set of alternatives actually available. Hence, one of the consequences of the assumption of rational behavior is that the choice from any collection of alternatives can be determined by a knowledge of the choices

which would be made from pairs of alternatives.

2. THE ORDERING OF SOCIAL STATES

In the present study the objects of choice are social states. The most precise definition of a social state would be a complete description of the amount of each type of commodity in the hands of each individual, the amount of labor to be applied by each individual, the amount of each productive resource invested in each type of productive activity, and the amounts of various types of collective activity such as municipal services, diplomacy and its continuation by other means, and the erection of statues to famous men. It is assumed that each individual in the community has a definite ordering of all conceivable social states in terms of their desirability to him. It need not be assumed here that an individual's attitude toward different social states is determined exclusively by the commodity bundles which accrue to his lot under each. The individual may order all social states by whatever standards he deems relevant. A member of Veblen's leisure class might order the states solely on the criterion of his relative income standing in each; a believer in the equality of man might order them in accordance with some measure of income equality. Indeed, since, as mentioned above, some of the components of the social state, considered as a vector, are collective activities, purely individualistic assumptions are useless in analyzing such problems as the division of the national income between public and private expenditure. The present notation permits perfect generality in this respect. Needless to say, this generality is not without its price. More information would be available for

analysis if the generality were restricted by a prior knowledge of the nature of individual orderings of social states. This problem will be touched on again.

In general, then, there will be a difference between the ordering of social states according to the direct consumption of the individual and the ordering when the individual adds his general standards of equity (or perhaps his standards of pecuniary emulation).¹⁰ We may refer to the former ordering as reflecting the *tastes* of the individual and the latter as reflecting his *values*. The distinction between the two is by no means clear cut. An individual with aesthetic feelings certainly derives pleasure from his neighbor's having a well-tended lawn. Under the system of a free market, such feelings play no direct part in social choice; yet, psychologically, they differ only slightly from the pleasure in one's own lawn. Intuitively, of course, we feel that not all the possible preferences which an individual might have ought to count; his preferences for matters which are "none of his business" should be irrelevant. Without challenging this view, I should like to emphasize that the decision as to which preferences are relevant and which are not is itself a value judgment and cannot be settled on an a priori basis. From a formal point of view, one cannot distinguish between an individual's dislike of having his grounds ruined by factory smoke and his extreme distaste for the existence of heathenism in Central Africa. There are probably not a few individuals in this country who would regard the former feeling as irrelevant for social policy and the latter as relevant, though

¹⁰ This distinction has been stressed to the author by M. Friedman, University of Chicago.

the majority would probably reverse the judgment. I merely wish to emphasize here that we must look at the entire system of values, including values about values, in seeking for a truly general theory of social welfare.

It is the ordering according to values which takes into account all the desires of the individual, including the highly important socializing desires, and which is primarily relevant for the achievement of a social maximum. The market mechanism, however, takes into account only the ordering according to tastes. This distinction is the analogue, on the side of consumption, of the divergence between social and private costs in production which has been developed by Professor Pigou.¹¹

As for notation, let R_i be the ordering relation for alternative social states from the standpoint of individual i . Sometimes, when several different ordering relations are being considered for the same individual, the symbols will be distinguished by adding a superscript. Corresponding to the ordering relation R_i , we have the (strict) preference relation P_i and the indifference relation I_i . If the symbol for the ordering has a prime or second attached (thus, R'_i , R''_i), then the corresponding symbols for preference and indifference will have the prime or second attached, respectively.

Similarly, society as a whole will be considered provisionally to have a social ordering relation for alternative social states, which will be designated by R , sometimes with a prime or second. Social preference and indifference will

be denoted by P and I , respectively, primes or seconds being attached when they are attached to the relation R , respectively.

Throughout this analysis, it will be assumed that individuals are rational, by which is meant that the ordering relations R_i satisfy Axioms I and II. The problem will be to construct an ordering relation for society as a whole which is also to reflect rational choice-making, so that R also will be assumed to satisfy Axioms I and II.

III. THE SOCIAL WELFARE FUNCTION

I. FORMAL STATEMENT OF THE PROBLEM OF SOCIAL CHOICE

I shall largely restate Bergson's formulation of the problem of making welfare judgments¹² in the terminology here adopted. The various arguments of his social welfare function are the components of what I have here termed the "social state," so that essentially he is describing the process of assigning a numerical social utility to each social state, the aim of society then being described by saying it seeks to maximize the social utility or social welfare subject to whatever technological or resource constraints are relevant, or, put otherwise, it chooses the social state yielding the highest possible social welfare within the environment. As with any type of behavior described by maximization, the measurability of social welfare need not be assumed; all that matters is the existence of a social ordering satisfying Axioms I and II. As before, all that is needed to define such an ordering is to know the relative ranking of each pair of alternatives.

The relative ranking of a fixed pair

¹¹ A. C. Pigou, *The Economics of Welfare* (London: Macmillan & Co., 1920), Part II, chap. vi. For the analogy see Samuelson, *op. cit.*, p. 224; Reder, *op. cit.*, pp. 64-67; G. Tintner, "A Note on Welfare Economics," *Econometrica*, XIV (1946), 69-78.

¹² Bergson, *op. cit.*

of alternative social states will vary, in general, with changes in the values of at least some individuals; to assume that the ranking does not change with any changes in individual values is to assume, with traditional social philosophy of the Platonic realist variety, that there exists an objective social good defined independently of individual desires. This social good, it was frequently held, could be best apprehended by the methods of philosophic inquiry. Such a philosophy could be and was used to justify government by elite, secular or religious, although the connection is not a necessary one.

To the nominalist temperament of the modern period the assumption of the existence of the social ideal in some Platonic realm of being was meaningless. The utilitarian philosophy of Jeremy Bentham and his followers sought instead to ground the social good on the good of individuals. The hedonist psychology associated with utilitarian philosophy was further used to imply that each individual's good was identical with his desires. Hence, the social good was in some sense to be a composite of the desires of individuals. A viewpoint of this type serves as a justification of both political democracy and laissez faire economics or at least an economic system involving free choice of goods by consumers and of occupations by workers.

The hedonist psychology finds its expression here in the assumption that individuals' behavior is expressed by individual ordering relations R_i . Utilitarian philosophy is expressed by saying for each pair of social states that the choice depends on the ordering relations of all individuals, i.e., depends on R_1, \dots, R_n , where n is the number of individuals in the community. Put

otherwise, the whole social ordering relation R is to be determined by the individual ordering relations for social states, R_1, \dots, R_n . We do not exclude here the possibility that some or all of the choices between pairs of social states made by society might be independent of the preferences of certain particular individuals, just as a function of several variables might be independent of some of them.

Definition 3: By a "social welfare function" will be meant a process or rule which, for each set of individual orderings R_1, \dots, R_n for alternative social states (one ordering for each individual), states a corresponding social ordering of alternative social states, R .

As a matter of notation, we shall let R be the social ordering corresponding to the set of individual orderings R_1, \dots, R_n , the correspondence being that established by a given social welfare function; if primes or seconds are added to the symbols for the individual orderings, primes or seconds will be added to the symbol for the corresponding social ordering.

There is some difference between the concept of social welfare function used here and that employed by Bergson. The individual orderings which enter as arguments into the social welfare function as defined here refer to the values of individuals rather than to their tastes. Bergson supposes individual values to be such as to yield a social value judgment leading to a particular rule for determining the allocation of productive resources and the distribution of leisure and final products in accordance with individual tastes. In effect, the social welfare function described here is a method of choosing which social welfare function of the Bergson type will be applicable, though of course I do not ex-

clude the possibility that the social choice actually arrived at will not be consistent with the particular value judgments formulated by Bergson. But in the formal aspect the difference between the two definitions of social welfare function is not too important. In Bergson's treatment the tastes of individuals (each for his own consumption) are represented by utility functions, i.e., essentially by ordering relations; hence, the Bergson social welfare function is also a rule for assigning to each set of individual orderings a social ordering of social states. Further, as already indicated, no sharp line can be drawn between tastes and values.

A special type of social welfare function would be one which assigns the same social ordering for every set of individual orderings. In this case, of course, social choices are completely independent of individual tastes, and we are back in the Platonic case.

For simplicity of exposition, it will be assumed that the society under study contains only two individuals and that the total number of alternatives which are conceivable is three. Since the results to be obtained are negative, the latter restriction is not a real one; if it turns out to be impossible to construct a social welfare function which will define a social ordering of three alternatives, it will a fortiori be impossible to define one which will order more alternatives. The restriction to two individuals may be more serious; it is conceivable that there may be suitable social welfare functions which can be defined for three individuals but not for two, for example. In fact, this is not so, and the results stated in this paper hold for any number of individuals. However,

the proof will be considerably simplified by considering only two.

We shall not ask, in general, that the social welfare function be defined for every logically possible set of individual orderings. On a priori grounds we may suppose it known that preferences for alternative social states are formed only in a limited set of ways, and the social welfare function need only be defined for individual orderings formed in those ways. For example, we may suppose (and will later on) that each individual orders social alternatives according to his own personal consumption under each (the purely individualistic case). Then the social welfare function need be defined only for those sets of individual orderings which are admissible, in the sense of being consistent with our a priori assumptions about the empirical possibilities.

Condition 1: The social welfare function is defined for every admissible pair of individual orderings, R_1, R_2 .

Condition 1, it should be emphasized, is a restriction on the form of the social welfare function, since we are requiring that for some sufficiently wide range of sets of individual orderings, the social welfare function give rise to a true social ordering.

2. POSITIVE ASSOCIATION OF SOCIAL AND INDIVIDUAL VALUES

Since we are trying to describe social "welfare" and not some sort of "illfare," we must assume that the social welfare function is such that the social ordering responds positively to alterations in individual values or at least not negatively. Hence, we may state the following condition:

Condition 2: If an alternative social state x rises or does not fall in the ordering of each

individual without any other change in those orderings and if x was preferred to another alternative y before the change in individual orderings, then x is still preferred to y .

3. THE INDEPENDENCE OF IRRELEVANT ALTERNATIVES

Just as for a single individual, the choice made by society from any given set of alternatives should be independent of the very existence of alternatives outside the given set. For example, suppose an election system has been devised whereby each individual lists all the candidates in order of his preference, and then, by a preassigned procedure, the winning candidate is derived from these lists. (All actual election procedures are of this type, although in most the entire list is not required for the choice.) Suppose an election is held, with a certain number of candidates in the field, each individual filing his list of preferences, and then one of the candidates dies. Surely, the social choice should be made by taking each of the individual's preference lists, blotting out completely the dead candidate's name, and considering only the orderings of the remaining names in going through the procedure of determining the winner. That is, the choice to be made among the set of surviving candidates should be independent of the preferences of individuals for the nonsurviving candidates. To assume otherwise would be to make the result of the election dependent on the obviously accidental circumstance of whether a candidate died before or after the date of polling. Therefore, we may require of our social welfare function that the choice made by society from a given set of alternatives depend only on the orderings of individuals among those alternatives. Alternatively stated, if we

consider two sets of individual orderings such that, for each individual, his ordering of those particular alternatives under consideration is the same each time, then we require that the choice made by society be the same if individual values are given by the first set of orderings as if they are given by the second.

Condition 3: Let R_1 , R_2 , and R'_1 , R'_2 be two sets of individual orderings. If, for both individuals i and for all x and y in a given set of alternatives S , $xR_i y$ if and only if $xR'_i y$, then the social choice made from S is the same whether the individual orderings are R_1 , R_2 , or R'_1 , R'_2 . (Independence of irrelevant alternatives.)

The reasonableness of this condition can be seen by consideration of the possible results in a method of choice which does not satisfy Condition 3, the rank-order method of voting frequently used in clubs.¹³ With a finite number of candidates, let each individual rank all his candidates, i.e., designate his first-choice candidate, second-choice candidate, etc. Let preassigned weights be given first, second, etc., choices, the higher weight to the higher choice, and then let the candidate with the highest weighted sum of votes be elected. In particular, suppose there are three voters and four candidates, x , y , z , and w . Let the weights for first, second, third, and fourth choices be 4, 3, 2, and 1, respectively. Suppose that individuals 1 and 2 rank the candidates in the order x , y , z , and w , while individual 3 ranks them in the order z , w , x , and y . Under the given electoral system, x is chosen. Then, certainly, if y is deleted from the ranks of the candidates, the system applied to the remaining candidates should yield the same result,

¹³ This example was suggested by a discussion with G. E. Forsythe, National Bureau of Standards.

especially since, in this case, y is inferior to x according to the tastes of every individual; but, if y is in fact deleted, the indicated electoral system would yield a tie between x and z .

The condition of the independence of irrelevant alternatives implies that in a generalized sense all methods of social choice are of the type of voting. If S is the set consisting of the two alternatives x and y , Condition 3 tells us that the choice between x and y is determined solely by the preferences of the members of the community as between x and y . That is, if we know which members of the community prefer x to y , which are indifferent, and which prefer y to x , then we know what choice the community makes. Knowing the social choices made in pairwise comparisons in turn determines the entire social ordering and therewith the social choice made from any set of alternatives. Condition 2 guarantees that voting for a certain alternative has the usual effect of making surer that that alternative will be adopted.

Condition 1 says, in effect, that, as the set of alternatives varies and individual orderings remain fixed, the different choices made shall bear a certain type of consistent relation to one another. Conditions 2 and 3, on the other hand, suppose a fixed set of alternatives and say that for certain particular types of variation in individual values, the various choices made have a certain type of consistency.

4. THE CONDITION OF CITIZENS' SOVEREIGNTY

We certainly wish to assume that the individuals in our society be free to choose, by varying their values, among the alternatives available. That is, we do not wish our social welfare function

to be such as to prevent us, by its very definition, from expressing a preference for some given alternative over another.

Definition 4: A social welfare function will be said to be *imposed* if for some pair of distinct alternatives x and y , xRy for any set of individual orderings R_1, R_2 , where R is the social ordering corresponding to R_1, R_2 .

In other words, when the social welfare function is imposed, there is some pair of alternatives x and y such that the community can never express a preference for y over x no matter what the tastes of both individuals are, indeed even if both individuals prefer y to x ; some preferences are taboo. (Note that, by Definition 1, asserting that xRy holds for all sets of individual orderings is equivalent to asserting that yPx never holds.) We certainly wish to require of our social welfare function the condition that it not be imposed in the sense of Definition 4; we certainly wish all choices to be possible if unanimously desired by the group.

Condition 4: The social welfare function is not to be imposed.

Condition 4 is stronger than need be for the present argument. Some decisions, as between given pairs of alternatives, may be assumed to be imposed. All that is required really is that there be a set S of three alternatives such that the choice between any pair is not constrained in advance by the social welfare function.

It should also be noted that Condition 4 excludes the Platonic case discussed in section 1 of Part III above. It expresses fully the idea that all social choices are determined by individual desires. In conjunction with Condition 2 (which insures that the determination is in the direction of agreeing with individual desires), Condition 4

expresses the same idea as Professor Bergson's Fundamental Value Propositions of Individual Preference, which state that of two alternatives between which all individuals but one are indifferent, the community will prefer one over the other or be indifferent between the two according as the one individual prefers one over the other or is indifferent between the two.¹⁴ Conditions 2 and 4 together correspond to the usual concept of consumers' sovereignty; since we are here referring to values rather than to tastes, we might refer to them as expressing the idea of citizens' sovereignty.

5. THE CONDITION OF NONDICTATORSHIP

A second form of social choice not of a collective character is the choice by dictatorship. In its pure form this means that social choices are to be based solely on the preferences of one man. That is, whenever the dictator prefers x to y , so does society. If the dictator is indifferent between x and y , presumably he will then leave the choice up to some or all of the other members of society.

Definition 5: A social welfare function is said to be "dictatorial" if there exists an individual i such that for all x and y , xP_iy implies xPy regardless of the orderings of all individuals other than i , where P is the social preference relation corresponding to those orderings.

Since we are interested in the construction of collective methods of social choice, we wish to exclude dictatorial social welfare functions.

¹⁴ Bergson, *op. cit.*, pp. 318-20. The Fundamental Value Propositions of Individual Preference are not, strictly speaking, implied by Conditions 2 and 4 (in conjunction with Conditions 1 and 2), although something very similar to them is so implied; see Consequence 1 in Part IV, section 2 below. A slightly stronger form of Condition 2 than that stated here would suffice to yield the desired implication.

Condition 5: The social welfare function is not to be dictatorial (nondictatorship).

We have now imposed five apparently reasonable conditions on the construction of a social welfare function. These conditions are of course value judgments and could be called into question; taken together, they express the doctrines of citizens' sovereignty and rationality in a very general form, with the citizens being allowed to have a wide range of values. The question is that of constructing a social ordering of all conceivable alternative social states from any given set of individual orderings of those social states, the method of construction being in accordance with the value judgments of citizens' sovereignty and rationality as expressed in Conditions 1-5.

IV. THE POSSIBILITY THEOREM FOR SOCIAL WELFARE FUNCTIONS

I. THE RANGE OF POSSIBLE INDIVIDUAL ORDERINGS

For simplicity we shall impose on the individual preference scales two conditions which in fact have almost invariably been assumed in works on welfare economics: (1) each individual's comparison of two alternative social states depends only on the commodities that he receives (and labor that he expends) in the two states, i.e., he is indifferent as between any two social states in which his own consumption-leisure-saving situations are the same or at least indifferent to him; (2) in comparing two personal situations in one of which he receives at least as much of each commodity (including leisure and saving as commodities) and more of at least one commodity than in the other, the individual will prefer the first situation. Suppose that among the possible alternatives

there were three, none of which gave any individual at least as much of both commodities as any other. For example, suppose that there are two individuals and a total of ten units of each of two commodities. Consider three alternative distributions described by the accompanying tabulation. The individualistic

ALTERNATIVE	INDIVIDUAL 1		INDIVIDUAL 2	
	Commodity 1	Commodity 2	Commodity 1	Commodity 2
1.....	5	1	5	9
2.....	4	2	6	8
3.....	3	3	7	7

restrictions imposed do not tell us anything about the way either individual orders these alternatives. Under the individualistic assumptions there is no a priori reason to suppose that the two individuals will not order the alternatives in any given way. In the sense of Part III, section 1, above, all individual orderings of the three alternatives are admissible. Condition 1 therefore requires that the social welfare function be defined for all pairs of individual orderings, R_1, R_2 .

2. THE POSSIBILITY THEOREM

Some consequences will be drawn from Conditions 1-5 for the present case of a social welfare function for two individuals and three alternatives. It will be shown that the supposition that there is a social welfare function satisfying those conditions leads to a contradiction.

Let x, y , and z be the three alternatives among which choice is to be made, e.g., three possible distributions of commodities. Let x' and y' be variable symbols which represent possible alternatives, i.e., range over the values x, y, z .

Let the individuals be designated as 1 and 2, and let R_1 and R_2 be the orderings by 1 and 2, respectively, of the alternatives x, y, z . Let P_1 and P_2 be the corresponding preference relations; e.g., $x'P_1y'$ means that individual 1 strictly prefers x' to y' .

Consequence 1: If $x'P_1y'$ and $x'P_2y'$, then $x'Py'$.

I.e., if both prefer x' to y' , then society must prefer x' to y' .

PROOF.—By Condition 4 there are orderings R'_1 and R'_2 , for individuals 1 and 2, respectively, such that, in the corresponding social preference, $x'Py'$. Form R''_1 from R'_1 by raising x' , if need be, to the top, while leaving the relative positions of the other two alternatives alone; form R''_2 from R'_2 in the same way. Since all we have done is raise alternative x' in everyone's esteem, while leaving the others alone, x' should still be preferred to y' by society in accordance with Condition 2, so that $x'Py'$. But, by construction, both individuals prefer x' to y' in the orderings R''_1, R''_2 , and society prefers x' to y' . Since, by Condition 3, the social choice between x' and y' depends only on the individual orderings of those two alternatives, it follows that whenever both individuals prefer x' to y' , regardless of the rank of the third alternative, society will prefer x' to y' , which is the statement to be proved.

Consequence 2: Suppose that for some x' and y' , whenever $x'P_1y'$ and $y'P_2x'$, $x'Py'$. Then, for that x' and y' , whenever $x'P_1y'$, $x'Py'$.

I.e., if in a given choice, the will of individual 1 prevails against the opposition of 2, then individual 1's views will certainly prevail if 2 is indifferent or if he agrees with 1.

PROOF.—Let R_1 be an ordering in which $x'P_1y'$, R_2 be any ordering. Let

R'_1 be the same ordering as R_1 , while R'_2 is derived from R_2 by depressing x' to the bottom while leaving the relative positions of the other two alternatives unchanged. By construction, $x'P'_1y'$, $y'P'_2x'$. By hypothesis, $x'P'y'$, where P' is the social preference relation derived from the individual orderings R'_1 , R'_2 . Now the only difference between R'_1 , R'_2 and R_1 , R_2 is that x' is raised in the scale of individual 2 in the latter as compared with the former. Hence, by Condition 2 (interchanging the R_i 's and the R'_i 's) it follows from $x'P'y'$ that $x'Py'$. I.e., whenever R_1 , R_2 are such that $x'P_1y'$, then $x'Py'$.

Consequence 3: If $x'P_1y'$ and $y'P_2x'$, then $x'Iy'$.

I.e., if the two individuals have exactly opposing interests on the choice between two given alternatives, then society will be indifferent between the alternatives.

PROOF.—Suppose the consequence is false. Then, for some orderings R_1 and R_2 and for some pair of alternatives x' and y' , we would have $x'P_1y'$, $y'P_2x'$, but not $x'Iy'$. In that case, either $x'Py'$ or $y'Px'$. We will suppose $x'Py'$ and show that this supposition leads to a contradiction; the same reasoning would show that the assumption $y'Px'$ also leads to a contradiction.

Without loss of generality it can be assumed that x' is the alternative x , $y' = y$. Then we have, for the particular orderings in question, xP_1y , yP_2x , and xPy . Since the social choice between x and y depends, by Condition 3, only on the individual choices as between x and y , we must have

$$\text{whenever } xP_1y \text{ and } yP_2x, xPy. \quad (1)$$

It will be shown that (1) leads to a contradiction.

Suppose individual 1 prefers x to y and y to z , while individual 2 prefers y to z and z to x . Individual 2 then prefers y to x . By (1) society prefers x to y . Also, both prefer y to z ; by Consequence 1, society prefers y to z . Since society prefers x to y and y to z , it must prefer x to z . Therefore, we have exhibited orderings R_1 , R_2 such that xP_1z , zP_2x , but xPz . Since the social choice between x and z depends only on the individual preferences for x and z ,

$$\text{whenever } xP_1z \text{ and } zP_2x, xPz. \quad (2)$$

Now suppose R_1 is the ordering y, x, z , and R_2 the ordering z, y, x . By Consequence 1, yPx ; by (2) xPz , so that yPz . By the same reasoning as before,

$$\text{whenever } yP_1z \text{ and } zP_2y, yPz. \quad (3)$$

If R_1 is the ordering y, z, x , and R_2 the ordering z, x, y , it follows from Consequence 1 and (3) that zPx and yPz , so that yPx . Hence,

$$\text{whenever } yP_1x \text{ and } xP_2y, yPx. \quad (4)$$

If R_1 is the ordering z, y, x , and R_2 the ordering x, z, y , then from Consequence 1 and (4), zPy and yPx , so that zPx .

$$\text{Whenever } zP_1x \text{ and } xP_2z, zPx. \quad (5)$$

If R_1 is the ordering z, x, y , and R_2 x, y, z , then, using (5), zPx and xPy , so that zPy .

$$\text{Whenever } zP_1y \text{ and } yP_2z, zPy. \quad (6)$$

From (1) it follows from Consequence 2 that whenever xP_1y , xPy . Similarly, from (1) to (6) it follows that for any pair of alternatives x' , y' , whenever $x'P_1y'$, then $x'Py'$. That is, by Definition 5, individual 1 would be a dictator. This is prohibited by Condition 5, so that (1) must be false. Therefore, Consequence 3 is proved.

Now suppose individual 1 has the ordering x, y, z , while individual 2 has the ordering z, x, y . By Consequence 1,

$$xPy. \quad (7)$$

Since yP_1z, zP_2y , it follows from Consequence 3 that

$$yIz. \quad (8)$$

From (7) and (8), xPz . But, also xP_1z, zP_2x , which implies xIz by Consequence 3. It cannot be that x is both preferred and indifferent to z . Hence the assumption that there is a social welfare function compatible with Conditions 1-5 has led to a contradiction.

Put another way, if we assume that our social welfare function satisfies Conditions 2-3 and we further suppose that Condition 1 holds, then either Condition 4 or Condition 5 must be violated. Condition 4 states that the social welfare function is not imposed; Condition 5 states that it is not dictatorial.

Possibility Theorem.—If there are at least three alternatives among which the members of the society are free to order in any way, then every social welfare function satisfying Conditions 2 and 3 and yielding a social ordering satisfying Axioms I and II must be either imposed or dictatorial.¹⁵ The Possibility Theorem shows that, if no prior assumptions are made about the nature of individual orderings, there is no method of voting which will remove the paradox of voting discussed in Part I, neither plurality voting nor any scheme of proportional representation, no matter how complicated. Similarly,

¹⁵ The negative outcome expressed in this theorem is strongly reminiscent of the intransitivity of the concept of domination in the theory of multiperson games; see John von Neumann and Oskar Morgenstern, *Theory of Games and Economic Behavior* (2d ed.; Princeton University Press, 1947), pp. 38-39.

the market mechanism does not create a rational social choice.

V. SOME IMPLICATIONS FOR THE FORMATION OF SOCIAL WELFARE JUDGMENTS

1. INTERPRETATION OF THE POSSIBILITY THEOREM

The interpretation of the Possibility Theorem is given by examination of the meaning of Conditions 1-5. In particular, it is required that the social ordering be formed from individual orderings and that the social decision between two alternatives be independent of the desires of individuals involving any alternatives other than the given two (Conditions 1 and 3). These conditions taken together serve to exclude interpersonal comparison of social utility either by some form of direct measurement or by comparison with other alternative social states. Therefore, the Possibility Theorem can be restated as follows:

If we exclude the possibility of interpersonal comparisons of utility, then the only methods of passing from individual tastes to social preferences which will be satisfactory and which will be defined for a wide range of sets of individual orderings are either imposed or dictatorial.

The word "satisfactory" in the foregoing statement means that the social welfare function does not reflect individuals' desires negatively (Condition 2) and that the resultant social tastes shall be represented by an ordering having the usual properties of rationality ascribed to individual orderings (Condition 1 and Axioms I and II).

In view of the interpretations placed on the conditions for a social welfare function in Part III above, we can also phrase the result this way: If con-

sumers' values can be represented by a wide range of individual orderings, the doctrine of voters' sovereignty is incompatible with that of collective rationality.

If we wish to make social welfare judgments which depend on all individual values, i.e., are not imposed or dictatorial, then we must relax some of the conditions imposed. It will continue to be maintained that there is no meaningful interpersonal comparison of utilities and that the conditions wrapped up in the word "satisfactory" are to be accepted.¹⁶ The only condition that remains to be eliminated is the one stating that the method of forming a social ordering would work properly for a wide range of sets of individual orderings. That is, it must be supposed that it is known in advance that the individual orderings R_1, \dots, R_n for social actions satisfy certain conditions more restrictive than those hitherto introduced.

2. A REFLECTION ON THE NEW WELFARE ECONOMICS

As noted in Part I, the so-called "new welfare economics" has concentrated on the determination of the totality of social states which have the property that any change which benefits one individual injures another—"maximal states" in Lange's terminology. In particular, this problem has usually been analyzed under the assumption that individual desires for social alternatives are formed in the individualistic way described above in Part IV, section 1. But if the only restrictions that we wish to

impose on individual tastes are those implied by the individualistic assumptions, then, as we have seen, there is no satisfactory social welfare function possible when there is more than one commodity. Since, as we have seen, the only purpose of the determination of the maximal states is as a preliminary to the study of social welfare functions, the customary study of maximal states under individualistic assumptions is pointless. There is, however, a qualification which should be added. It is conceivable that, if further restrictions are added to the individualistic ones, a social welfare function will be possible. Any state which is maximal under the combination of individualistic and other restrictions will certainly be maximal if only individualistic restrictions are imposed on the individual orderings. Hence, if the proper handling of the social welfare problem is deemed to be the imposition of further restrictions in addition to the individualistic ones, then the social maximum in any given situation will be one of the maximal elements under the combined restrictions and hence one of the maximal elements under individualistic conditions. It is therefore not excluded that the current new welfare economics will be of some use in restricting the range in which we must look for the social maximum.

The failure of purely individualistic assumptions to lead to a well-defined social welfare function means, in effect, that there must be a divergence between social and private benefits if we are to be able to discuss a social optimum. Part of each individual's value system must be a scheme of socio-ethical norms, the realization of which cannot, by their nature, be achieved through atomistic market behavior. These norms, further, must be suffi-

¹⁶ The only part of the last-named conditions that seems to me to be at all in dispute is the assumption of rationality. The consequences of dropping this assumption are so radical that it seems worth while to explore the consequences of maintaining it.

ciently similar among the members of the society to avoid the difficulties outlined above.

3. A ONE-COMMODITY WORLD

The insufficiency of the individualistic hypotheses to permit the formation of a social welfare function, as developed in the previous sections, hinged on the assumption that there was more than one commodity involved. An investigation of the one-commodity case may be of interest to bring out more clearly the issues involved.

In a one-commodity world, if we make assumptions 1 and 2 of Part IV, section 1, there is for any given individual only one possible ordering of the social states. He orders various social states solely according to the amount of the one commodity he gets under each. In such a situation the individual orderings are not variables; Conditions 2, 3, and 4 become irrelevant, since they relate to the variation in the social ordering corresponding to certain specified types of changes in the individual orderings. Condition 5 (nondictatorship) becomes a much weaker restriction, though not completely irrelevant. Any specification of a social ordering which does not coincide completely with the ordering of any one individual will be a social welfare function compatible with all the conditions. For example, for each fixed total output, we might set up arbitrarily an ordering of the various distributions; then order any two social states with different total outputs in accordance with the total output, any two social states with the same total output according to the arbitrary ordering. This sets up a genuine weak ordering which does not coincide with the ordering of any one individual. For let x and y be two states with total

outputs s and t , respectively, and apportionments s' and t' , respectively, to the given individual. If $s > t$, but $s' < t'$, then society prefers x to y , while the individual prefers y to x .

The qualitative nature of the difference between the single- and multicommodity cases makes any welfare arguments based on an implicit assumption of a single commodity dubious in its applicability to real situations. The fundamental difficulty is that, in a world of more than one commodity, there is no unequivocal meaning to comparing total production in any two social states save in terms of some standard of value to make the different commodities commensurable; and, usually such a standard of value must depend on the distribution of income. In other words, there is no meaning to total output independent of distribution, i.e., of ethical judgments.

4. DISTRIBUTIONAL ETHICS COMBINED WITH INDIVIDUALISM

We may examine briefly a set of assumptions about individual values which seem to be common to those who feel that the new welfare economics is applicable in a fairly direct way to the solution of specific economic problems. It is assumed that there are (1) an accepted (let us say, unanimously accepted) value judgment that if everybody is better off (more precisely, if everybody is at least as well off and one person better off) in one social state than another *according to his tastes*, then the first social state is preferred to the second; and (2) a universally accepted ordering of different possible welfare distributions in any given situation. The latter value judgment usually takes an egalitarian form.

This ethical schema is quite explicit

in the work of Bergson; the second value judgment is contained in his Propositions of Relative Shares.¹⁷ The same set of ethics underlies the compensation principle of Professors Kaldor and Hicks. More recently, some proposals made by Professors Johnson and Modigliani for meeting the problem of the increased cost of food due to European demand seem to have been based on value judgments 1 and 2 above.¹⁸ To prevent the inequitable shift in real income to farmers, it was proposed that there should be imposed an excise tax on food, accompanied by a per capita subsidy to consumers. Under the assumption that the supply of agricultural goods is completely inelastic, the tax would be absorbed by the farmers while the subsidy would have no substitution effects at the margin, so that the marginal rate of substitution for any pair of commodities would be the same for all consumers and hence the first value judgment would be fulfilled. The taxes and subsidies perform a purely distributive function and can be so arranged as to restore the status quo ante as near as may be, though actually the payment of a per capita subsidy implies a certain equalizing effect.

The value judgments are assumed here to hold for any individual. Note that even to state these judgments we must distinguish sharply between values and tastes (see Part II, sec. 2). All individuals are assumed to have the same values at any given instant of time, but the values held by any one

individual will vary with variations in the tastes of all. Our previous arguments as to the nonexistence of social welfare functions were based on the diversity of values; do they carry over to this particular kind of unanimity?

The actual distribution of welfare dictated by the second value judgment cannot be stated simply in money terms. As Professor Samuelson points out, such a value judgment is not consistent with any well-defined social ordering of alternative social states.¹⁹ The distribution of real income, for a given environment, must vary with individual tastes. Thus, for a given set of individual tastes (as represented by the ordering relations of all individuals, each for his own consumption) and a given environment, there is a given distribution of purchasing power (somehow defined); then exchange under perfectly competitive conditions proceeds until an optimum distribution is reached. The given distribution of real income and the individual tastes uniquely determine the final outcome, which is a social state. Therefore, the given ethical system is a rule which selects a social state as the choice from a given collection of alternative distributions of goods as a function of the tastes of all individuals. If, for a given set of tastes, the range of social alternatives varies, we expect that the choices will be consistent in the sense that the choice function is derivable from a social weak ordering of all social states. Thus, the ethical scheme discussed in this section, which we may term the "Bergson social welfare function," has the form of a rule assigning a social ordering to each possible set of individual orderings representing tastes. Mathematically, the

¹⁷ Bergson, *op. cit.*

¹⁸ D. G. Johnson, "The High Cost of Food—a Suggested Solution," *Journal of Political Economy*, LVI (1948), 54–57; Modigliani's proposals are contained in a press release of the Institute of World Affairs, New York, October, 1948.

¹⁹ Samuelson, *op. cit.*, p. 225.

Bergson social welfare function has, then, the same form as the social welfare function we have already discussed; though, of course, the interpretation is somewhat different, in that the individual orderings represent tastes rather than values and that the whole function is the end product of certain values assumed to be unanimously held rather than a method of reconciling divergent value systems. If the range of tastes is not restricted by a priori considerations (except that they must be truly tastes, i.e., refer only to an individual's own consumption, however that may be defined), then, indeed, the Bergson social welfare function is mathematically isomorphic to the social welfare function under individualistic assumptions. Hence the Possibility Theorem is applicable here; we cannot construct a Bergson social welfare function, i.e., cannot satisfy value judgments 1 and 2, which will satisfy Conditions 2-5 and which will yield a true social ordering for every set of individual tastes. Essentially, the two value judgments amount to erecting individualistic behavior into a value judgment. It is not surprising, then, that such ethics can be no more success-

ful than the actual practice of individualism in permitting the formation of social welfare judgments.

It must of course be recognized that the meaning of Conditions 2-5 has changed. The previous arguments for their validity assumed that the individual orderings represented values rather than tastes. It seems obvious that Conditions 2, 4, and 5 have the same intrinsic desirability under either interpretation. Condition 3 is perhaps more doubtful. Suppose there are just two commodities, bread and wine. A distribution, deemed equitable by all, is arranged, with the wine-lovers getting more wine and less bread than the abstainers get. Suppose now that all the wine is destroyed. Are the wine-lovers entitled, because of that fact, to more than an equal share of bread? The answer is, of course, a value judgment. My own feeling is that tastes for unattainable alternatives should have nothing to do with the decision among the attainable ones; desires in conflict with reality are not entitled to consideration, so that Condition 3, reinterpreted in terms of tastes rather than of values, is a valid value judgment, to me at least.

If you're paying, I'll have top sirloin

By Russell Roberts

(First published in The Wall Street Journal and republished in "The Libertarian Reader.")

As Congress tries to cut spending, I am reminded of an evening last fall at the St. Louis Repertory Theater, our local company. Before the curtain rose, the company's director appeared and encouraged us to vote against a ballot proposition to limit state taxes. He feared it would lead to reduced funding for the company.

I turned to the woman sitting next to me and asked her if she felt guilty knowing that her ticket was subsidized by some farmer in the "boot heel" of Missouri. No, she answered, he's probably getting something, too. She seemed to be implying that somehow it all evened out.

I left her alone. But I wanted to say: No, it doesn't even out. That's the whole idea behind much of what the government does. The subsidized theatergoer thinks she's getting a good deal, and so does the farmer. If it "evened out" for everybody, then matters would really be depressing: all that money shuffled around, all those people working for the IRS, all those marginal tax rates discouraging work effort just to get everybody to get the same deal.

Here in St. Louis we recently completed the Metrolink, a light rail system. It cost \$380 million to build. We locals contributed zero out of pocket, except for the usual federal taxes. Shouldn't we feel guilty making people in California pay for our trips to the hockey arena downtown? No, say the beneficiaries. After all, we paid for BART in San Francisco, MARTA in Atlanta and all the other extraordinarily expensive, underutilized public transportation systems whose benefits fall far short of their costs. It's only fair that we get our turn at the trough.

This destructive justification reminds me of a very strange restaurant.

When you eat there, you usually spend about \$6. You have a sandwich, fries and a drink. Of course you'd also enjoy dessert and a second drink, but they would cost an additional \$4. The extra food isn't worth \$4 to you, so you stick with the \$6 meal.

Sometimes, you go to the restaurant with three friends. The four of you split the check evenly. You realize after a while that the \$4 drink and desert will end up costing you only \$1 because the tab is split four ways. Should you order the drink and dessert? If you're a nice person, you might want to spare your friends from having to subsidize your

extravagance. Then it dawns on you that they may be ordering extras financed out of your pocket. But they're your friends. You wouldn't do that to each other.

But now suppose the tab is split not at each table but across the 100 diners at all the tables. Now adding the \$4 drink and dessert costs only four cents. Splurging is easy to justify now. In fact, you won't just add a drink and dessert, you'll upgrade to the steak and add a bottle of wine.

Suppose you and everybody else orders \$40 worth of food. The tab for the entire restaurant will be \$4,000. Divided by the 100 diners, your bill comes to \$40. Like my neighbor at the theater, you'll get your "fair share." But this outcome is a disaster. When you dined alone, you spent \$6. The extra \$34 of steak and other treats was not worth it. But in competition with the others, you chose a meal far out of your price range whose enjoyment fell far short of its cost.

Self-restraint goes unrewarded. If you go back to ordering your \$6 meal in hopes of saving money, your tab will be close to \$40 anyway, unless the other 99 diners cut back also. The good citizen starts to feel like a chump.

And so read of the freshmen congressman eager to cut pork out of the budget but in trouble back home because local projects will also come under the knife. Instead of being proud to lead the way, he is forced to fight for the projects, to make sure his district gets its "fair share."

Matters get much worse when there are gluttons and drunkards at the restaurant mixing with dieters and teetotalers. The average tab might be \$40, but some are eating \$80 worth of food while others are stuck with salad and an iced tea. Those with modest appetites would like to flee the premises, but suppose it's the only restaurant in town and you're forced to eat there every night. Resentment and anger come naturally. And since it's the only restaurant in town, you can imagine the quality of service.

Such a restaurant can be a happy place if the light eaters enjoy watching the gluttony of those who eat and drink with gusto. Many government programs generate a comparable range of support. But many do not.

How many Americans other than farmers benefit from agriculture subsidies? How many Americans other than train riders benefit from the Amtrak subsidy? How many Americans outside of the theater and its patrons benefit from the subsidy to the arts?

People who are overeating at the expense of others should be ashamed. The only way to avoid national indigestion is to close the government restaurant where few benefit at the expense of many.

Session V

The Knowledge Problem: Markets vs. Government

Readings

F.A. Hayek, "The Use of Knowledge in Society", *American Economic Review*, Vol. 35, No. 4, pp. 519-530.

Don Lavoie, "The Knowledge Problem", *National Economic Planning, What is Left?*, Cato Institute: 1985, pp. 51-92.

The American Economic Review

VOLUME XXXV

SEPTEMBER, 1945

NUMBER FOUR

THE USE OF KNOWLEDGE IN SOCIETY

By F. A. HAYEK*

I

What is the problem we wish to solve when we try to construct a rational economic order?

On certain familiar assumptions the answer is simple enough. *If* we possess all the relevant information, *if* we can start out from a given system of preferences and *if* we command complete knowledge of available means, the problem which remains is purely one of logic. That is, the answer to the question of what is the best use of the available means is implicit in our assumptions. The conditions which the solution of this optimum problem must satisfy have been fully worked out and can be stated best in mathematical form: put at their briefest, they are that the marginal rates of substitution between any two commodities or factors must be the same in all their different uses.

This, however, is emphatically *not* the economic problem which society faces. And the economic calculus which we have developed to solve this logical problem, though an important step toward the solution of the economic problem of society, does not yet provide an answer to it. The reason for this is that the "data" from which the economic calculus starts are never for the whole society "given" to a single mind which could work out the implications, and can never be so given.

The peculiar character of the problem of a rational economic order is determined precisely by the fact that the knowledge of the circumstances of which we must make use never exists in concentrated or integrated form, but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess. The economic problem of society is thus not merely a problem

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of how to allocate "given" resources—if "given" is taken to mean given to a single mind which deliberately solves the problem set by these "data." It is rather a problem of how to secure the best use of resources known to any of the members of society, for ends whose relative importance only these individuals know. Or, to put it briefly, it is a problem of the utilization of knowledge not given to anyone in its totality.

This character of the fundamental problem has, I am afraid, been rather obscured than illuminated by many of the recent refinements of economic theory, particularly by many of the uses made of mathematics. Though the problem with which I want primarily to deal in this paper is the problem of a rational economic organization, I shall in its course be led again and again to point to its close connections with certain methodological questions. Many of the points I wish to make are indeed conclusions toward which diverse paths of reasoning have unexpectedly converged. But as I now see these problems, this is no accident. It seems to me that many of the current disputes with regard to both economic theory and economic policy have their common origin in a misconception about the nature of the economic problem of society. This misconception in turn is due to an erroneous transfer to social phenomena of the habits of thought we have developed in dealing with the phenomena of nature.

II

In ordinary language we describe by the word "planning" the complex of interrelated decisions about the allocation of our available resources. All economic activity is in this sense planning; and in any society in which many people collaborate, this planning, whoever does it, will in some measure have to be based on knowledge which, in the first instance, is not given to the planner but to somebody else, which somehow will have to be conveyed to the planner. The various ways in which the knowledge on which people base their plans is communicated to them is the crucial problem for any theory explaining the economic process. And the problem of what is the best way of utilizing knowledge initially dispersed among all the people is at least one of the main problems of economic policy—or of designing an efficient economic system.

The answer to this question is closely connected with that other question which arises here, that of *who* is to do the planning. It is about this question that all the dispute about "economic planning" centers. This is not a dispute about whether planning is to be done or not. It is a dispute as to whether planning is to be done centrally, by one authority for the whole economic system, or is to be divided

among many individuals. Planning in the specific sense in which the term is used in contemporary controversy necessarily means central planning—direction of the whole economic system according to one unified plan. Competition, on the other hand, means decentralized planning by many separate persons. The half-way house between the two, about which many people talk but which few like when they see it, is the delegation of planning to organized industries, or, in other words, monopoly.

Which of these systems is likely to be more efficient depends mainly on the question under which of them we can expect that fuller use will be made of the existing knowledge. And this, in turn, depends on whether we are more likely to succeed in putting at the disposal of a single central authority all the knowledge which ought to be used but which is initially dispersed among many different individuals, or in conveying to the individuals such additional knowledge as they need in order to enable them to fit their plans in with those of others.

III

It will at once be evident that on this point the position will be different with respect to different kinds of knowledge; and the answer to our question will therefore largely turn on the relative importance of the different kinds of knowledge; those more likely to be at the disposal of particular individuals and those which we should with greater confidence expect to find in the possession of an authority made up of suitably chosen experts. If it is today so widely assumed that the latter will be in a better position, this is because one kind of knowledge, namely, scientific knowledge, occupies now so prominent a place in public imagination that we tend to forget that it is not the only kind that is relevant. It may be admitted that, so far as scientific knowledge is concerned, a body of suitably chosen experts may be in the best position to command all the best knowledge available—though this is of course merely shifting the difficulty to the problem of selecting the experts. What I wish to point out is that, even assuming that this problem can be readily solved, it is only a small part of the wider problem.

Today it is almost heresy to suggest that scientific knowledge is not the sum of all knowledge. But a little reflection will show that there is beyond question a body of very important but unorganized knowledge which cannot possibly be called scientific in the sense of knowledge of general rules: the knowledge of the particular circumstances of time and place. It is with respect to this that practically every individual has some advantage over all others in that he possesses unique information of which beneficial use might be made, but of

which use can be made only if the decisions depending on it are left to him or are made with his active coöperation. We need to remember only how much we have to learn in any occupation after we have completed our theoretical training, how big a part of our working life we spend learning particular jobs, and how valuable an asset in all walks of life is knowledge of people, of local conditions, and special circumstances. To know of and put to use a machine not fully employed, or somebody's skill which could be better utilized, or to be aware of a surplus stock which can be drawn upon during an interruption of supplies, is socially quite as useful as the knowledge of better alternative techniques. And the shipper who earns his living from using otherwise empty or half-filled journeys of tramp-steamers, or the estate agent whose whole knowledge is almost exclusively one of temporary opportunities, or the *arbitrageur* who gains from local differences of commodity prices, are all performing eminently useful functions based on special knowledge of circumstances of the fleeting moment not known to others.

It is a curious fact that this sort of knowledge should today be generally regarded with a kind of contempt, and that anyone who by such knowledge gains an advantage over somebody better equipped with theoretical or technical knowledge is thought to have acted almost disreputably. To gain an advantage from better knowledge of facilities of communication or transport is sometimes regarded as almost dishonest, although it is quite as important that society make use of the best opportunities in this respect as in using the latest scientific discoveries. This prejudice has in a considerable measure affected the attitude toward commerce in general compared with that toward production. Even economists who regard themselves as definitely above the crude materialist fallacies of the past constantly commit the same mistake where activities directed toward the acquisition of such practical knowledge are concerned—apparently because in their scheme of things all such knowledge is supposed to be “given.” The common idea now seems to be that all such knowledge should as a matter of course be readily at the command of everybody, and the reproach of irrationality leveled against the existing economic order is frequently based on the fact that it is not so available. This view disregards the fact that the method by which such knowledge can be made as widely available as possible is precisely the problem to which we have to find an answer.

IV

If it is fashionable today to minimize the importance of the knowledge of the particular circumstances of time and place, this is closely connected with the smaller importance which is now attached to change

as such. Indeed, there are few points on which the assumptions made (usually only implicitly) by the "planners" differ from those of their opponents as much as with regard to the significance and frequency of changes which will make substantial alterations of production plans necessary. Of course, if detailed economic plans could be laid down for fairly long periods in advance and then closely adhered to, so that no further economic decisions of importance would be required, the task of drawing up a comprehensive plan governing all economic activity would appear much less formidable.

It is, perhaps, worth stressing that economic problems arise always and only in consequence of change. So long as things continue as before, or at least as they were expected to, there arise no new problems requiring a decision, no need to form a new plan. The belief that changes, or at least day-to-day adjustments, have become less important in modern times implies the contention that economic problems also have become less important. This belief in the decreasing importance of change is, for that reason, usually held by the same people who argue that the importance of economic considerations has been driven into the background by the growing importance of technological knowledge.

Is it true that, with the elaborate apparatus of modern production, economic decisions are required only at long intervals, as when a new factory is to be erected or a new process to be introduced? Is it true that, once a plant has been built, the rest is all more or less mechanical, determined by the character of the plant, and leaving little to be changed in adapting to the ever-changing circumstances of the moment?

The fairly widespread belief in the affirmative is not, so far as I can ascertain, borne out by the practical experience of the business man. In a competitive industry at any rate—and such an industry alone can serve as a test—the task of keeping cost from rising requires constant struggle, absorbing a great part of the energy of the manager. How easy it is for an inefficient manager to dissipate the differentials on which profitability rests, and that it is possible, with the same technical facilities, to produce with a great variety of costs, are among the commonplaces of business experience which do not seem to be equally familiar in the study of the economist. The very strength of the desire, constantly voiced by producers and engineers, to be able to proceed untrammelled by considerations of money costs, is eloquent testimony to the extent to which these factors enter into their daily work.

One reason why economists are increasingly apt to forget about the constant small changes which make up the whole economic picture is probably their growing preoccupation with statistical aggregates, which

show a very much greater stability than the movements of the detail. The comparative stability of the aggregates cannot, however, be accounted for—as the statisticians seem occasionally to be inclined to do—by the “law of large numbers” or the mutual compensation of random changes. The number of elements with which we have to deal is not large enough for such accidental forces to produce stability. The continuous flow of goods and services is maintained by constant deliberate adjustments, by new dispositions made every day in the light of circumstances not known the day before, by *B* stepping in at once when *A* fails to deliver. Even the large and highly mechanized plant keeps going largely because of an environment upon which it can draw for all sorts of unexpected needs; tiles for its roof, stationery for its forms, and all the thousand and one kinds of equipment in which it cannot be self-contained and which the plans for the operation of the plant require to be readily available in the market.

This is, perhaps, also the point where I should briefly mention the fact that the sort of knowledge with which I have been concerned is knowledge of the kind which by its nature cannot enter into statistics and therefore cannot be conveyed to any central authority in statistical form. The statistics which such a central authority would have to use would have to be arrived at precisely by abstracting from minor differences between the things, by lumping together, as resources of one kind, items which differ as regards location, quality, and other particulars, in a way which may be very significant for the specific decision. It follows from this that central planning based on statistical information by its nature cannot take direct account of these circumstances of time and place, and that the central planner will have to find some way or other in which the decisions depending on them can be left to the “man on the spot.”

V

If we can agree that the economic problem of society is mainly one of rapid adaptation to changes in the particular circumstances of time and place, it would seem to follow that the ultimate decisions must be left to the people who are familiar with these circumstances, who know directly of the relevant changes and of the resources immediately available to meet them. We cannot expect that this problem will be solved by first communicating all this knowledge to a central board which, after integrating *all* knowledge, issues its orders. We must solve it by some form of decentralization. But this answers only part of our problem. We need decentralization because only thus can we ensure that the knowledge of the particular circumstances of time and place will be promptly used. But the “man on the spot” cannot decide

solely on the basis of his limited but intimate knowledge of the facts of his immediate surroundings. There still remains the problem of communicating to him such further information as he needs to fit his decisions into the whole pattern of changes of the larger economic system.

How much knowledge does he need to do so successfully? Which of the events which happen beyond the horizon of his immediate knowledge are of relevance to his immediate decision, and how much of them need he know?

There is hardly anything that happens anywhere in the world that *might* not have an effect on the decision he ought to make. But he need not know of these events as such, nor of *all* their effects. It does not matter for him *why* at the particular moment more screws of one size than of another are wanted, *why* paper bags are more readily available than canvas bags, or *why* skilled labor, or particular machine tools, have for the moment become more difficult to acquire. All that is significant for him is *how much more or less* difficult to procure they have become compared with other things with which he is also concerned, or how much more or less urgently wanted are the alternative things he produces or uses. It is always a question of the relative importance of the particular things with which he is concerned, and the causes which alter their relative importance are of no interest to him beyond the effect on those concrete things of his own environment.

It is in this connection that what I have called the economic calculus proper helps us, at least by analogy, to see how this problem can be solved, and in fact is being solved, by the price system. Even the single controlling mind, in possession of all the data for some small, self-contained economic system, would not—every time some small adjustment in the allocation of resources had to be made—go explicitly through all the relations between ends and means which might possibly be affected. It is indeed the great contribution of the pure logic of choice that it has demonstrated conclusively that even such a single mind could solve this kind of problem only by constructing and constantly using rates of equivalence (or “values,” or “marginal rates of substitution”), *i.e.*, by attaching to each kind of scarce resource a numerical index which cannot be derived from any property possessed by that particular thing, but which reflects, or in which is condensed, its significance in view of the whole means-end structure. In any small change he will have to consider only these quantitative indices (or “values”) in which all the relevant information is concentrated; and by adjusting the quantities one by one, he can appropriately rearrange his dispositions without having to solve the whole puzzle *ab initio*, or without needing at any stage to survey it at once in all its ramifications.

Fundamentally, in a system where the knowledge of the relevant facts is dispersed among many people, prices can act to coördinate the separate actions of different people in the same way as subjective values help the individual to coördinate the parts of his plan. It is worth contemplating for a moment a very simple and commonplace instance of the action of the price system to see what precisely it accomplishes. Assume that somewhere in the world a new opportunity for the use of some raw material, say tin, has arisen, or that one of the sources of supply of tin has been eliminated. It does not matter for our purpose—and it is very significant that it does not matter—which of these two causes has made tin more scarce. All that the users of tin need to know is that some of the tin they used to consume is now more profitably employed elsewhere, and that in consequence they must economize tin. There is no need for the great majority of them even to know where the more urgent need has arisen, or in favor of what other needs they ought to husband the supply. If only some of them know directly of the new demand, and switch resources over to it, and if the people who are aware of the new gap thus created in turn fill it from still other sources, the effect will rapidly spread throughout the whole economic system and influence not only all the uses of tin, but also those of its substitutes and the substitutes of these substitutes, the supply of all the things made of tin, and their substitutes, and so on; and all this without the great majority of those instrumental in bringing about these substitutions knowing anything at all about the original cause of these changes. The whole acts as one market, not because any of its members survey the whole field, but because their limited individual fields of vision sufficiently overlap so that through many intermediaries the relevant information is communicated to all. The mere fact that there is one price for any commodity—or rather that local prices are connected in a manner determined by the cost of transport, etc.—brings about the solution which (it is just conceptually possible) might have been arrived at by one single mind possessing all the information which is in fact dispersed among all the people involved in the process.

VI

We must look at the price system as such a mechanism for communicating information if we want to understand its real function—a function which, of course, it fulfills less perfectly as prices grow more rigid. (Even when quoted prices have become quite rigid, however, the forces which would operate through changes in price still operate to a considerable extent through changes in the other terms of the contract.) The most significant fact about this system is the economy of knowledge

with which it operates, or how little the individual participants need to know in order to be able to take the right action. In abbreviated form, by a kind of symbol, only the most essential information is passed on, and passed on only to those concerned. It is more than a metaphor to describe the price system as a kind of machinery for registering change, or a system of telecommunications which enables individual producers to watch merely the movement of a few pointers, as an engineer might watch the hands of a few dials, in order to adjust their activities to changes of which they may never know more than is reflected in the price movement.

Of course, these adjustments are probably never "perfect" in the sense in which the economist conceives of them in his equilibrium analysis. But I fear that our theoretical habits of approaching the problem with the assumption of more or less perfect knowledge on the part of almost everyone has made us somewhat blind to the true function of the price mechanism and led us to apply rather misleading standards in judging its efficiency. The marvel is that in a case like that of a scarcity of one raw material, without an order being issued, without more than perhaps a handful of people knowing the cause, tens of thousands of people whose identity could not be ascertained by months of investigation, are made to use the material or its products more sparingly; *i.e.*, they move in the right direction. This is enough of a marvel even if, in a constantly changing world, not all will hit it off so perfectly that their profit rates will always be maintained at the same constant or "normal" level.

I have deliberately used the word "marvel" to shock the reader out of the complacency with which we often take the working of this mechanism for granted. I am convinced that if it were the result of deliberate human design, and if the people guided by the price changes understood that their decisions have significance far beyond their immediate aim, this mechanism would have been acclaimed as one of the greatest triumphs of the human mind. Its misfortune is the double one that it is not the product of human design and that the people guided by it usually do not know why they are made to do what they do. But those who clamor for "conscious direction"—and who cannot believe that anything which has evolved without design (and even without our understanding it) should solve problems which we should not be able to solve consciously—should remember this: The problem is precisely how to extend the span of our utilization of resources beyond the span of the control of any one mind; and, therefore, how to dispense with the need of conscious control and how to provide inducements which will make the individuals do the desirable things without anyone having to tell them what to do.

The problem which we meet here is by no means peculiar to economics but arises in connection with nearly all truly social phenomena, with language and most of our cultural inheritance, and constitutes really the central theoretical problem of all social science. As Alfred Whitehead has said in another connection, "It is a profoundly erroneous truism, repeated by all copy-books and by eminent people when they are making speeches, that we should cultivate the habit of thinking what we are doing. The precise opposite is the case. Civilization advances by extending the number of important operations which we can perform without thinking about them." This is of profound significance in the social field. We make constant use of formulas, symbols and rules whose meaning we do not understand and through the use of which we avail ourselves of the assistance of knowledge which individually we do not possess. We have developed these practices and institutions by building upon habits and institutions which have proved successful in their own sphere and which have in turn become the foundation of the civilization we have built up.

The price system is just one of those formations which man has learned to use (though he is still very far from having learned to make the best use of it) after he had stumbled upon it without understanding it. Through it not only a division of labor but also a coördinated utilization of resources based on an equally divided knowledge has become possible. The people who like to deride any suggestion that this may be so usually distort the argument by insinuating that it asserts that by some miracle just that sort of system has spontaneously grown up which is best suited to modern civilization. It is the other way round: man has been able to develop that division of labor on which our civilization is based because he happened to stumble upon a method which made it possible. Had he not done so he might still have developed some other, altogether different, type of civilization, something like the "state" of the termite ants, or some other altogether unimaginable type. All that we can say is that nobody has yet succeeded in designing an alternative system in which certain features of the existing one can be preserved which are dear even to those who most violently assail it—such as particularly the extent to which the individual can choose his pursuits and consequently freely use his own knowledge and skill.

VII

It is in many ways fortunate that the dispute about the indispensability of the price system for any rational calculation in a complex society is now no longer conducted entirely between camps holding different political views. The thesis that without the price system we

could not preserve a society based on such extensive division of labor as ours was greeted with a howl of derision when it was first advanced by von Mises twenty-five years ago. Today the difficulties which some still find in accepting it are no longer mainly political, and this makes for an atmosphere much more conducive to reasonable discussion. When we find Leon Trotsky arguing that "economic accounting is unthinkable without market relations"; when Professor Oscar Lange promises Professor von Mises a statue in the marble halls of the future Central Planning Board; and when Professor Abba P. Lerner re-discovers Adam Smith and emphasizes that the essential utility of the price system consists in inducing the individual, while seeking his own interest, to do what is in the general interest, the differences can indeed no longer be ascribed to political prejudice. The remaining dissent seems clearly to be due to purely intellectual, and more particularly methodological, differences.

A recent statement by Professor Joseph Schumpeter in his *Capitalism, Socialism and Democracy* provides a clear illustration of one of the methodological differences which I have in mind. Its author is pre-eminent among those economists who approach economic phenomena in the light of a certain branch of positivism. To him these phenomena accordingly appear as objectively given quantities of commodities impinging directly upon each other, almost, it would seem, without any intervention of human minds. Only against this background can I account for the following (to me startling) pronouncement. Professor Schumpeter argues that the possibility of a rational calculation in the absence of markets for the factors of production follows for the theorist "from the elementary proposition that consumers in evaluating ('demanding') consumers' goods *ipso facto* also evaluate the means of production which enter into the production of these goods."¹

Taken literally, this statement is simply untrue. The consumers do nothing of the kind. What Professor Schumpeter's "*ipso facto*" presumably means is that the valuation of the factors of production is

¹ J. Schumpeter, *Capitalism, Socialism, and Democracy* (New York, Harper, 1942), p. 175. Professor Schumpeter is, I believe, also the original author of the myth that Pareto and Barone have "solved" the problem of socialist calculation. What they, and many others, did was merely to state the conditions which a rational allocation of resources would have to satisfy, and to point out that these were essentially the same as the conditions of equilibrium of a competitive market. This is something altogether different from showing how the allocation of resources satisfying these conditions can be found in practice. Pareto himself (from whom Barone has taken practically everything he has to say), far from claiming to have solved the practical problem, in fact explicitly denies that it can be solved without the help of the market. See his *Manuel d'économie pure* (2nd ed., 1927), pp. 233-34. The relevant passage is quoted in an English translation at the beginning of my article on "Socialist Calculation: The Competitive 'Solution,'" in *Economica*, New Series, Vol. VIII, No. 26 (May, 1940), p. 125.

implied in, or follows necessarily from, the valuation of consumers' goods. But this, too, is not correct. Implication is a logical relationship which can be meaningfully asserted only of propositions simultaneously present to one and the same mind. It is evident, however, that the values of the factors of production do not depend solely on the valuation of the consumers' goods but also on the conditions of supply of the various factors of production. Only to a mind to which all these facts were simultaneously known would the answer necessarily follow from the facts given to it. The practical problem, however, arises precisely because these facts are never so given to a single mind, and because, in consequence, it is necessary that in the solution of the problem knowledge should be used that is dispersed among many people.

The problem is thus in no way solved if we can show that all the facts, *if* they were known to a single mind (as we hypothetically assume them to be given to the observing economist), would uniquely determine the solution; instead we must show how a solution is produced by the interactions of people each of whom possesses only partial knowledge. To assume all the knowledge to be given to a single mind in the same manner in which we assume it to be given to us as the explaining economists is to assume the problem away and to disregard everything that is important and significant in the real world.

That an economist of Professor Schumpeter's standing should thus have fallen into a trap which the ambiguity of the term "datum" sets to the unwary can hardly be explained as a simple error. It suggests rather than there is something fundamentally wrong with an approach which habitually disregards an essential part of the phenomena with which we have to deal: the unavoidable imperfection of man's knowledge and the consequent need for a process by which knowledge is constantly communicated and acquired. Any approach, such as that of much of mathematical economics with its simultaneous equations, which in effect starts from the assumption that people's *knowledge* corresponds with the objective *facts* of the situation, systematically leaves out what is our main task to explain. I am far from denying that in our system equilibrium analysis has a useful function to perform. But when it comes to the point where it misleads some of our leading thinkers into believing that the situation which it describes has direct relevance to the solution of practical problems, it is time that we remember that it does not deal with the social process at all and that it is no more than a useful preliminary to the study of the main problem.

3 THE KNOWLEDGE PROBLEM

I am suggesting, in fact, that the co-ordinating functions of the market are but a special case of co-ordination by mutual adjustment. In the case of science, adjustment takes place by taking note of published results of other scientists; while in the case of the market, mutual adjustment is mediated by a system of prices broadcasting current exchange relations, which make supply meet demand.

Michael Polanyi (1962: 52)

The business man who forms an expectation is doing precisely what a scientist does when he formulates a working hypothesis. Both, business expectation and scientific hypothesis serve the same purpose; both reflect an attempt at cognition and orientation in an imperfectly known world, both embody imperfect knowledge to be tested and improved by later experience.

Ludwig Lachmann (1978: 23)

After all, what is Competition? Is it a thing which exists and is self-acting like the cholera? No, Competition is only the absence of constraint. In what concerns my own interest, I desire to choose for myself, not that another should choose for me, or in spite of me—that is all. And if any one pretends to substitute his judgment for mine in what concerns me, I should ask to substitute mine for his in what concerns him. What guarantee have we that things would go on better in this way? It is evident that Competition is Liberty. To take away the liberty of acting is to destroy the possibility, and consequently the power, of choosing, of judging, of comparing; it is to annihilate intelligence.

Frederic Bastiat ([1850] 1978: 328–29)

KNOWLEDGE VS. DATA: THE NATURE OF THE PROBLEM

Each of the three kinds of coordinating processes discussed in the last chapter is intrinsically capable, within a given span of time, of attaining some degree of coordination, or in other words, each is capable of attaining a particular level of "social intelligence." The historical record strongly suggests that Tradition is a relatively crude ordering process, incapable of producing anything much more advanced than the agricultural peasant economy. The Market as a coordinating process has historically proven to be substantially more powerful, while the few serious attempts at Planning have been, for whatever reasons, thus far unsuccessful.

But how does the Market attain such a relatively high degree of social intelligence, and why can't Planning replicate this performance? In brief, the advanced technology that market organization based on private ownership of the means of production has made possible requires that the dispersed knowledge of thousands of individual minds be marshaled in a manner of which comprehensive planning is logically incapable.

Put another way, the evolution of markets has delivered us into a world too complex for any individual intelligence to comprehend in detail, thus necessitating our reliance on the greater social intelligence embodied in market processes. These market processes, if they are to generate and embody a high degree of social intelligence, require relatively free competition among (de facto) private owners of capital and other resources and the continuous (and nonegalitarian) ebb and flow of wealth caused by this competitive process. In short, it is impossible to achieve simultaneously advanced technological production and comprehensive planning. Moreover, this same argument provides a major component of the case against the contemporary, noncomprehensive proposals for planning that will be taken up in the next three chapters as well.

The knowledge problem is the contention that a central planning board, even if very well intentioned, would lack the knowledge to combine resources in a manner that is economic enough to sustain modern technology. The choices concerning which methods of production should be used—out of a virtually unlimited number of possible methods—could not be made intelligently enough by a com-

prehensive planning apparatus, and so must be left to emerge as an unplanned outcome of competition among separate owners.

It is often assumed that the choice of methods of production is only a technical matter that could be resolved by a committee of engineers, and thus one that has nothing to do with such legal matters as the kind of ownership of the means of production that happens to prevail. But as Ludwig von Mises, the first to clearly spell out the knowledge problem, pointed out, the mere technological knowledge that could be supplied by scientists and engineers would suffice as a basis for choosing methods of production only if one of two possibilities held true. Either each factor of production would have to be absolutely *specific* (that is, it could only be employed in one particular production process in one particular way), or they would all have to be perfectly substitutable for one another in definite ratios. In either case once the detailed information about the ends of consumers was ascertained, say, by permitting a free consumer goods market, or by allowing an elected government to express its consumption demands, the best method of production would already be implicit in the consumer goods price information. But of course "neither of these two conditions is present in the universe in which man acts."

If wood is nonspecific, let's say because it can be used for printing books or for building houses or for both in any possible combination, how are we to choose that combination which will best satisfy the demand for shelter and for reading? This is not an issue about which the engineer has any special expertise. It is not a question to which quantitative measurement of any physical dimension is relevant. It is a question of the relative *value* of wood in alternative uses.

Whether the ultimate "wants" in question are those of consumers or of a government, technology ignores the crucial economic problem: "to employ the available means in such a way that no want more urgently felt should remain unsatisfied because the means suitable for its attainment were employed—wasted—for the attainment of a want less urgently felt." Mises ([1949] 1966: 207) put the point concisely:

For the solution of such problems technology and its methods of counting and measuring are unfit. Technology tells how a given end could be attained by the employment of various means which can be used together in various combinations, or how various available means could be employed for certain purposes. But it is at a loss to tell man which procedures he should choose out of the infinite variety of imaginable and possible modes of production.

The function that prices play in a market is a cognitive one. It is to reduce for each decisionmaker the otherwise overwhelming number of *technologically* feasible ways of producing things to the relatively much smaller number that appear *economic*—that is, appear to more than repay their costs. Without the guidance provided by price signals, each producer is likely to engage in a project which, were it the only goal of society, could probably be carried out (technological feasibility) but which, since it is not the only goal, finds itself running out of scarce resources used up by other producers (economic infeasibility). Price movements convey the more or less accurate knowledge of the relative scarcities, the values, of all the factors of production to those who calculate potential and actual profits with them.

Yet the only force that tends to pack this scarcity information into prices is the degree of the tug exerted on prices from various directions by multitudes of competitive bidders. Each is committing himself, and either his own wealth or that which it is his responsibility to manage, to his own assessment about where future profits are to be found. Hence comprehensive planning, because of inherent constraints of the individual human intellect, can at best achieve a level of social intelligence approximating that of a society guided by Tradition and so could only manage to sustain at bare subsistence levels a tiny fraction of the present world's population. This idea of planning may still be advocated, of course, but its appalling costs in human lives would render it undesirable to most of those who presently support it.

It might be objected that the limitation of the mental capacity of individual human minds could be overcome by modern (or perhaps future) computers. A vast network of computer terminals all tied in to a supercomputer at the Central Planning Bureau might be proposed as a replacement for the Market. Thus, it could be argued, human limitations are (or will someday become) irrelevant in the flowering of the computer age. "Planometrics," or as one critic has called it, "computopia," is the academic preoccupation of many East European economists who see in it the possibility of a more rationalized planning system than has ever been possible.

While I confess to being as romantic as anyone about the untold benefits that computers promise for future generations, it does not strike me as even a remote possibility that these machines could replace market institutions. Rather, we can expect them to facilitate

market transactions increasingly and thereby improve the coordination of plans.

The reason is not only that computers are a long way from being intelligent enough to replace an individual human mind in the making of the sorts of skillful judgments that economic decisionmaking requires. More to the point, even if some supercomputers were invented that surpassed human mental powers in every respect, their "intellect" would be put to a far more effective use if organized competitively than if organized by a single plan. Minds, whether human or not, achieve a greater social intelligence when they are coordinated through the Market than is possible if all economic activity had to confine itself to what a single supercomputer could hierarchically organize. In any case few policymakers take this notion of computerized comprehensive planning very seriously.

But what about the less ambitious proposals for noncomprehensive planning which aim to combine the Market and Planning principles? Are they subject to this critique as well? I think so. A central theme pervading the current literature in support of national economic planning is that current policymaking suffers from a serious deficiency of detailed knowledge of what is really going on in today's increasingly complex economy. With this complaint I wholeheartedly agree. Public policy is being conducted in abysmal ignorance of its likely consequences, and this inadequate knowledge of how to achieve goals rationally *does* largely explain the policy failures that surround us. But it is on the question of how to circumvent this pervasive problem where I believe the advocates of noncomprehensive planning go wrong. Most proponents of planning would agree with Leontief's contention (1982b: 33) that the complexity of the modern economy makes necessary a vast national data-gathering effort, including the "monitoring in great detail" of "what is happening to the different parts of the U.S. economy." He echoes a thesis common to the whole national planning literature when he concludes a recent article with an urgent plea for more data collection: "[We] need to provide the foundation of factual analysis and economic projection that would make democratic national planning possible. Our political economy will continue to flail blindly unless we can *uncover its interacting empirical realities* and consider in what general directions it should move." (1982b: 34; emphasis added).

I shall argue to the contrary: The intricate complexity of our economy is such that removing our profound ignorance of its de-

tailed workings is not just an ambitious and difficult task, as Leontief avers; it is a hopeless dream. The fundamental defect of virtually all proposals for planning—from Marx to Leontief—lies in what Michael Polanyi calls their “objectivist,” or what F. A. Hayek calls their “rationalistic,” concept of the nature of human knowledge.¹ This epistemological issue contains both the key to understanding most contemporary policy failures as well as the basic obstacle that stands in the way of all national planning proposals.²

A planning agency could, of course, collect mountains of data.³ The question is whether the data that it is feasible to collect correspond to the knowledge that really guides economic decisions. The issue of the possibility of making policymakers more knowledgeable about the economy involves the question of obtaining that specific practical knowledge which is actually involved in the dynamics of changing productive techniques. The truly relevant “data” that a planning organization would need in order to “uncover” a modern economy’s “interacting empirical realities,” resides deeply embedded in and dispersed among the separate minds of millions of people. In the relevant sense of the term, *the data do not exist*. The knowledge relevant for economic decisionmaking exists in a dispersed form that cannot be fully extracted by any single agent in society. But such extraction is precisely what would be required if this knowledge were to be made usable for a single planning agency.

Thus the only way this decentralized knowledge can be used effectively is by relying on the competitive struggles among several different owners in a Market system. If true, this argument immediately disposes of the older extreme notion of comprehensive planning, which seeks to *replace* the Market with Planning. The Market is the source of that knowledge which rational activity requires; it is thus indispensable.

It might be objected that since most modern-day planners, including Leontief, advocate the retention and conscious use of market institutions rather than their abolition, the problem of knowledge relates only to the obsolete idea of comprehensive planning. However, the issue is more serious. The attempt to abolish the Market is absurd because it would leave economic decisionmakers in complete ignorance. The point is that even the more modest and popular attempts merely to guide or steer the Market toward particular outcomes are really blind and dangerous obstructions of the very source

of that knowledge which is essential to rational economic decision-making.

Whether applied to comprehensive or noncomprehensive planning, the knowledge problem argument crucially depends on the view that knowledge is not the same as data, that is, given pieces of explicit information. If this conception of knowledge is valid, then what really is at stake in the knowledge problem goes far beyond the issue of merely gaining access to scattered bits of explicit information, and implies that the whole standard approach to economic planning has been based on a misconception of the real problem to be solved.⁴

In order to better understand the nature of knowledge in general, it will be helpful to refer to the example of the specific kind of knowledge with which the scientific community is concerned. If even scientific knowledge is found necessarily to contain certain non-objective elements, the kinds of knowledge practically relevant to economic decisionmaking can be shown even more dependent on such elements. In short, the whole case against planning that is being developed here is rooted in a critique of objectivist theories of knowledge.

The objectivist view attempts to treat knowledge as proven, unambiguously observable facts completely detached from the particular persons who articulate them, and therefore not requiring any support from judgments based on hunches, or mere beliefs, or appeals to authority. Knowledge is objective and quantitative and cumulative. It is completely “out there,” as opposed to personally held convictions, which are subjective and which only occupy individual minds. Learning is depicted as the kind of process in which elementary bits of atomistic data are removed from the “unknown” pile and added to the “known” pile, reducing the size of the former and increasing that of the latter. General categories and abstractions are viewed as derived from such primary bits of data.

Furthermore, as knowledge grows, it is presumed to converge on an increasingly vivid truth while reducing the area of our ignorance to a smaller and smaller domain of reality. In the limit, objective knowledge can conceivably become complete, encompassing a fully predictive, deterministic model of the universe. In principle, then, if not in practice, we can one day come to know everything there is to know about everything. What distinguishes science from belief, in this view, is that while others argue about opinions, scientists accept

only formally proven theories and empirically confirmed facts, and in their professional capacity they do not form mere opinions at all. Scientists are modest, disinterested, and self-critical servants of the truth.⁵

Although a flattering view for scientists to have of themselves, this idea of the nature of science and knowledge has been gradually eroded by the arguments of skeptics and is now all but abandoned partly as a result of the recent revolution within the philosophy of science that has come to be called the growth-of-knowledge literature.⁶

In the Polanyi/Hayek view, knowledge is justified as a kind of spontaneous outcome of the skilled performances of scientists interacting under certain special circumstances within a particular kind of community. Scientific knowledge is not seen as fundamentally different from practical know-how and its justification is not to be sought in sophisticated philosophical demonstrations of the logic of its methods. Rather, it is to be found in sociological investigations into the way the scientific community works and the values it imbues in its members. Knowledge is inextricably connected to the knowing subject and crucially dependent on the subject's values and beliefs rather than detached and "out there." The only difference between the statement "*P* is true" and the statement "I believe *P*" is one of emphasis, since all statements are really personal commitments. "Meaning" is not an attribute of articulated statements but rather of the relationship between a statement and a human being, whether its author or those who try to interpret it. Knowledge is qualitative as well as quantitative, and more integrative than cumulative. Learning is an enhancement of our interpretative powers and of our tacit understanding of an unfolding reality rather than the simple accumulation of data. General concepts or abstract wholes are not derived from elementary particulars but are primary and are akin to the basic perceptions of animals which precede and underlie the ability to ascertain particular facts.

Growing knowledge does constitute an ever-widening grasp of reality. But there is a sense in which we cannot say our ignorance is being reduced, for the more we know, the more new questions we are able to ask. Although reality is still understood as unitary, our increasing grasp of it continually takes on additional perspectives and discovers more aspects in such a way that the growth of knowledge is realized to be divergent. In this view it is impossible *in principle*

ever to know everything about anything.⁷ In particular, it may well be impossible that anyone could ever know the workings of an economy, or for that matter, a single human mind in that economy, in sufficient detail to predict its precise future development.⁸

A renowned physical chemist, Michael Polanyi has shown in painstaking detail that in virtually every aspect of a scientist's activity, from defining a problem to discovering a satisfactory solution, the scientist is called upon to make tacit judgments he or she cannot fully defend but which nevertheless work as indispensable aids in the effort to achieve knowledge. This tacit dimension plays an important role not only in the acquisition and use of specialized skills but also in the very act of articulation or the formulation and interpretation of a rigorous mathematical model. Thus knowledge, even knowledge of inanimate matter, necessarily carries with it an essentially personal component, and not as an unavoidable liability but as a skillful contribution to the social process of scientific discovery.

If even scientific knowledge contains personal elements, then the kind of knowledge relevant to economic decisionmaking can be shown to contain such elements to a much greater degree. Once the nature of technological and economic knowledge in society is properly understood it can be shown that it would be impossible *in principle* to obtain the sort of knowledge that is necessary for rational planning. The market can make effective use of personal economic knowledge in a way that comprehensive planning cannot.

The crux of this critique is the view that much of the knowledge practically necessary for economic production cannot be articulated. Stated more positively, there are in fact two kinds of legitimate knowledge—not only articulate but also what Polanyi calls "tacit" or "inarticulate" knowledge.

This idea of inarticulate knowledge may at first seem paradoxical. The point in a discussion when the speaker asserts that he really knows something, but just cannot express it, marks the end of the possibility of expanding knowledge in that discussion. The objectivist view of knowledge, taken consistently, would have to deny legitimacy to any knowledge claim that was rooted in tacit elements. Only a completely explicit statement, preferably a thoroughly formalized system on the model of Euclidean geometry, is deserving of the label "knowledge." However, some outstanding recent developments in fields as diverse as linguistics, ethology, physics, mathematics, psychology, and computer science have considerably weak-

ened this objectivist view, which once seemed unchallengeable. They now make the achievement of such a complete articulation of all knowledge seem, for several reasons, far less likely than it may have appeared to the eighteenth-century philosophers who first clearly formulated it as an ideal.⁹

But this achievement is not only far more difficult than it had been thought to be; it is logically impossible. As Polanyi (1958b: 18) put it, "This exalted valuation of strictly formalized thought is self-contradictory" because it would, if taken seriously, undermine all knowledge, even the most fully articulated and carefully formulated ideas. If we demand of an idea that it be completely articulated before it be given the appellation "knowledge," then, Polanyi argues, we will find we know nothing at all. While there are some skepticist epistemologists who are completely content with that conclusion, many of us might prefer to use the word "knowledge" in a way that permits us to say, for example, that we at least know that one plus one equals two.

There are two related aspects of articulated knowledge that logically require us to admit that it rests on unarticulated foundations. (1) Even looking at the problem in a static way, the component parts of any statement, the words used, each require definition, which in turn entails the use of other, as yet undefined, words. If complete definition of all words is required before an initial statement such as "One plus one equals two" is accepted, this necessarily presents us with an infinite regress, or rather, circular reasoning in which some of the original words like "plus" or "two" reappear in subsequent definitions. (2) Looking at the problem dynamically, the very act of formulating any general statement necessarily requires using rules of proper statement formulation which are themselves inarticulate. For example we must select certain abstract qualities of the real situation to which attention is being directed. This implies, then, that nothing can be completely articulated, since the very process of articulation involves the abstraction from some real features of the entity or process that is being described.

It was the philosopher-mathematician Alfred North Whitehead ([1947] 1968: 95) who so concisely pointed out the first of these problems, the "static" limitation, when he noted that "there is not a sentence which adequately states its own meaning. There is always a background of presupposition which defies analysis by reason of its infinitude."

Whitehead illustrated this point by the example "One plus one equals two," showing that the unstated presuppositions of even so simple a statement as this are more numerous than can be articulated in a lifetime. He refers in this context to the background of common sense that we rely upon to express ourselves.

Thomas Sowell (1980: 335) was focusing on the other limitation, the "dynamic" one, of articulation when he pointed out:

Because nothing can be literally exhaustively articulated, the process of articulating is necessarily to some extent also a process of abstraction. Some characteristics are defined, to the neglect of others which may be present but which are deemed less significant for the matter at issue.

There is what he calls a "purely judgmental decision" involved in such abstraction that cannot itself be reduced to explicit formal rules. The two problems could be summarized by Hayek's point that the very act of articulation requires that we focus our awareness on the ideas we are seeking to communicate clearly by employing unconscious rules of proper communication of which we must be largely unaware at the time (see Hayek [1962] 1967 and 1973). Thus, to engage in the process of articulation requires that we rely on unarticulated habits of thought—including habitually accepted definitions of words and rules of abstraction—in order to get our articulated point across.¹⁰

Polanyi and Hayek have usefully employed the example of a child's speech (as well as the intelligent behavior of animals) to illustrate their contention that our articulated knowledge must represent only a small part of what we know. That a child, who may not learn the rules of grammar for a decade, if ever, can nevertheless construct grammatically correct sentences is evidence of the kind of tacit knowledge that underlies all articulated knowledge. It is only because our minds are capable of operating according to effective rules of which we are unaware that we are able to learn to speak a language. The act of forming an explicit statement in a language requires our use of an extremely complicated system of rules, of conventional interpretations of words, of syntax, and of idioms, which could not be fully understood by anyone who had not already thoroughly mastered that language.

But this reliance upon implicit rules does not apply only to the remarkable phenomenon of a child's command of a language. Any time an adult formulates an explicit statement, he too must rely on

rules and implicit meanings of which he himself is not consciously aware. Indeed, this phenomenon is far more comprehensive than the realm of language. It comprises everything we call skills. A skill is a learned rule of conduct which successfully guides the behavior of its possessor but which is rarely understood in a manner that can be made explicit. Gilbert Ryle (1945) made this point with his useful distinction between "knowing how" and "knowing that." One often knows how to do something without being able to explain how one does it. Polanyi gives the example of riding a bicycle without knowing the law of centrifugal force or the rule derived from it that if one turns the handlebars in the direction in which one starts to fall this force will keep the bicycle from falling. He refers to the apprenticeship of a scientist learning the skills of his teacher not by explicit instruction of methods but by the copying and refinement of good habits through practice.¹¹

Articulation, then, is just one kind of skill that we learn without knowing precisely how we accomplish it. The very exercise of our ability to articulate ideas fundamentally relies on the use of implicit rules of which we are unaware. Polanyi argues that there are higher level orders that cannot be explained in terms of their constituent particulars, but whose grasp as a whole relies on these particulars as subsidiary clues.¹² Hayek refers in this respect to the intuitively understood "wholes" or overall patterns that guide the scientist's attention as he strives to extend his articulate command over his subject matter. In this view a crucial and primary part of knowing rests on an ability to perceive similarities between wholes from clues supplied by background subsidiaries. This kind of analogical skill underlies everything from sense perception to animal intelligence to scientific discoveries.

Hayek has elaborated the way the unarticulated components of our knowledge, the unconscious rules, guide virtually all our activity, from the way we speak to the way we conduct ourselves in society. Law, for example, was a necessary institution for the survival of primitive societies, yet it has only been (partly) articulated in modern times. Such unconscious rules more often work negatively than positively, guiding action away from inappropriate directions, for example when bad grammar "sounds wrong" to the child or when theft is punished in primitive communities unacquainted with the subtleties of the economic analysis of property rights.¹³ Languages and societies that are insufficiently prohibitive of meaningless or antisocial actions do not survive in the evolutionary struggle.

Applied to scientific knowledge, the Polanyi/Hayek approach contends that the determining rationality of the scientific process resides not in any rationally articulated understanding achievable by an individual but in the particular kinds of social processes taking place in the scientific community as a whole and guided by tacit judgments of its skilled participants. It is through the tensions and pressures generated by struggles among scientists to persuade one another, as each is guided by his own inarticulate groping for truth, that the process succeeds in continually discovering new knowledge. Participants in this process contribute their own personal, professional judgment by committing themselves to the theory each senses holds promise. From the competitive rivalry among such judgments there emerges a gradual consensus in the scientific community as a whole.

Each judgment about the potential fruitfulness of a theory constitutes an *expectation* about the unknowable future and therefore is not resolvable by any strict, logical procedures. Polanyi shows that this element of skillful foresight plays a role not only in the initial selection of research problems but, to varying degrees, in all aspects of scientific work. Even to hold that something is a fact is to maintain a particular set of expectations about the future: "To say that an object is real is to anticipate that it will manifest its existence indefinitely hereafter" (Polanyi 1972: 44-45).¹⁴

Scientific knowledge, then, is seen as an evolving outcome of the interplay of scientists who exercise their tacit skills in the pursuit of an improved personal understanding of the world. This discovery procedure can achieve progress only if the members of the scientific community, no matter what their paradigm, share certain essential values, among which must be the attainment of the greatest possible clarity and precision in their attempts to explain reality. Contrary to the popular view of the scientist as a disinterested and detached observer of facts, this approach requires of the scientist nothing short of impassioned commitment to his own conception of the truth and to the theoretical "spectacles" through which he perceives it. Justifiable scientific knowledge emerges only through the social process by which such personal commitments vie with one another, each relying on its tacit clues about the potential fruitfulness of intellectual paths that are not yet traversed.

One of the most vital values to which this social discovery process necessitates allegiance is that of complete freedom of thought. The moral issues of freedom and responsibility are inextricably connected

to the epistemological issues of what and how we know anything about the world we live in. A substantial degree of opposition to the use of force in human relationships is not merely one particular moral position among others; it is a prerequisite for the growth of knowledge. Scientists must be free to maintain, reject, or invent paradigms or theories according to their own largely inarticulate judgments as to what they find intellectually convincing. They must be free to believe in ideas that they cannot *fully* defend. But at the same time this freedom does not say that anything goes; it is intimately bound up with the sense of responsibility the scientist feels toward the attainment of valid meaning, and it requires a willingness on the part of each scientist to submit to the authority of specialists in areas beyond his own expertise.

In particular, then, one of the chief aspirations of the older objectivist attempts to justify scientific knowledge must be abandoned: the exclusion from science of any appeals to authority. The popular idea of science has said that it constitutes a collection of observable facts that anybody can verify for himself, whereas in fact

the acceptance of scientific statements by laymen is really based not on their own observations, but on the authority that laymen acknowledge scientists to have in their special fields; and this is true to nearly the same extent of scientists using results of sciences other than their own: they do not feel called upon, or even competent, to test these results themselves. (Polanyi and Prosch 1975: 184-85)

There is a network of overlapping specialties in the scientific community in which border contributions meet the pressure of criticism from related scholars, but in which no one scientist can possibly understand the whole. Thus, science does not reject all personal belief, or appeals to authority but, rather, constitutes a particular kind of believing based on a commitment to truth instead of blind faith, and uses a complex system of what Polanyi calls "mutual authority" instead of vesting authority with any particular agent or office (Polanyi and Prosch 1975: 182-97).

Those who try to ignore the fact that the purely objectivist foundations of science have been undermined will brand this new approach unscientific. But the choice is not between a rigorous, explicit, and logical foundation for science and an informal, tacit, and historical one, it is between the latter and the ultimate death of the scientific enterprise. For this great human achievement is doomed if scien-

tists do not learn that the true basis of the successes of their efforts lies not in the formal logical structure of any particular theory or the proof provided by any given experiment, but in the kind of "republic" that the scientific community constitutes and the values it upholds.

The fates of science and of the human civilization that made science possible are intertwined because both depend upon the strong belief in values that cannot be established by the kinds of rigorous standards popularly demanded. Hayek (1973: 7) found this same impossible standard to be one of the central defects of the planning or "constructivist" mentality:

The tendency of constructivism to represent those values which it cannot explain as determined by arbitrary human decisions, or acts of will, or mere emotions, rather than as the necessary conditions of facts which are taken for granted by its expounders, has done much to shake the foundations of civilization, and of science itself, which also rests on a system of values which cannot be scientifically proved.

THE PRINCIPLE OF "MASS COMMUNICATION"

The conclusion at which this discussion aims—namely that the social aspirations of advocates of comprehensive planning would more than exhaust the intellectual capacity of human minds—has a particularly troublesome obstacle to overcome. The most difficult thing to convince a person of is the existence of any sort of general and insurmountable limit to the powers of the mind, especially since the mind who tries to do the convincing is necessarily just as limited as the mind he is trying to persuade. It is exceedingly difficult for our intelligence to grapple with its own shortcomings, since to describe them *in detail* would require the spelling out of what we do not know, which, of course, is just what I am saying cannot be done.

Those who have embarked on this hazardous road of trying to convince human minds of their inherent limits have invariably been accused of obscurantism, of sabotaging the human species' greatest tool, and of resurrecting the mysticism of the prerational age that set dogmatic taboos on the activities of the mind. But is not the automatic denial that we can ever find such limits and describe them at least in general terms *itself* a form of obscurantism? If we agree, as most of us do in principle, that we are not omniscient, then is it not

one of reason's most important tasks to clarify the nature—including the limits—of its own powers? If this tool is not perfect, then to try to outline in general terms what its imperfections are is not to sabotage it. On the contrary, to fail to recognize these limitations is to risk just such a sabotage.

Most advocates of national planning conceive of the knowledge problem in terms of a remediable deficiency of the data they think necessary to coordinate anything so complex as a modern economy. This very complexity of human society, which both planning advocates and opponents stress, makes it horrendously difficult to analyze in any satisfactory detail. Suppose, then, that we transplant this same sort of problem down to the less complicated level of the social insects—ants, termites, and bees—just so we can begin to grasp the general principles involved. While no human can claim to yet understand the detailed workings as a whole of his own society (whether, as Leontief believes, because of insufficient data or, as I am arguing, because of insurmountable limitations), many entomologists have been able to study entire insect societies in exhaustive detail, and, although much remains to be learned, they can now legitimately be said to have discovered the major organizing principles of these societies.¹⁵

While this analogy reaches below the level of the human economy to the lowly insect, a second analogy I will employ reaches above the human economic level to that higher realm of human achievement, science. All of these apparently disparate phenomena can be analyzed as special instances of what have been called "spontaneous orders." Hayek (1967: 96–105) and Polanyi (1951: 114–22) use this same phrase to represent that kind of ordered pattern which emerges without being the product of anyone's deliberate design but only as an unplanned outcome of the mutual adjustments of its parts. Such emergent orders are, in Hayek's (1967: 22–42) terminology, not necessarily complex, but in many cases can attain a degree of complexity that extends beyond that which is attainable to any of its constituent, mutually adjusting parts; or in the terminology I have employed, can achieve a social intelligence that is greater than the intelligence of any of its individuals.

Admittedly, any analogy is imperfect. Significant differences do exist among these three kinds of spontaneous orders.¹⁶ But in these instances, to the extent that the market is unlike insect societies

and science, I will contend that the argument is not impaired but strengthened.

The popular conception of an insect society is one of a centrally directed allocation of obedient insects to given tasks, in which no real knowledge problem seems to arise. Indeed many a polemical argument against comprehensive planning has employed the accusation that central planning would result in the reduction of a free society to the rigid military organization of an anthill.

In fact, however, modern research has shown that insect societies are neither rigidly structured nor centrally directed. This fact, when first realized, posed for biologists precisely the same kind of knowledge problem that has mystified many economists and sociologists. Edward O. Wilson (1971: 226) puts the issue clearly:

The individual member of a large colony cannot possibly perceive the actions of more than a minute fraction of its nestmates; nor can it monitor the physiological condition of the colony as a whole. Yet somehow everything balances out, a fact that keeps drawing the mind back to Maeterlinck's poetic question about the termite colony: "What is it that governs here, that issues orders, foresees the future . . . ?"

But, as Wilson goes on to show, there is no need to postulate a central decisionmaker—perhaps some kind of master termite issuing decrees to his followers—in order to explain the remarkably well-ordered functioning of a termite colony. The complex activities achievable by these lowly insects are made possible by what Wilson calls "mass communication," which he defines as "the transfer among groups of information that a single individual could not pass to another."

Some of the many examples Wilson provides of such ordered behavior attained through mass communication are the complex flanking maneuvers of ant swarms, the regulation of numbers of workers pursuing odor trails, and the precise thermoregulation of nests. In these tasks the action of each individual is never strictly controlled by any mechanism but "results from the competing stimuli impinging on it, including those produced by other members of the colony." In other words we have a primitive form of mutual coordination in which the actions of each participant both contribute a kind of pressure to the actions of other participants while simultaneously being guided in its own actions by similar pressures contributed by others.

With this dual causation, the insect is not only guided by chemical signals (pheromones) contributed by others but also positively contributes similar signals of its own to the process. It is an essential feature of mass communication that "individual insects often seek the stimulus and are not always just passive recipients" (Wilson 1971: 226-28).

A pheromone is properly considered not a precise command but, rather, a partial signal. The particular chemical composition one termite passes into the mouth of another does not by itself result in any particular behavior, but instead it is the resultant chemical composition that emerges from hundreds of mouth-to-mouth signals that can be said to guide the activity of the recipients. Each participant has its own contribution to make to this composite signal, which essentially indicates which productive activity needs greater allocation of social resources. If, say, the chemical component secreted by defense workers falls off, this may mean that an invasion has killed off some of these workers. The termites' rapid response to this chemical signal is then to begin to withdraw workers from other tasks and allocate more to defense.

The main goal of the analyst of such mass communication phenomena should be to develop a compositive theory that builds up from our understanding of the simple behavior patterns of the individual insects into a coherent picture of their more complicated mutual interaction at the social level. Again, as Wilson argues, "The reconstruction of mass behavior from a knowledge of the behavior of single colony members is the central problem of insect sociology." That is, even though the individual insects do not themselves know how their actions contribute to an overall order, it is the aim of the scientist who investigates these orders to divulge "the principles of mass action by which insect colonies translate the numerous individual behavioral acts of its members into higher order effects" (Wilson 1971: 224).

The order that results from this mass communication can by no means be considered any kind of complete coordination and is only evident at a higher level—societywide. If one observes insects at the level of the individual, one finds what Marx calls an "anarchy of production," an ongoing rivalrous struggle among apparently uncoordinated insects, some feverishly attempting to achieve one purpose while others busily work at a contradictory goal. To take just one of several examples Wilson (1971: 224) cites, "Polistes colonies often

build up brood cells while others are tearing them down, so that a greater effort in one direction or the other settles how many cells are to be constructed and where they are to be located."¹⁷

In other words the spontaneous order that emerges on the social level is the outcome of the rivalrous competition among individuals. It is a higher level order that evolves out of a furious turmoil of lower level disorder. "Although these various antagonistic actions seem chaotic when viewed at close range, their final result is almost invariably a well-constructed nest that closely conforms to the plan exhibited throughout the species" (Wilson 1971: 224-25). Of course Wilson is here using the word "plan" in an unusual sense. What he is really saying is that it is not anyone's deliberate plan that can be said to allocate, say, honeybees to a nest site, but instead it is the "competition" among bees that, depending on the relative intensity of signals supplied by different participants, results in an observable pattern of the swarm. Thus, even the marching patterns of army ants, which many people would presume represent some kind of rigidly controlled and centrally directed behavior, are treated by sociobiologists as a particularly striking example of how the "emergence of statistical order from competing elements" can occur.

How, then, does this "important first rule concerning mass action" in insect societies—that it is paradoxically the result of what Wilson (1971: 224-25) calls "conflicting actions of many workers"—relate to human activity in markets? Surely I am not suggesting that humans engage in such obviously contradictory activities as, for example, Wilson observes when some workers are scurrying one way in a tunnel with larvae while others are stupidly walking right by them carrying identical larvae the other way. We do not see humans in front of a building trying to put it together while others in back are obviously tearing it down. Indeed the unique character of human beings, our ability not merely to *signal* each other with pheromones but to *talk* to each other, to consciously draw up blueprints and deliberately coordinate our activities with one another, would seem to be the main attribute distinguishing our societies from those of insects.¹⁸

However, the similarity between insects and man is greater in this respect than it may appear. Of course the contradictions among the far more complicated human plans are never so obvious as those of the insects carrying larvae in opposite directions appear to us. But we have the same general type of phenomenon when two capitalists

embark on projects, however well designed in themselves, in direct competition with one another for the favor of a buyer, in a situation in which only one can ultimately succeed. The fact that the lowly ant seems hopelessly doltish to us should not detract from our recognition that in both human and insect societies a higher level of intelligence arises out of a competition among participants who are, relative to the intellectual achievements of the whole society, woefully ignorant.

The individual ant is capable of certain simple kinds of mental feats based on a combination of clues it can recognize both from the physical environment as well as from pheromones of other ants; its own behavior includes not only various physical actions but also the issuing of chemical signals that can be sensed by its fellows. The spontaneous result of the interplay among such relatively simple "minds" is a degree of social intelligence that far exceeds the capacity of an ant brain. Because we humans who observe this situation are so much more intelligent than ants, we have the ability to formulate problems that the ant brain cannot handle, to specify the exact limitations of the ant's intellectual powers, and to ridicule as obviously contradictory many of its primitive behaviors. Because we clearly do not possess any such superiority over the intellectual capacity of a human in modern society, we are unable to formulate precisely problems humans cannot handle or to specify in detail our mental limitations, and we are not likely to find our own mutually contradictory behavior so obviously ridiculous. But in fact I would argue that an individual human would be no more capable of subsuming the whole society's activities under his or her own mental control than would an individual ant be able to deliberately allocate its fellows to the construction and maintenance of an anthill. The human as an individual problem solver is clearly superior to any insect, but at the same time the complexity of the social problem to be solved is far greater for us than that of insect societies.

The human analogue of the insects' pheromone is the expenditure of money in market exchanges. Human mass communication takes place when an individual engages in the dual process of actively influencing others by secreting "money pheromones" in particular directions, thereby bidding up prices in those avenues, and of passively responding to the prices resulting from the money issuing from other individuals. Insects biologically read composite chemical signals according to genetically programmed procedures. Humans, on the other hand, rationally respond to constellations of price signals by

conceiving of production plans that seem feasible (profitable) according to the prices of the inputs and outputs under consideration. But the added degree of rationality that humans impart to their individual activities should not deceive us into assuming that any single agent could rationally plan the overall result of a modern technologically advanced economy.

In a single firm's accounting statement itemizing the total costs of a project and comparing this total to the revenues received is contained a wealth of scarcity information that neither the accountant nor any other agent in the system could ever gather. Each price of purchased, rented, and hired factors reflects a complex tension among diverse plans that have tried to pull the relevant factor into alternative uses. The profit and loss calculus itself then determines whether the particular combination of inputs under consideration yields an output that is expected to pay its way in the market. The fact that all this scarcity information is expressed in quantitative form permits each decisionmaker to test extremely complex combinations of factors for their profitability while simultaneously relying on similar tests being conducted by rival decisionmakers.

In Polanyi's terminology we could say that those who use profit and loss accounting apply their *focal awareness* to devising or revising the particular combination of factors in their own production process while being guided in this skilled performance by the *subsidiary* clues that are contained in the prices of possible factors supplied by the market system. The ability to add up total costs as expressed in money units enables such decisionmakers to apply their tacit skills to increasingly complex projects, just as the ability to articulate permits people to extend their tacit powers of knowing far beyond those possible to animals.

Without the quantitative comparison of costs and benefits, Robinson Crusoe could still make rough (strictly ordinal rather than cardinal) comparisons between various courses of action: whether, for example, he should expend more labor hours on fishing by hand or on constructing a net. But Crusoe's "seat-of-the-pants" qualitative judgment can only encompass matters that lie directly within his purview. He must confine his cost/benefit judgment to the conditions of possible production processes that can be surveyed from beginning to end directly by him.

Not so for decisionmakers who act within the market system. Crusoe, when he returns to civilization, can now quantitatively weigh costs and benefits in terms of a common denominator—money—in

such a way as to enable him to take account of conditions far beyond those of which he could himself be aware. Each input price of his own calculation represents the output price of the profit and loss calculation of another decisionmaker, who in turn relies on other input prices, in this way stretching a chain of information transmission throughout the stages of production.

As Hayek (1982) puts it, the price system represents a stage in sociological evolution comparable to the emergence in biological evolution of eyesight. It permits decisionmakers to take account of conditions beyond their immediate locality, indeed beyond what they can physically see, just as sight enables animals to take account of conditions they could not touch. Thus in the market system the focal decision about one's own production process is dramatically enhanced by the information supplied by others and imparted to the factor prices that serve as subsidiary clues to guide one's decisions.

Entrepreneurs in human society rely on such clues supplied by prices, which in turn result from independent decisions being made simultaneously by other entrepreneurs elsewhere in the system, in order to make choices about how to allocate scarce resources among competing ends. The clues are contained in the intricate and volatile constellation of relative prices, not only of the final consumer goods (toward which all productive activity is ultimately directed) but also of all of the various factors of production available. The crucial decisions being made throughout the economy about how to combine resources effectively are invariably keyed to the observed changes in relative prices and thus depend on the knowledge that is conveyed by them. At the same time, that knowledge is put into prices by the cumulative choices of market participants across the whole economy and the relative intensities of their multidirectional tugs.

Part of this relation between market choice and the price system has been accepted by the aforementioned planometric models of planning that have arisen within the field of comparative economic systems. It is now widely accepted (except by some stubbornly consistent Marxists) that intelligent production decisions must be based on price information and that any attempt to abolish prices is doomed. Just as an insect deprived of its ability to sense pheromones would be helpless to engage in complex social behavior, so a human, deprived of the opportunity to observe, respond to, and try to anticipate price changes, would be completely in the dark about how to make rational production plans effectively.

While modern planometric theorists have admitted that the "reading" of price signals is necessary, they have failed to recognize what kind of social arrangements are necessary for their "writing," that is, for the relevant information to get put into prices.¹⁹ In fact it has been generally assumed that the ideal state of affairs (incorporated into abstract models misleadingly labeled "perfectly competitive") would be a situation in which all producers are pure "price takers" who have no influence whatsoever over prices but simply treat them as parametric signals to which they passively react. From this point of view, real-world markets can readily be shown to fall far short of the imagined ideal, since market participants regularly exert a substantial influence over prices. At the same time planning proposals can aspire to actually achieve the "perfection" that is evidently so lacking in the real world.

But this way of formulating the problem is fundamentally wrong. The fact that market participants exert influence over prices is no more a lamentable imperfection of the market's system of mass communication than an individual insect's exertion of influence over the composite chemical signals a colony relies on is an imperfection of their method of mutual coordination. For either of these processes to work, information not only has to be sifted out of pheromone or price signals but must also be injected into them. These signals carry only as much knowledge as has been imparted to them as an outcome of the rivalrous multidirectional tugging taking place among competing individuals. No single agent knows what the pheromone or the matrix of relative prices should be. But as an unplanned outcome of the contention among rivals, information gets packed into the signals in such a way as to lead to an effective coordination of the society as a whole.

It is important to recognize that the standard against which a society's organizing mechanism is being judged here is not the neoclassical welfare economist's Pareto-optimality conditions, which pertain to imaginary states of perfect competition, but rather the Austrian economist's conception of a politically unhampered market process. The prices that Mises, Hayek, and Kirzner describe as providing needed information to the human actors who employ them are *not* equilibrium prices, and the coordination they make possible is nowhere near the neoclassical economist's notion of general equilibrium where all plans mesh perfectly.

Like pheromones, prices are imperfect signals that guide a continuous coordinating process. For example, an economy with completely

unhampered entry and exit is still deemed by neoclassicists to be suboptimal because in some industries large firms with high start-up costs have an "advantage" over new entrants, an advantage that should be counterbalanced by antitrust enforcement. Large economies of scale are thus seen as a source of market failure.

By the standards I am commending, however, no single agent in the economy, even those trained in neoclassical economics, is thought to possess sufficient knowledge to decide whether or not the size or number of firms in an industry is "optimal." Thus, government interference into the market process in order to shrink or break up "excessively large" firms (or for that matter to enlarge "excessively small" ones to take advantage of economies of scale), with the purpose of deliberately making the economy more competitive, is ill conceived. A truly competitive industry is one in which the firms are the size and number dictated by the competitive process itself.

When the neoclassical welfare economist labels a situation a "market failure" in the provision of certain goods, he has to admit that he is suspending judgment on whether government provision of the good would improve circumstances. But if the government cannot be shown to do better, the "failure" is no failure at all. The point of the Austrian view, by contrast, is that no single agent can be trusted to be able to identify consistently particular instances of real market failure—that is, instances where government planning is known to be able to do better.

Many advocates of planning have been willing to concede the necessity for *some* competitive markets as a method for imparting information to prices. But they have argued that the material factors of production need not be separately owned in order to set the prices of those factors. The means of production could all be commonly owned, it is argued, and at most only the final output (the consumer goods) and the primary inputs (raw materials and labor) would need to be the objects of free exchange among separate competing bidders. Once prices have been generated in these limited markets, all the other prices of the various factors of production can simply be computed from them. In the equilibrium theory of economic textbooks, when certain data are said to be given, the values of all intermediate factors get imputed from the relative values of the final consumer goods, as determined by the expenditure of incomes from wages and from selling or renting raw materials. Thus, it is argued, markets in the factors of production are superfluous and can be re-

placed by economists, no doubt armed with computers, instructed to derive factor prices from consumer goods prices.

But it is not only in one's capacity as a consumer that one imparts information to the price system; it is in *all* market-related decisions. To make all material factors of production common property, as is the traditional goal of comprehensive planning, *would be to deprive the economy of its main source of economic knowledge*. It is primarily the rivalrous competition among separate owners of factors of production, trying in their diverse and often mutually incompatible ways to employ them in what they believe to be the most profitable avenues for investment, which generates information-laden prices. Factor prices in the real world cannot be derived from consumer goods prices since, unlike in the textbooks, the set of specific production methods from which the choices are to be made are not given but are exactly what is at issue.

Once again such production methods, as Mises has argued, can only be derived from consumer goods prices under the highly unrealistic assumptions that factors are perfect substitutes for one another or that they are perfectly specific. Since neither condition holds in the real world, no producer can know in advance of his participation in the competitive struggle with others whether his own production technique is economically appropriate.

Another way to put this point is to say that when a rival outbids me for a factor of production (say, by pushing its price so high that I can no longer afford to use this factor in my own project), he is not only hurting me by frustrating my purpose. He is also *informing* me. He is telling me that this factor has more highly valued uses than the one to which I would have put it. When the bidding of thousands of participants instead of just two is involved, the informing process is still going on, but it is now the scattered bits of knowledge from all the participants that combine to produce a price that is informative, in turn, to each of them. It is only by being informed in this way—by the contrary tugging of all of one's rivals—that any one producer can be said to know what he is doing.

Or, in the terms of the last chapter, it could be said that the Market exhibits a social intelligence greater than the individual intelligence of its contentious participants. The question at hand is whether Planning can exhibit a comparable social intelligence.

To be sure, a planning office can marshal, in some manner, the abilities of thousands of minds more effectively than any termite

could organize his comrades. A human planning agency must be hierarchically organized or it will display the very lack of control that constituted its *raison d'être*. Whether this agency is directed by an individual or a committee, it will be limited by the individual or organizational intelligence of that director. But in a spontaneous order there is no such limitation.²⁰

This same limitation pertains to a profit-making corporation. Its effective size is also limited by the organizational capacity of its director. A large private corporation can admittedly often look deceptively like a small planning agency. It might even be argued that a planning agency could engage in internal accounting procedures in the same way that a large corporation like IBM does. But in a market order, much of the necessary information available internally to an organization is supplied to it by the external competitive order, by the organization's freely competing rivals. A comprehensive planning agency, on the other hand, *has* no rivals, while a noncomprehensive planning agency's rivals are at an inherent disadvantage that may keep them from supplying such information. The planning agency may be preventing the discovery process from operating by "rigging the game" for the industries it favors.

The principle the sociobiologists call "mass communication" reveals how partial, localized knowledge on the part of a termite in one part of a colony can be merged together with similar bits of knowledge of all the other termites in such a way that the system's overall allocation of resources is informed by more knowledge than any one participant to the process can possess. It seems to me that the very same kind of mass communication is the principle that operates in market systems. In either case, the resulting order of the system is necessarily an imperfect one since it only comes about as a result of the conflicting tugs and pulls of chemical or price signals. Yet despite its close-range chaos, the overall system exhibits a degree of coordination that far surpasses what has ever been consciously undertaken by any one member of insect or human societies.

SCIENTIFIC AND MARKET DISCOVERY PROCEDURES

It might still be objected that one attribute of humankind which I have stressed and which is denied to insects might make us capable

of overcoming this kind of reliance upon disorderly competitive struggle as the method of roughly coordinating social activity. This is the human ability to articulate knowledge of productive techniques and thereby to refine our understanding of the production processes in which we are engaged. The ant has to be unconscious of the reasons for his actions, but we human beings are increasingly aware of how the world works and can apparently explain to others what we know. What is manifestly unavailable to insects, the capacity to accumulate clear scientific knowledge of their own activities, is just as clearly an option for humans. And it may appear that this makes it possible for us to attain a degree of deliberate self-control over our whole society's activities heretofore denied to both insects and people. What has always been widely dispersed, localized knowledge, can perhaps be rendered global and universally accessible by means of extensive data gathering and the ongoing accumulation of scientific knowledge. It might be argued that in spite of the similarities I have been describing between human and insect societies, an effort at information collection such as that proposed by Leontief might make it possible for us, for the first time, to rise above the crude coordination processes of insect societies and truly come to control our own development. In other words, can most of what has been said up until now be accepted, and yet the further claim be made that individuals, instead of bidding against one another, can articulate their local knowledge and expectations to a central authority who could then coordinate their actions with one another?²¹

This is where the discussion of the contemporary work in the philosophy of science and the difference between knowledge and data comes to bear on the issue of planning. The general conception of the nature of knowledge that emerges from that analysis suggests that articulated knowledge is only the visible tip of the iceberg, representing only what we are able to *say* about what we know, which never comes close to encompassing our full understanding. While our ability to articulate ideas is the main intellectual advantage we have over other animals, this ability is itself rooted in tacit mental operations of which we are largely unaware. Articulation is an indispensable tool we use for the advancement of our mostly tacit understanding of the world.

Now the knowledge of insects, of course, is entirely tacit and hence it is blatantly obvious that they are unable to explain what they know to an "insect planning authority" in order to deliberately

organize themselves. But the intelligence of humans, though immensely strengthened by articulation, nonetheless contains a large component of tacit understanding by individuals who know more than they can say. If this is also true with respect to the sorts of knowledge relevant to our economic activities, then no comprehensive planning agency could obtain the sort of knowledge necessary for economic planning, for it would lie buried deep in the minds of millions of persons.

Is it legitimate, then, for us to extrapolate from the fact that scientific knowledge rests on tacit or personal components to the contention that the kinds of information relevant to economic decision-making also rest on such inarticulate foundations? In other words, having seen that (with respect to the first extended analogy) the crucial difference between human economy and that of insects is the human ability to articulate (at least part of) our understanding of the world, we are now led to consider the second analogy: Is our economic knowledge similar, in the relevant respects, to scientific knowledge?

Even if it is accepted that science involves all the subtleties of interpretation that make complete objective articulation impossible, it could still be argued that the kinds of information needed for economic decisionmaking are less problematic, and are mere matters of indisputable fact like how many plastics factories there are in California.²² After all, it might be argued, the typical business manager does not have to speculate about alternative scientific theories but simply relies on the current state of technology. He or she just applies scientific discoveries to the mundane problems of social production.

There is no doubt that business entrepreneurs or managers solve *different* sorts of problems than scientists do, but this only means that it requires different skills. Entrepreneurship certainly involves as much skill, tacit judgment, and imagination as scientific research. Much laboratory work is exasperatingly laborious, while there is nothing dull about the challenge of keeping a business in the black in a competitive industry.

But all of this is really beside the point. Like individual scientists, individual businesspersons know very little *compared* to the knowledge contained in the entire community in which they operate; each crucially depends on interaction with rivals in order to be tacitly and explicitly informed by their contrary tugs. Hence the point is

not to compare the individual intelligence of businesspersons to that of scientists. It is that the intelligence of each of them is meager in comparison with the social intelligence embodied in the overall community in which each participates.

There is, in fact, a fundamental difference between the kind of specific, detailed knowledge of the particular circumstances of time and place relevant to economic activity and the general knowledge of interest to the scientist (Hayek 1948: 80). While this difference might make economic decisions *more* dependent on the kinds of rivalrous mutual adjustment processes I have been describing, it certainly does not make them less so. A good case can be made for the position that the complexity of the overall social problem of applying scarce resources to the millions of competing ends in the economy is greater than the complexity of the overall sum of scientific knowledge. If competitive discovery processes are necessary to science in part because it is complex and ever-changing, those processes must be equally necessary to the economy, whose intricate details are undergoing such turbulent change as to make science look almost simple and static by comparison.

The quantities and qualities of the myriad of resources available for economic production, indeed of even notions of what constitutes a resource, are continually changing as an inherent by-product of production processes. Specific techniques of production alter much more rapidly than do scientific theories of technology. The criss-crossing lines of interdependence among economic choices are far more intricate than those of scientific choice. Although it is quite likely that pathbreaking developments in genetics will have little or no impact on particle physics, it is hard to think of an instance of any major change in one sector of an economy that will not have significant rippling effects throughout the system.²³

In other words the very features of the scientific enterprise that make it impossible for science ever to be fully articulated by an individual scientist are even more pervasive in the economic realm and hence make it impossible to obtain comprehensive, fully articulated knowledge of an economy. In particular, the two kinds of limitations to scientific articulation which I have called the "static" and "dynamic" limitations have counterparts in the case of market processes.

With respect to the first, the static limitation to articulation, one can argue that just as an articulated statement only carries meaning

to other people because of a shared definitional background in unarticulated assumptions about the use of language, so too do articulated prices only carry meaning to those who calculate with them because of a shared background in unarticulated assumptions about the characteristics of the priced goods and services. Just as articulated statements in science constitute an indispensable aid to our advancement of a largely inarticulate understanding of the world, so too do articulated prices provide an indispensable service to our largely inarticulate production activities. But neither articulated statements nor posted prices have any meaning when divorced from their inarticulate foundations.

The articulate information supplied by prices is only informative because they are juxtaposed against a wide background of inarticulate knowledge gleaned from a vast experience of habitual productive activity. A price is not just a number. It is an indicator of the relative scarcity of some particular good or service of whose unspecified qualities and attributes we are often only subsidiarily aware. Yet were these qualities of a good to change in the slightest respect, this could change incremental decisions about the uses of the good just as significantly as a price change could. As Sowell (1980: 180–81) reminds us, what we mean by an apartment or a can of peas is not generally clear even to ourselves; but if any of the unspecified features of either were to change, we would substantially alter our demand for it.

There has been a great deal of attention in recent years to Hayek's conception of the price system as a means of transmitting information. As interpreted through orthodox economists' analytical lenses, the idea is rendered as the claim that a market economy is "informationally efficient" in that prices contain all the information needed for decisionmaking. In the literature on planometrics, this view has led to the calculation of the number of prices and quantities of goods that have to be communicated back and forth between plant managers and the central planning board during the planning process. The confident conclusion is that the number of numbers to be passed around is small enough to be manageable.

Now it is true that one of Hayek's main points was that prices act as a summary of detailed changes that allow decisionmakers to respond to fluctuations in relative scarcities without knowing the causes of such changes. But Hayek was not contending that prices as numbers are the only pieces of information that the market re-

quires. On the contrary, it is only because of the underlying tacit meaning attached to the priced goods and services that prices themselves communicate any knowledge at all.

This is not to say that the relative significance of the tacit parts of these two kinds of knowledge—scientific and economic—are the same. But it seems that, if anything, we might expect economic information to have an even larger tacit component. The primary aim of the scientific enterprise, after all, is to advance our explicit knowledge of the world, to widen the scope, precision, and clarity of our articulation. The driving force of market activity is the competitive groping for pure profit opportunities in which the "articulation" of information from which the more promising paths for investment can be discovered via the constellation of relative prices is but a by-product (although of course an important one) of profit-seeking behavior.

Capitalists, unlike scientists, are not deliberately trying to improve the informational content of the articulation that results from their respective activities. For markets, it is only as an unplanned result of their competitive bids tugging in various directions that such an improvement in price information emerges. With scientific activity the central aim is to validate and improve upon the existing structure of articulated knowledge. To use Polanyi's phrase again, scientists are "focally aware" of the extent to which their knowledge is well articulated whereas capitalists and entrepreneurs are only "subsidiarily aware" of their articulation of price information while focusing their awareness instead on the profit implications they believe are suggested by relative prices. Thus the relative importance of the tacit component of *market* knowledge is apt to be at least as great as that of *scientific* knowledge simply because it is one of the main purposes of the latter and not of the former to make the articulation as thorough as possible even if it is never complete.

Two other features that distinguish economic information from scientific knowledge, both of which relate to the relatively greater significance of time in the market process, can also be shown to accentuate the limitations to full articulation that apply in the case of the market. First, market activity is oriented toward future and hence more uncertain circumstances to a greater extent than most scientific work. The scientist primarily aims to improve the current state of articulated knowledge, while the businessperson produces mainly to satisfy future consumer demand. In both cases the deci-

sion is bound to carry with it a certain tacit element, a kind of educated hunch about either future scientific tests and theories or future conditions of supply and demand. But the extent to which the entrepreneurs' activity is based on subtle clues, subjective expectations and tacit judgments seems at least as great as that involved in most scientific activity.

The other time-related aspect of market information that differentiates it from scientific knowledge is the fact that it tends to be of only fleeting interest or validity, whereas scientific knowledge is intended to be universally true and inherently interesting. A fall today in the price of oil may be of tremendous importance for a while, but were it to rise tomorrow this would instantly make the old price obsolete and of interest only to a few scattered economic historians. In other words price information represents knowledge about a continually and rapidly changing structure of economic relationships, while scientific knowledge represents a gradually changing knowledge of universal laws that are believed to be permanent. Thus it is to be expected that it would be easier to formulate scientific articulation into relatively comprehensive form than it would be to get any relevant economic information into this form before it becomes obsolete.

Not only is economic information of limited temporal usefulness, it is equally confined in its spatial usefulness. The relative scarcity of coal in Ethiopia today may have little to do with its availability in Mexico and is likely to be of little immediate interest to most Mexican businessmen. But clearly a new scientific contribution that happened to be made by an Ethiopian scientist will be of relevance to scientists in that field all over the world. Again we have every reason to believe that the tacit elements, this time relating to local circumstances, will be at least as significant a part of the intellectual apparatus of businessmen as will be the corresponding tacit elements in the case of scientific knowledge.

Thus in all these respects it appears that the static kind of limitation to articulation, which indicates that a scientific statement can never be completely articulated because of the implicit reliance on the tacit meaning of the words used, presents just as strong a corresponding limitation to the articulation of market information. If even scientific knowledge—which is intended to be as fully articulated as possible, primarily oriented toward the current state of science and presumed to be universally valid independent of time and

place—if even such knowledge necessarily contains a tacit component, then we should certainly expect economic information to be at least as dependent on tacit knowing. Market participants do not deliberately aim at improving the articulation of price information, their actions are largely oriented toward the uncertain future, and the information they use is normally of only temporary and local significance. All these features suggest that the economic information is likely to be at least as deeply imbued with subjective or personal elements as the modern philosophy of science has shown scientific knowledge to be.

There is also a counterpart in the market context to the second or dynamic limitation to articulation. Just as the process of constructing or using a formal system or scientific statement involves a creative imagination that necessarily lies outside of the framework of the formal system itself, so does the construction or use of a configuration of prices rest on knowledge that is not contained in that set of prices. Just as the acceptance or rejection of a scientific theory rests on the personal commitments of members of the scientific community to truth, so does the "survival" of a posted price or a particular production project rest on the personal commitments of market participants to profit.

The extent to which a scientist is willing to adhere to a theory, or an entrepreneur to a production project, depends on his or her whole set of personally held and inarticulate beliefs about other theories or other production projects with which the presently contemplated theory or project must be complementary. Entrepreneurs' subjective expectations about the future course of demand and supply for all the related goods and services determine their decisions. Yet, like the ideas of scientists about what constitutes good science, these expectations are inarticulate. Profit and truth are not so much seen as imagined, not so much grasped as pursued.²⁴

The role controversy plays in ferreting out less defensible beliefs in science has its counterpart in the role rivalrous competition and the calculation of profit and loss play in eliminating less economically viable methods of production. It is the challenge of fellow scientists or of competing producers that applies the pressure that keeps each of these social processes going.

Thus market participants are not and could not be price takers any more than scientists could be theory takers. In both cases a background of unquestioned prices or theories is relied upon subsidiarily

by the entrepreneur or scientist, but the focus of the activity is on disagreeing with certain market prices or scientific theories. Entrepreneurs (or scientists) actively disagree with existing prices (or theories) and commit themselves to their own projects (or ideas) by bidding prices up or down (or by criticizing or elaborating existing theories). It is only through the intricate pressures being exerted by this rivalrous struggle of competition (or criticism) that new workable productive (or acceptable scientific) discoveries are made and that unworkable (or unacceptable) ones are discarded.

As Polanyi points out, there can be no pure statement *P* independent of the person of a scientist willing to commit himself to the proposition "*P* is true." The enterprise of science can only progress so long as scientists are free to attach or withdraw their commitment to propositions on the basis of the rivalrous process of criticism taking place in the scientific community. Hence, "to say that '*P* is true' is to underwrite a commitment or to sign an acceptance, in a sense akin to the commercial meaning of such acts" (Polanyi 1958a: 254). Scientists can be said to "invest" intellectual resources on behalf of theories in which they believe truth to be forthcoming in much the same way that capitalists invest in productive projects in which they believe profit to be forthcoming.

Without the pressure that such personal commitments impart to science and to the market, each would lose what Sowell (1980: 102-3) calls its "determining rationality." It is precisely because the scientist has his reputation (and self-esteem)—and the capitalist his wealth—at stake that he is impelled to make his commitments for or against any particular direction of scientific or productive activity. Thus both the property rights that permit separate owners to use their resources as they see fit and the intellectual freedom that permits scientists to adhere to the theories of their choice play the same roles. To the extent that either form of personal commitment is undermined—when scientific reputation or economic wealth depends on loyalty to a party line rather than to a personal devotion to truth or a pursuit of anticipated profit opportunities—each of these great achievements of civilization, science and our advanced economy, is to that degree sabotaged.²⁵

Coercion obstructs the flow of knowledge in the market process for the same reason it obstructs it in the scientific community. The spontaneous transmittal of scattered information that is continually

being accomplished by the various tugs of market rivals is distorted when some of the participants gain the coercive advantage. As Thomas Sowell (1980: 172) points out, when the effects of government policies such as wage and price controls are examined, "The element of force is crucial to the distortion" that they cause.

The knowledge transmitted by voluntarily chosen prices conveys the terms on which various forms of mutual cooperation are available. The knowledge transmitted under government price constraints reflects the desire to escape punishment, and the knowledge conveyed by such prices does not reflect the full array of options actually available to the economy.

Managers of different "departments" within a planned economy would be expected in practice to *contend* with one another, although they would have to do so without claiming a firm title to property over the resources each controls. But, the objection could be raised, the scientist is in the same circumstances, unable, except to the very limited extent protected by patent or copyright laws, to hold any clearcut property rights over his "products." Yet with rivalry but *without* property rights and a price system, this process works to generate the scientific discovery procedure. Why, then, can the market-science analogy not be turned into a planning-science analogy that answers the critique heretofore presented of central planning? Could not a new procedure of interdepartmental rivalry take the place of the scientific and market rivalries that enable these processes to generate and disperse knowledge?

This line of argument for planning has a serious shortcoming: No advocate of planning has yet indicated a workable *medium*, analogous to the insects' pheromones or the scientists' journals or the market's money prices, through which the interdepartmental rivalry could generate a level of social intelligence that exceeds the individual intelligence of its participants. If, on the other hand, the advocate of planning answers that he will borrow the procedures of science for the needed interdepartmental rivalry, he faces the difficulty that most of the knowledge needed for the working of our economy has never been and is unlikely ever to be articulated. The first part of this chapter argued, in fact, that the task of allocating resources efficiently is not the kind of project that can be subsumed under the conscious direction of articulate discourse. On the other hand, if he answers that he would model his interdepartmental rivalry after

the procedures of the market, he will have to face the difficulty that his departments and managers would seem indistinguishable from the firms and capitalists of the market system.

These diverse spontaneous orders, from primitive insect societies to such complex institutions as markets and science, all exhibit as a basic organizing principle a competitive process of discovery whereby each participant both actively contributes and passively responds to signals. Whether these are crude chemical compositions with which termites communicate or complicated price configurations or articulated theories with which entrepreneurs and scientists communicate, the same principle is at work. In all these processes the very contentiousness or "rivalrousness" of separate, independent, self-motivated agents each guided by his own personal, largely tacit, perspective is what determines the degree of higher level order or of social intelligence that emerges.

Comprehensive planning, the classic doctrine of planning advocates, seeks to achieve economic coordination without relying on the contention of separate decisionmakers with one another; it thereby deprives itself of access to one of the most important sources of knowledge exhibited by these kinds of orders. Just as in biological competition, there is the "information bearer" function of DNA, so in the society of Tradition, this function is further served by such developments as language and culturally acquired techniques and habits. In the society of Market, profit and loss signals are added to this array. In the society of Planning, there is no new information bearer and those of the Market are discarded. It is this lack that gives the knowledge problem argument its force.

The description of the knowledge problem as a full critique of national economic planning is not yet complete. The three varieties of noncomprehensive planning to be taken up in the next chapters can be understood as representing three ways of attempting to resolve the knowledge problem by reducing the comprehensiveness of the planners' task. One tries to rely on an aggregated rather than a detailed use of knowledge in the planning process. A second aims at decentralizing the decisionmaking in the planning system as compared with the hierarchically organized procedures of comprehensive planning. The third proposes that the planning agency focus attention on propping up only certain "structural" sectors, rather than reach for so comprehensive a grasp over the whole economy. We

must next consider whether any of these attempts are able to solve the knowledge problem.

NOTES TO CHAPTER 3

1. I hasten to add that Polanyi and Hayek do not contest the fact that in some sense what distinguishes the scientist from quacks has to do with the scientist's objectivity and rationality. The problem these two writers are concerned with lies in the question of just what is involved in this objectivity or rationality. They both are painfully conscious of having to give up two perfectly good words to their opponents. See Hayek (1967: 82-95) and Polanyi (1958a: 403). The word "positivist" is often used to denote this objectivist epistemology but that word is sometimes taken to mean only the particular school of logical positivism, which is a much narrower category than the position I am criticizing here. (Incidentally, this objectivism has nothing to do with the epistemology of Ayn Rand. Although the style of presentation of her position is diametrically opposed to that of Polanyi and Hayek, the content of her position is not nearly as different as it may appear.)
2. It may seem odd to find so much discussion of the philosophy of knowledge in a book on economic planning. But it has been shown (Gray 1984) that Hayek's theory of knowledge is the foundation of all of his work, including his critique of central planning. The first of this chapter's epigraphs reveals Polanyi's view of the close relation between epistemological and economic issues. I should point out, however, that it is quite possible for someone to reject much of this epistemology, which has substantial implications for all the sciences, and still agree with most of the basic critique of economic planning elaborated in this book. Thus I have relegated my more detailed discussion of these issues to the appendix.
3. It should also be admitted that individual projects of government-financed data gathering or forecasting may, in many instances, be found to be superior to any done within the private sector. The crop forecasts of the U.S. Department of Agriculture, or the money supply statistics of the Federal Reserve Bank may well be the best available sources of these kinds of information. Similarly impressive individual accomplishments can be cited in any area that has received large investments of government research monies. But we must bear in mind that the forgone uses of the massive funds that have been spent by these tax-supported research institutions are unknowable, and in most cases could probably have produced more useful knowledge or other kinds of products that would have been deemed more valuable.

4. Elsewhere I have discussed the history of the classic debate in which the knowledge problem was first formulated. Oskar Lange is generally thought to have won this "calculation debate" with his claim that the equations of Walras and Barone supplied the definitive answer to Mises's challenge. I have argued (1981, 1985) that this was a gross misrepresentation of the nature of the challenge being made, since Mises never tried to deny any of the formal deductive logic of general equilibrium analysis. To Mises's challenge that planners would lack the knowledge to run a technologically advanced economy Lange offered the answer: Under the assumption that all "data are given," as he liked to put it, there is no problem. "The administrators of a socialist economy will have exactly the same knowledge, or lack of knowledge, of the production functions as the capitalist entrepreneurs have" (Lange [1938] 1964: 61). But the point is that persons embroiled in a competitive process can, by virtue of their very rivalry with one another, impart information to the system of relative prices that in the absence of competition they would have no way of obtaining.

I should point out that one of the several purposes of the discussion of epistemology in this chapter and the appendix is to provide a justification for the *kind* of demonstration I am trying to make. One of the most serious misinterpretations of earlier attempts to explain the knowledge problem, especially the attempt of Ludwig von Mises, was the notion that he was supplying some sort of rigorous formal proof of the impossibility of a planned economy, the reaction to which was that on the strictly formal level of economic analysis the knowledge problem does not exist. I argue, on the contrary, that nothing of importance concerning the viability of planning can be settled by means of such formal proofs. The argument does not pose as any sort of rigorous proof but is simply an attempt to persuade the reader that planning is not a very plausible way of running an economy. The main tools of this argument are not formalistic and mathematical but descriptive and analogical. To many economists this form of argument already condemns it as unscientific. It is partly in order to anticipate and counter this charge that I embark on this epistemological reconstruction.

5. I have of course packed many different epistemological positions into this one view of knowledge and it is quite possible for someone to hold only a subset of these positions, but space will not permit dealing with all the different permutations. The package as a whole seems to capture an overall attitude that has dominated much of philosophy at least since Descartes and that underlies the arguments for national economic planning.
6. The appendix will discuss this important revolution, which was ignited by Thomas S. Kuhn and try to relate it directly to Michael Polanyi's notion of "personal knowledge." Polanyi was not himself an active participant in the philosophical revolution with which I am concerned here, and

neither was Hayek, even though I will be using their work as well as Kuhn's to present what I believe is the most promising alternative to this objectivism. Hayek's and Polanyi's ideas are broadly consistent with the main elements of Kuhn's growth-of-knowledge perspective. In fact Kuhn has explicitly credited Polanyi with having influenced his ideas concerning the important role of paradigms in the scientific community:

Mr. Polanyi himself has provided the most extensive and developed discussion I know of the aspect of science which led me to my apparently strange usage [of paradigm]. Mr. Polanyi repeatedly emphasizes the indispensable role played in research by what he calls the "tacit component" of scientific knowledge. This is the inarticulate and perhaps inarticulable part of what the scientist brings to his research problem: it is the part learned not by precept but principally by example and practice. (Crombie 1963: 392)

7. Students of philosophy will recognize many of these points as having been made by several important philosophers prior to Kuhn, Polanyi, and Hayek, including Locke, Hume, and Kant. In particular, the work of the later Ludwig Wittgenstein on the idea that the meaning of a language is culturally embedded has been cited by Thomas Kuhn as an influence on his thought, and it has been shown that Wittgenstein's work borrows much from the continental tradition of phenomenology that stems from the work of Edmund Husserl and even from some of the work of the existentialists. See for example Helmut Kuhn (1968), C. Daly (1968), Gier (1981), Gelwick (1977), and Barrett (1979) for some of these fascinating connections. Incidentally, the last of these studies explicitly draws the implication from this epistemology that comprehensive planning would be an impossibility (p. 114).
8. Indeed, it can be argued that the objectivist view of knowledge is primarily responsible not only for the fallacies of all varieties of planning, but also more generally for the lag of social sciences behind the natural sciences. While it was possible for the natural sciences to achieve success in spite of their commitment to this faulty theory of knowledge, the social sciences have been positively crippled by it. Ignoring the personal element necessarily involved even in the study of the contents of test tubes may have little impact on the progress of chemistry, but ignoring this personal element in the study of persons or of interactions among them has proved a positive hindrance to such fields as psychology and economics.

Polanyi (1958a: 347-380) has shown the reason the objectivist view of knowledge is more damaging to social sciences: "Facts about living things are more highly personal than the facts of the inanimate world. Moreover as we ascend to higher manifestations of life, we have to exercise ever more personal faculties—involving a more far-reaching participation of the knower—in order to understand life." (p. 347)

Polanyi's philosophy of science contains a kind of methodological dualism by degree. There is no sharp dividing line between natural and social

sciences but, rather, a single spectrum in which all knowing requires *some* personal participation on the part of the knower; the social sciences, however, require more than, say, the study of insects, which in turn requires more than physics. See also Polanyi (1958b: 71-102). This issue bears on the argument of the latter part of this chapter that the personal component of socioeconomic knowledge is greater than that of the natural sciences. Axel Leijonhufvud (1981: 307) makes a very similar point when he contends that "the degree" to which subtle problems of interpretation "force themselves on the average practitioner and shape the collective style of the pursuit of knowledge in economics will pose problems for the extension of natural science-based Growth of Knowledge theories to the field."

9. For linguistics see Chomsky (1963), Hattiangati (1973), and Campbell (1982), and for the study of animal behavior see Thorpe (1963). The emergence of modern physics and especially quantum mechanics is often cited as having set in motion a serious retreat from the rigid deterministic model of Newtonian physics, which inspired the quest for certain, objective knowledge. On mathematics see Lakatos (1978) and the excellent survey of the "loss of certainty" that has taken place in the history of mathematics in Kline (1980). On psychology see much of the work of the gestalt school and modern, antbehaviorist cognitive psychology, such as Piaget (1971), Lackner and Garrett (1973), and Rosch (1977). For a nontechnical summary of much of this work, see Hunt (1982). And see Dreyfus (1979) for a fascinating if perhaps overpolemical study of the developments in the field of artificial intelligence, where the serious difficulties encountered are largely attributed to their lack of a notion of tacit knowledge.
10. One implication of this theory of knowledge is that it is *logically impossible* for a mind to understand itself in detail, because the individual mind is itself a spontaneous order of propensities and practical habits, none of which controls the outcome completely. Hayek ([1952] 1963) has argued this in more detail and with reference to the neurological functioning of the brain, and has concluded (1967: 73) that "the brain of an organism which acts as the directing centre for that organism is itself in turn a polycentric order, that is, that its actions are determined by the relation and mutual adjustment to each other of the elements of which it consists." The emerging consensus among cognitive scientists seems to agree with this view of the mind as itself, in an important sense, unplanned.
11. Or as Kuhn concisely puts it, "Knowledge of nature can be tacitly embodied in whole experiences without intervening abstraction of criteria or generalizations. Those experiences are presented to us during education and professional imitation by a generation which already knows what they are exemplars of" ([1962] 1970: 275). See also Kuhn (1977: 305-18).

12. One example from physics that Polanyi uses is in the study of the molecular motion of gas; he argues that "to specify the randomness of a gaseous molecular aggregate in terms of its mechanical particulars . . . is logically impossible (1958a: 391).
13. Hayek ([1962] 1967: 56-57): "Like scientific laws, the rules which guide an individual's act are better seen as determining what he will not do rather than what he will do."
14. See Polanyi (1972: 44-45). See the appendix for an elaboration of this point. The scientists' "hunches" about the potential fruitfulness of various avenues for future research, Polanyi insists, "are conjectural and may prove false, but they are not therefore mere guesses like betting on a throw of dice. For the capacity for making discoveries is not a kind of gambler's luck. It depends on natural ability, fostered by training and guided by intellectual effort. It is akin to artistic achievement and like it is unspecifiable, but far from accidental or arbitrary" (1958a, p. 106). Polanyi does not, however, equate the sort of meanings involved in the sciences, and the standards appropriate to them, with those of the arts. While the former is focusing on the nature of reality itself, the latter examines our emotional responses to reality. See Polanyi and Prosch (1975).
15. Many biologists and social scientists have fruitfully employed this type of analogy between animal and human societies, and I claim no originality for my use of this heuristic device. I will be trying only to draw out certain features of insect societies which I think are particularly important for understanding markets, not trying to supply an adequate description of the nature of insect societies.
16. For example, the previous chapter has just stressed the importance of humans' cultural transmission of effective habits and their economic selection of profitable methods of production as two particularly significant distinguishing characteristics of human as compared with other animal societies.
17. See also Thomas (1974: 12-13): "It is only when you watch the dense mass of thousands of ants, crowded together around the hill, blackening the ground, that you begin to see the whole beast, and now you observe it thinking, planning, calculating."
18. See, for example, Marx ([1867] 1967: 178): "What distinguishes the worst architect from the best of bees is this, that the architect raises his structure in imagination before he erects it in reality." Hayek (1967: 73) makes the same point: "The unique attribute of the brain is that it can produce a representative model on which the alternative actions and their consequences can be tried out beforehand."
19. This critique of neoclassical price theory has been one of the main themes of Kirzner's work (1973, 1979). Some important advancements within neoclassical economics are beginning to get away from this perfect competition approach; see, for example, Nelson and Winter (1982).

20. "Organizational intelligence" may be differentiated from social intelligence in that it must resolve somehow—usually by an individual director—its internal conflicts. A society's social intelligence need not resolve such conflicts. On the limits to the organizational capacity of hierarchical organizations, see Roberts (1971: ch. 3) and Polanyi (1951: 111–37).
21. This has been proposed by Hurwicz (1973: 5) in an attempt to answer Hayek's critique of planning (1935, 1948). Some of what follows is taken from an article in which I criticize this approach.
22. The first part of the next chapter will take up the issue of how detailed the collected information must be in order to guide an economy rationally. There it will be argued that knowing such things as how many factories there are in a given industry is useless unless you also know exactly how each factory is organized internally.
23. For a lucid discussion of the complex network of continually changing and interrelated plans that can be called the capital structure, see Lachmann (1978).
24. Of course the point here is not to equate these two pursuits, of truth and of profits, as intrinsically or equally admirable, but rather to suggest that each form of personal commitment is a necessary component of social-evolutionary processes the results of which most of us cherish.
25. Polanyi was drawn to the study of the sociology of science by his observation of the crippling of science, especially but not only biology, under Stalinist-type regimes. It appears that even the most totalitarian system is forced to permit a substantial degree of freedom to its scientists if it expects the scientific discovery process to work. For an interesting account of the delicate relationship between the scientific community and the political rulers in the post-Stalinist Soviet Union, see Parry (1966).

Session VI

Case Studies

Readings

Peter Jaworski, Hemeos Case Study.

Brian Richter, "Case Study: Do Business and Politics Mix?" Harvard Business Review, November 2014.



RECRUIT

COLLECT

DELIVER

FINANCING:

Current Round: \$900K Seed

USE OF FUNDS:

1. Software License
2. Donor HLA Typing
3. Hospital Sales & Marketing
4. Strategic Operations Hire

TEAM:

Doug Grant, CEO
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PROBLEM AND OPPORTUNITY

Hematopoietic blood stem cell (HSC) procurement is a highly inefficient sector of the medical services industry. Each year, 8,000 people with various blood diseases, like leukemia or sickle cell anemia, need a hematopoietic stem cell transplant (HSCT). Over 1,000 of these people die

THE INVESTMENT OPPORTUNITY

Growing Market, Unmet Demand: \$105M of a \$400M market unserved, 6% growth per year

1st Mover Advantage: Incumbent cannot adopt compensation strategy, allowing Hemeos to be a price leader and maintain higher margins

Barrier to Entry: Exclusive 5-year U.S. license for the only viable 3rd party donor-patient HLA matching software available on the market

waiting to find a suitable donor in the existing registry. Sadly, 60% of donors in the national registry are unwilling or unable to donate when contacted. This high dropout rate comes from a variety of causes: lost contact, job commitments, childcare, inconvenience, and misinformation are the most common reasons.

To fix the 60% dropout rate, patients initiated legal action in 2012 to allow financial compensation to HSC donors.

They argued compensation would allow the national registry to recruit more donors and encourage their donors to follow through to donation once identified as a match. They won, aligning the industry with the best practices of egg, sperm, and plasma donor industries. However, the only HSC registry in the United States strongly opposed the movement and they argued that all HSC donations should be altruistic. Donor compensation fell dormant. Tragically, this viewpoint comes at the expense of patients and adds tremendous cost to the system. Hemeos is the first independent HSC registry using the donor compensation model. Hemeos is positioned to challenge the norms of the \$400M monopolized HSCT industry and help those patients desperately in need of a suitable donor.

HEMATOPOIETIC STEM CELL TRANSPLANT INDUSTRY SNAPSHOT

Our customers comprise of approximately 185 U.S. transplant hospitals that conduct HSCT surgery. These hospitals currently search the national registry, run by the National Marrow Donor Program (NMDP), for potential donors. They search for donors who are a suitable Human Leukocyte Antigens (HLA) match for their patients. The NMDP then contacts selected donors for further medical screening. Following successful screening, only one donor is selected to go to a medical collection center and donate. The HSC are then transported from the collection center to the transplant hospital for the transplant procedure. The hospital pays ~\$50K to the NMDP for each HSC donation.

HEMEOS POSITIONING AND STRATEGY

Hemeos currently focuses on recruiting African American donors because 1 in 3 African American patients cannot find a suitable donor. Because HLA type is genetic, donor-patient matches generally align by race. To date, we have recruited over 1,000 donors and four transplant centers agreed to use Hemeos once we are operational. We acquired these hospitals because of our focus on recruiting African American donors and our entrance as a price leader. Due to efficiencies from the donor compensation model, Hemeos can reduce the HSC price to the hospitals by 20%. Additionally, Hemeos has a 5-year exclusive license for the only viable 3rd party donor-patient matching software on the market (currently used in over 30 international registries). Hemeos is positioned for rapid growth in an under-served market.

{ The solution to blood stem cell shortages. }

HEMEOS CASE STUDY

Doug looked baffled by the voice coming through his phone. Craig and Jon could see his mouth drop.

“But why would they do that?” he asked into the receiver. “Why are they contacting you, and what’s their issue?”

The conversation was quick. Doug thanked the caller on the other end of the line, and hung up. He looked at his partners, and with a furrowed brow said,

“Senior people with the NMDP [see: “*The National Marrow Donor Program (NMDP)*” *inset*] are contacting all of the hospitals we’ve partnered with and disparaging our business model. They say we’re running an unethical operation, that they think we’re going to be regulated out of business anyways. They’re putting pressure on the hospitals to end their partnership with us.”

“Of course they are against it!” said Craig after Doug got off the phone.

“We represent a threat to their business. Why would someone register with the NMDP and then make a donation of their stem cells for free when they can come to us and get \$2,000 for every donation?”

The tone of his voice suggested that he thought everything he was saying was obvious. Or at least should be. But the pause suggested it wasn’t obvious to the others.

“Look,” he continued, “they were against the decision in the Federal Court Case, *Flynn v. Holder* [see: “*Flynn v. Holder*” *inset*], that led to our business model being legal, they’ve issued press releases saying they think this is wrong, and they were pressuring the Department of Health and Human Services to adopt a regulatory rule prohibiting compensation after the Institute for Justice won.”

The National Marrow Donor Program (NMDP):

The NMDP are the largest registry for bone marrow donors in the world. They operate on an altruistic model -- Americans volunteer to be entered on their registry and if they match someone needing bone marrow or peripheral blood stem cells, they would be asked to donate.

The matching process involves a cheek swab, which is used to check your DNA. Once you are in the registry, hospitals can check against the registry to see if a patient needing bone marrow can be matched up with a donor.

But the number of people who need bone marrow and blood stem cells far outstrips the number of willing donors.

The need is particularly acute for minority patients. While 95% of Caucasians are successfully matched with a donor, 1 in 3 African-Americans, Asians, Hispanics, Latinos and people of mixed race are unable to locate a matching donor.¹ Without a donor, their disease is oftentimes a death sentence.

Flynn v. Holder: At issue was whether or not compensated bone marrow donations through a procedure called apheresis counted as a compensated organ donation. If it did, then it would be in violation of the 1984 National Organ Transplant Act's (NOTA) prohibition on any form of compensation for organ donations. The D.C. Circuit Court of Appeal for the 9th Circuit ruled that it did not.

According to the Court, the procedure that would be prohibited by NOTA is bone marrow donation through the old method called aspiration. Aspiration required a donor to have a large needle inserted directly into their hip bone, and the marrow extracted in that fashion. Apheresis, meanwhile, requires the injection of filgrastim, a commonly prescribed synthetic protein that stimulates the production of hematopoietic stem cells (essentially baby bone marrow), which mobilizes into the bloodstream. Once enough of these stem cells are present in the donor's blood stream, they can be extracted through the arm, similar to a blood donation. The process is much less invasive for the donor than marrow donation.

The Court reasoned that apheresis is, in fact, similar to blood plasma donations, for which a compensatory model is legal. A ban on compensation for this type of donation through apheresis, therefore, fails the rational basis test -- there's not a sufficiently good reason for one to be illegal while the other is not. In addition, the Court thought that Congress could not have intended to prohibit compensation using this new procedure. They, as the Court saw it, would have permitted it if they were aware of apheresis.

It was the Institute for Justice, a public interest law firm, that brought the successful suit against the government on behalf of Doreen Flynn and other interested parties.

However, despite the court victory, a provision in NOTA grants the Department of Health and Human Services the right to pass a regulatory rule that could make bone marrow donations through apheresis illegal.

"Of course they're going to call the hospital's we've partnered with," continued Craig. "And I bet you they're on the phone with HHS every day demanding that they regulate us out of business."

"They're a charity, Craig. A non-profit," intoned Jon. "It's not like they're defending their bottom line. They are in it to help others. That's why I thought we should partner with them from the beginning."

Craig shook his head.

"I know what you hoped would be the case, Jon. I know that you think they've got nothing but good intentions, and that all they want to do is see people find a match. But they've been against this from the start. And they haven't moved from the position Richard Titmuss took way back in the '70s."

Craig paused dramatically for a second, and held up a finger as if to say "hold that thought." He walked behind his desk, crouched down and pulled open a drawer revealing a thick file. Opening the file, he dropped a large stack of articles on one side.

"These," he said, fingering the large pile, "are the studies we have that show that giving people incentives to donate blood or blood plasma increases, not decreases, the net amount of donations."

He pulled out two more articles and carefully placed them next to the large stack.

"And these," he said now tapping his finger on the short stack, "attempt to show that there might be fewer donations."

"As far as I'm concerned, the empirical evidence is there, and it's overwhelming. Titmuss was wrong. The NMDP is stuck in the 1970s, or the '80s at best. And worries about the quality of the blood are a non-starter as we all know."

And they did know. They had done their homework. The methods for testing blood for HIV, Hepatitis, and other blood-borne illnesses had all improved significantly since Richard Titmuss had written his famous book *The Gift Relationship*.

“Right,” said Doug.

Doug was familiar with the literature on the quantity and the quality of the blood. He felt confident the company had the best information, and that their company would do a lot for their target population. He just didn't feel confident about the moral arguments.

Feeling a little dejected, he breathed in deeply and asked,

“What do we do in response?”

“One option is to do nothing. We can try to keep our head down,” said Jon, “and wait until December, when the government's option to appeal the decision in *Flynn v. Holder* elapses, and we can hope that HHS does nothing to regulate us out of existence.”

“That's naive,” said Craig. “We should fight. Keeping our head down is not an option any more. The NMDP is a huge bear, and we've poked that bear already. I'm betting they are putting pressure on HHS right now to regulate, and are pushing to have the government appeal the decision in *Flynn*. What do you think they're going to do if there's pressure just on one side?”

He paused for a moment. He opened his eyes wide and looked at Doug, and then Jon significantly, finally saying, “They're going to move in the direction where they're pushed. If we get out there and push from the other side, then at least there's a chance they won't take action, knowing that we won't just be rolled over.”

Doug nodded at Craig. He looked at Jon, who clearly didn't see things Craig's way.

“But HHS haven't done anything yet,” said Jon. “After the court case, they opened a discussion period, or public comment period, or whatever it's called, in 2013 on a proposed rule which would have banned what we are doing. They were supposed to come up with a final rule by July of 2015. It's now two years later and there's no rule. They've done nothing. You think the NMDP has been sitting on its hands until we came along? No chance. They've been pushing and pushing, of that we can be sure.”

Titmuss: Richard Titmuss' *The Gift Relationship* made two central claims. First, that paying for blood reduced the total number of donors, and so would result in a lower quantity of total blood supply. Second, that the quality of the blood would be worse when donors were compensated.

With respect to quantity, the claim is that financial incentives sometimes crowd-out altruistic motivations. Put differently, extrinsic rewards can sometimes undermine intrinsic motivation. If you are moved to donate blood for altruistic reasons, the fact that you can get paid for the donation might cause you to rethink donating in the first place.

As for quality, the argument is that people desperate for money are more willing to lie about their past risky behavior in order to get the money.

An excerpt from *The Gift Relationship*:

“On all four criteria, the commercialized blood market fails. In terms of economic efficiency it is highly wasteful of blood; shortages, chronic and acute, characterize the demand and supply position and make illusory the concept of equilibrium; the market also involves heavy external costs. It is administratively inefficient; the so-called mixed pluralism of the American market results in more bureaucratization, avalanches of paper and bills, and much greater administrative, accounting and computer overheads. These wastes, disequilibria and inefficiencies are reflected in the price paid by the patient (or consumer); [...] And, finally, in terms of quality, commercial markets are much more likely to distribute contaminated blood; in other words, the risks for the patient of disease and death in the form of serum hepatitis are substantially higher.”

Jon made a whack-a-mole gesture, banging down on an invisible mole and continued:

“If there’s no mole to whack, maybe they move on to other things and leave this alone. But if we pop up out of nowhere and start making a lot of noise, we might present ourselves as a mole to be whacked. And don’t think that the public will be on our side. We haven’t yet had a single marrow transplant. If we did, we could at least ask that person to come out and say that he or she wouldn’t be here if it weren’t for us, if it weren’t for Hemeos.

“If we’re going to fight this in the court of public opinion, we’re going to lose, Craig. We might win with social scientists and economists, but we’re going to lose with regular folk who are going to rend their garments over the twin bogeymen of ‘commodification’ and ‘exploitation.’”

Jon moved his glance from Craig to Doug.

“Remember what Jake said to you in class about paying people for organs? Remember how most of our classmates reacted to the idea?”

Doug chuckled a bit and said,

“How could I forget?”

Doug and Jon had both taken Principled Leadership during their MBA program. One of the classes was devoted to a discussion of “repugnant markets.”

Discussing the state of organ, tissue, and bone marrow donations in the U.S., Doug had defended the position that giving people incentives to donate would increase the number of willing donors and thereby save many lives.

“If you pay people to do something, they will do more of it,” he had said. “That’s just Econ 101. If we want fewer people to die on a transplant waiting list, we should offer compensation to potential donors for what is theirs anyways.

“No one thinks there’s a problem with people selling their hair, their eggs, their sperm, their blood, and so on. People are even compensated for being a surrogate parent and carrying a baby for nine months. Why should we stop them from selling their bone marrow?”

He had looked around then and noticed something peculiar. While a few of his classmates nodded in approval, including, maybe most enthusiastically, Jon, most looked a little aghast. They didn’t just disagree, the looks on their faces registered as hot indignation to Doug. He knew he could count on those with Economics training to agree with him, but the others were very far from seeing things his way.

“The idea of selling a kidney is repugnant,” said Jake at the time. “We shouldn’t be commodifying the human body. We shouldn’t think of our bodies like we do widgets. And exactly who is going to sell their kidney? You think any one of us in this room is going to do it? It’s the poor who will do it. That’s exploitation. And that’s wrong.”

Doug wanted to chalk this up to soft and overly-emotional thinking, but a few students nearly jumped out of their seats to shout their agreement with Jake.

This particular disagreement struck Doug as very strange. If incentives work, then a business that incentivized bone marrow or kidney donations would *save lives*. So some people might feel disgust, or maybe a few people will think of their bodies as commodities, but how do we weigh that against life itself? We certainly wouldn't think it ethical to allow even one person to die in order to prevent disgust, or to keep people from thinking of their bodies as commodities. Why the moral asymmetry?

As for exploitation, he just didn't see how removing an option from poor people makes them better off. "If I were desperately poor," he thought to himself, "I'd want more options, not fewer! Being able to sell bone marrow would improve my situation, not worsen it."

He hadn't thought much about that exchange in class until just now. But he found his memory of it was vivid. He knew where he and Jon were sitting. He could almost picture Jake's look of disapproval as though he were right there in the room with them.

Jon continued:

"The NMDP is going to make us look like greedy monsters."

"Just think of it," Jon curled his fingers menacingly while revealing his upper teeth with a snarl and continued with what he thought was his best Transylvanian accent, "Ve vill look like Count Dracula. Ve suck blood from poor people, and ve take money from sick people."

"I just don't see us winning this. I really don't. Better to lay low than to get whacked like a mole or be made to look like vampires."

"I hear you, Jon," said Doug.

"What do you say, Craig? Still think we should fight?"

Craig folded his arms. He wasn't convinced by Jon's arguments. The best arguments are on their side, he thought to himself. He trusted what he always thought of as the market of ideas, and he was convinced that, over time, the best ones win. And they had the best ones.

Craig started tentatively.

"Let's take a step back for a second. One option is to fight in the court of public opinion. We present our case, we make the moral arguments, we tell people that Hemeos will save lives, and that saving lives is important.

"As far as I'm concerned, we're going to win that argument. We can get other interest groups on side. I'm sure of it. We're focusing on African-Americans who are disadvantaged in this, as in many other things, compared to white people. This is a very straightforward "equal access to healthcare" argument. I don't know... maybe we can get the NAACP to say something on our behalf? Maybe Alonzo Mourning could be someone we could get to demand this publicly."

Jon shook his head and openly scoffed. “Maybe we can set up a basketball net in front of the office of the HHS and have Patrick Ewing and Alonzo Mourning dunk for Hemeos. It’s just not realistic, Craig.”

“Sure, maybe we can’t get Mourning,” said Craig, “but we could issue press releases, contact some sympathetic think tanks and academics, and ask them to write op-eds and white papers on our behalf. Don’t focus so much on Mourning. That’s just an example.

“The other way,” continued Craig, “is legal. We partner with the Institute for Justice and they can publicly say that if HHS passes a regulatory rule, they will sue on our behalf, and they will win. They’ve won before, and they can win again.”

The Hemeos team had already been approached by the Institute for Justice just a week prior. IJ wanted to further discuss the possibility of having them represent Hemeos just in case HHS passes a rule at the eleventh hour.

“The HHS probably doesn’t relish another legal battle that they will probably lose.”

“Okay,” interrupted Doug. “I think I hear what you’re both saying. Why don’t we spend some time thinking about it, and we’ll come to a decision next Monday.”

Your turn: *What should Hemeos do?*

1. Hemeos should continue to operate quietly, hoping that they stay under the radar, and wait for the time period within which the government can act to elapse.

2. Hemeos should take a pro-active position to get out in front of this issue aggressively.

If you think Hemeos should take a pro-active position, do you think they should:

- a) pursue a legal strategy, publicly aligning themselves with the Institute for Justice, and threatening to sue the HHS if they move to regulate them out of business; or
- b) try to win in the court of public opinion through op-eds, and issuing press releases to generate newspaper, and magazine stories; or
- c) try to find interest groups who support the model to publicly defend it; or
- d) do some combination of the above; or
- e) pursue a different pro-active strategy (and, if so, what should they do?)

3. Hemeos should stop pursuing this business model.

4. Some other strategy? (Explain what strategy you think they should pursue)

Comment from Barzin Bahardoust, CEO of Canadian Plasma Resources

Canadian Plasma Resources: After receiving authorization from the Biologic and Genetic Therapies Directorate of Health Canada, and receiving establishment licenses in 2014, Canadian Plasma Resources intended to open plasma collection centers in Ontario. They opened two plasma collection centers in Toronto. The collection centers would offer \$25 gift cards in exchange for blood plasma donations.

CPR found itself in the middle of a heated controversy over their compensatory model. Interested parties were divided over whether or not the model was morally acceptable. Some, including Canadian Blood Services and many patient organizations, argued that a financial incentive would increase donations, thereby saving lives, while others expressed moral concern over the further commodification of the human body, and worried about poor and desperate donors being exploited.

The medical community, meanwhile, was divided on whether or not this was a safe model for plasma collection, with many citing Richard Titmuss, and others pointing to the tainted blood scandal in the 1980s where 30,000 Canadians were infected with HIV and hepatitis C after receiving blood transfusions that were sourced, in part, from prisoners in the U.S. In response, Health Canada organized a public consultation. The summary report from that consultation concluded that “No country in the world has been able to meet their need for plasma with a solely volunteer model,” and that a paid donor model is safe saying that “plasma product manufacturing technology has evolved and many of the identified risks from the past have been mitigated or eliminated.” Health Canada opted not to prohibit a compensatory model for blood plasma.

The government of Ontario, however, chose to introduce legislation (the “Voluntary Blood Donations Act”¹) in 2014 which would prohibit Canadian Plasma Resources (and all other private centers) from operating in Ontario, and would only permit Canadian Blood Services to use a compensatory model. “They haven’t started up business yet so that why we moving quickly now to make sure they can’t,” Health Minister Deb Matthews told the Toronto Star in March of 2014. She continued: “They are located pretty poor neighbourhoods, so it is pretty clear who their target is.”

Canadian Plasma Resources chose to move their operation to Saskatchewan in 2015. Bill 21 (“Safeguarding Health Care Integrity Act”¹) included, as a schedule, the Voluntary Blood Donations Act, and was passed by the House of Commons and given Royal Assent in December of 2015.

Q: If you were advising the U.S.-based company, would you recommend a pro-active, aggressive strategy of defending the business model (and, if so, which one, or which combination -- the interest group, legal, or public opinion strategy)? Or would you recommend that they keep their head down and do nothing?

To make an informed decision we would need to know the potential size of this business. Not knowing the details we suggest the following: a pro-active approach of defending the business model by lobbying HHS to do nothing.

Q: What strategy did you pursue?

In Ontario we initially did nothing and only after we realized that there were groups (unions) lobbying the provincial governments to ban donor compensation we did all 3 (lobbying the provincial government, public campaign to win the public's support, pursuing a legal strategy).

Finally the bill which was passed did not ban compensation but provides a monopoly for plasma/blood collection to the government-funded blood operator (Canadian Blood Services).

Based on the experience in Ontario we started with lobbying the other provincial governments before setting up in their jurisdictions.

Q: Knowing what you know now, would you choose a different strategy from the one you pursued?

We believe that the vast majority of the public do not concern themselves about this topic so a public campaign to win their support is not very effective while it will be very costly.

As for the legal approach we would not recommend it unless they receive a strong legal opinion that they will win the case; otherwise, this would be another very expensive experiment without positive results.

Therefore, in our case, we started lobbying the provincial governments and provided them with the background, evidence and facts about paid plasma donation. In all cases we received positive results. From the NDP (left leaning party) in Manitoba to the conservatives in Alberta.

The limitation with this approach is that it requires a large amount of lead time to prepare and educate the politicians. Ideally you would start this when the decision makers have a neutral stance on the topic and their decision has not been tainted by other interest groups and the media.

Barzin Bahardoust, PhD
Chief Executive Officer
Canadian Plasma Resources

Case Study: Do Business and Politics Mix?

by Brian K. Richter

FROM THE NOVEMBER 2014 ISSUE

As soon as Harold Leeson, the CEO of Natural Foods, pulled into the parking lot of his company's headquarters, his phone rang. It was Kenneth King, one of his board members. Harold braced himself before answering.

"This is a total mess," Ken said immediately.

"I know," Harold replied, exhaustion creeping into his voice. "But our publicity team is telling me it's going to calm down soon—people will forget about it."

"Which people? The media? Our employees? Our customers? Because a lot of people are upset with us right now. And personally, I think they have a right to be."

The trouble had started several weeks earlier, when the *StarTribune* ran a story about the donation that Natural Foods, a midsize chain of organic grocery stores based in Minneapolis, had made to a super PAC called Minnesota Business First. The company had chosen to support the group because of its plan to fund ads promoting political candidates who had strong pro-business platforms in the upcoming elections. However, in a last-minute push to court conservative voters in a tight race, one of those candidates, Pat Erikson, a rising star in the Minnesota Republican Party, had taken a strong stance against gay marriage, saying that he'd vote against any bill to legalize it. Much to Harold's dismay, Natural Foods was now equated with that position.

“I’m not happy about it either,” Harold told Ken. “You know more than anyone how much I don’t want the word ‘antigay’ associated with Natural Foods.” The two men had discovered early on in their 10-year working relationship that each of them had a gay son.

When Harold had approved the super-PAC donation a few months before, he hadn’t thought to question how Minnesota Business First vetted candidates on social issues. And even when Erikson shifted to his hard-line stance on gay marriage, Harold hadn’t anticipated how big the ramifications would be for Natural Foods.

Customers had staged protests at several of the company’s larger stores in San Francisco, Los Angeles, and Minneapolis, and many of its 10,000 employees had signed a letter to Harold asking that Natural Foods explain its support of Erikson. Several senior executives privately expressed concern that their gay and lesbian team members were feeling alienated. With the help of Betty Martin, Natural Foods’ head of government relations, Harold had issued an internal statement saying that the chain’s donation did not mean that Natural Foods endorsed all the views of the candidates Minnesota Business First supported and that the executive committee and the board would be reviewing its policy on campaign donations.

“I saw your letter to the employees, and that was the right message,” Ken said. “Make it clear that Erikson’s position is not what Natural Foods stands for; we’re a socially progressive organization.” The company was known for being a generous donor to nonprofits, both in Minnesota and in other states where it had stores; it gave 5% of its pretax operating profits to charity each year.

“But we need to take it a step further,” Ken continued. “As someone who gets paid to think about risks that you and your team don’t see, this is where I need to advise you to avoid making the same mistake again. Natural Foods should get out of politics.”

Do you think I would have gotten a meeting with the governor on 24-hour notice if we hadn t been a donor?

Harold had known that this would be Ken's take on the situation. Ken had always argued that the world of campaign donations and lobbying was a minefield that sooner or later would result in a crisis, just like this one. But he was outnumbered by fellow directors who thought that ignoring politics was even riskier. There were many policy issues, from taxes to food regulations, in which the company needed a say if it was to remain a successful, profitable business and realize its mission of getting healthful food into the hands of more people.

"Everyone likes to say it's impossible," Ken said now. "But look at Starbucks, Costco. They don't make federal campaign donations. They don't lobby Congress. And the Supreme Court's decision in *Citizens United* hasn't changed their position on that."

"Come on, Ken. That's all true, but those companies are in politics. They're just involved in ways that don't leave obvious 'receipts' lying around for the national media to find. We've built our reputation on doing the right thing for people—our customers, our employees, the environment—and most of the issues we get involved in put those stakeholders first. Think about how we support the expansion of federal food education and safety programs. We need political clout to make those things happen. And it doesn't cost us much; it's a tiny percentage of our revenue." Harold looked out his car window and saw several employees wave at him on their way into the office. He was usually one of the first to enter the building, but this call was holding him up.

"We can maintain that reputation by giving to charities and nonprofits, but politics is getting too dangerous," Ken retorted. "I'm not even sure we're getting the results we want from these donations."

"We've gone over this before," Harold said. "Betty has made it clear that supporting these PACs isn't about buying legislation or votes, but it does give us a voice. Do you think I would have gotten a meeting with the governor on 24-hour notice if we hadn't been a donor?" The year before, the Minnesota legislature had taken up a GMO-labeling bill that, if passed as written, would have imposed requirements inconsistent with those in other states, forcing the company to change its labeling system and costing it millions of dollars. Harold had secured the governor's word that he would veto it and encourage state lawmakers to focus on rules more consistent with those in place elsewhere.

“Please. We’re one of the biggest employers in Minnesota. We’d have that access even if we didn’t make donations.”

“That’s not what Betty says,” Harold replied. “Let’s talk to her about this at the board meeting.”

“You know what her position is going to be,” Ken said. “She doesn’t want to jeopardize her job.”

HBR’s fictionalized case studies present dilemmas faced by leaders in real companies and offer solutions from experts. This one is based on the Ivey Publishing Case Study “Rethinking Political Activity at Target” (case no. W12350-PDF-ENG), by Brian K. Richter and Anisha George.

No Way Out?

Harold was opening his car door when the phone rang again. It was Betty. He was sure the conversation would be one he didn’t want to have walking the halls, so he closed the door and leaned back again.

“Listen, Harold. I hope you’re not panicking this morning.”

“Is there a reason I should be? More protests?”

“No, no. Like I said last night, it’s already dying down. We just need to give it more time, not make any rash decisions. I know you’ve been hesitant about our super-PAC donations. But we need to do everything we can to get access to politicians who are potentially sympathetic to us.”

“Right. But I just spoke to Ken, and you won’t be surprised to hear that he thinks this is a sign. Perhaps we do need to rethink what we’re doing in politics—though I know that would have big implications for you.”

“This isn’t about me,” Betty said curtly. “It’s about what’s best for Natural Foods. It’s absurd to think that a company our size doesn’t need influence in Saint Paul and Washington. How would you feel not having a voice in the debate on the definition of ‘organic,’ or in the conversation on import tariffs for the specialty products our customers demand? When the farm bill comes up in Congress this year, do you want a say or not? These are things that affect our business model. We’d be silly not to give ourselves access to decision makers, especially since our positions on all these issues are subtle. We can’t explain them with philanthropy or reduce them to marketing sound bites.”

Harold knew she had a point, but he wasn’t fully convinced. “The *StarTribune* article said that only 10% of publicly traded companies lobby at the federal level, and only half the S&P companies make campaign contributions. I didn’t believe those numbers at first, but I checked them. Even in a post-*Citizens United* world, it seems we’re the outlier here.”

“But we’re already in the game—and playing it successfully, in spite of this situation with Erikson,” Betty said. She explained that Starbucks and other companies had adopted policies against campaign contributions early on. And although Howard Schultz, Starbucks’s CEO, might be able to catch key politicians’ ears regardless, most chief executives weren’t in that position. “We meet with governors. We meet with our representatives and senators. We meet with majority and minority leaders and with key committee chairs. We’d be crazy to throw away the investment we’ve put into making that happen.”

Even before *Citizens United*, the company had maintained a traditional PAC through which it amassed employee and shareholder contributions to target specific candidates. But those donations were limited to \$5,000 per candidate. For the past five years Natural Foods had shifted money from its general treasury to super PACs, where contributions were unlimited, and had been lobbying at the national level.

“So what do I tell our customers? What do I tell our employees?” Harold shifted in his seat. He knew his assistant would be wondering where he was.

“Like I said, Harold, this situation is an anomaly, and everyone will move on soon. Revenue at the stores where there have been protests hasn’t even dropped. But politics does not go away. We need those relationships.”

Harold jumped when someone knocked on the glass next to him. It was Camilla Fernandez, the company’s no-nonsense general counsel.

When he lowered the window, she said, “You’re late for our meeting.”

It Could Happen Again

Harold was happy to finally be in his office. Camilla sat opposite him.

“I know you don’t like to wait,” he said. “Sorry about that.”

She shrugged. “I saw you on the phone. I assume you’re getting calls about the protests?”

Harold told her about his conversations with Ken and Betty.

“Everyone is giving you their gut reaction, Harold. Betty loves politics. Ken hates it. We need to be measured about this.”

“That’s why I wanted to meet,” he said. “I’d like to get your perspective.”

“Is there a middle ground?” Camilla asked. “Could we give to campaigns exclusively through the National Grocers Association PAC? We wouldn’t have as much say over the candidates endorsed, but if there were problems, it would be Whole Foods or Safeway taking the heat, not us.”

“But then it’s also them, not us, with access to lawmakers,” Harold said.

“OK, so what about taking out the middleman?” Camilla said. “Just give directly to candidates we’ve thoroughly vetted.”

“In either of those cases, our contributions would be limited by the laws governing traditional PACs. Plus reviewing candidates would mean that Betty needed more resources, and the board would have to approve a new process and criteria. And I don’t know that we could say for sure whether a candidate would be aligned with all the issues we care about.”

“We’d be even more closely tied to the next Pat Erikson.”

Harold nodded. “This all just leaves such a bad taste in my mouth.”

“What does Nick say?” Camilla asked, referring to Natural Foods’ CFO.

“He says that neither store revenue nor the stock price has been affected, and until they are, he doesn’t have an opinion.”

“Spoken like a true numbers man,” Camilla said. “But I’m surprised we haven’t seen any financial fallout yet.”

Me too, Harold thought.

A Bold Move?

That evening Harold was returning to his car when his phone rang: Conversations with an angry Ken would bookend his day. This time Ken was more subdued, however. He had talked to several other board members that afternoon, and opinion was divided.

“I’ve been going back and forth on this all day,” Harold said. “Betty made some strong arguments about why we need to keep investing in politics. And Camilla had some good advice about ways we could stay active with less risk.”

“Betty’s talking her own book, and Camilla’s a lawyer—of course she’s going to try to mediate between the parties and negotiate a palatable compromise. But this is your opportunity to make a bold move and do what’s right for the company. There’s a real split, Harold. People are looking to you to lead the way.”

Should Natural Foods stop making campaign contributions?

The Experts Respond

Ken Cohen is the vice president of public and government affairs for Exxon Mobil Corporation.

In my view, the heart of this controversy is actually management's reaction to the accusations of discrimination. The company's first priority should be to clarify its position on the issue of gay marriage and thus change the perception that Natural Foods shares the candidate's view. As it is, events are defining the company's stance. An internal statement from the CEO, especially one that sounded as defensive as his did, is not enough. Harold (or a designated spokesperson) must say that Natural Foods opposes discrimination of any kind—period. Then his team needs to get that message out in a variety of venues—blog posts, in-store displays, a CEO interview or two.

That said, Natural Foods should not stop making campaign donations. Any company of size and consequence should be actively engaged in the political process, and that includes political giving. Once in office, candidates are likely to give reasonable access to those who helped them.

Natural Foods shouldn't give up its role in the political process because of this one incident.

In today's world, where business is highly regulated, corporate leaders who insist on staying out of politics may be neglecting their fiduciary responsibilities. Not only is Ken King's stance unrealistic for Natural Foods, but it could damage shareholder value over the long term, leaving the company at the mercy of too many external players. At Exxon Mobil, where I head up our company's PAC, we see campaign donations as an important way to stay involved in political discussions. After all, few industries are more closely regulated than energy.

When making contributions, we seek out candidates who have a history of supporting open markets, understand business, and have demonstrated a willingness to hear the facts involved in a particular debate. We certainly don't expect a candidate we've supported to vote in our favor 100% of the time, but we do seek to have a voice in the debate. Camilla, the general counsel, suggested better vetting of candidates, but of course that's not always possible. We focus on the candidate's positions on issues that are core to our business.

Recently we've had some investors who shared Ken King's views and introduced proxy proposals that would impact our ability to influence policy making. To date, however, these initiatives have not gained much support from other shareholders.

Natural Foods shouldn't give up its role in the political process because of this one incident. Campaigns generate controversy and debate, which the media will cover. It's how you handle yourself in such situations that matters. As long as Harold and his team are clear on what the company stands for, Natural Foods can survive those storms and retain the access to government decision makers that gives it a place at the table in policy debates relevant to its business.

Answers from the hbr.org community

Go with a lobbyist

The company should allocate all its campaign contributions to a lobbyist or a lobbying firm, which would advance Natural Foods' interests but without the exposure. The lobbyist would also use the money more effectively, targeting specific issues that are important to Natural Foods, such as import tariffs or farm bills. *Alex Chang, consultant, Cerner Corporation*

Align actions with values

John Harrington is the president and CEO of Harrington Investments, a registered management advisory firm.

Ken King is mostly right when he says that Natural Foods needs to get out of politics. Political donations are not a good use of the company's money and, as the current situation demonstrates, can be harmful to its reputation.

Executives often frame campaign contributions as investments in their company's future—a necessity if they want to be engaged in the political process and to

What are the company's values, and how do its actions align with them? As an employee, a customer, or an investor, I would want to know the answers to those questions long before a crisis occurred. *John Calia, CEO group chair, Vistage International*

Protect the brand

Natural Foods should withdraw, for three reasons: (1) Issue advocacy can be done without direct political contributions; (2) election outcomes and popular thinking create risks that lobbying cannot manage well; and (3) the other positions of candidates that aren't directly relevant to the business may create risk for the overall brand. *Robert J. Choi, principal, RJC & Co.*

Stay away from PACs

Political endorsement is very different from issue alignment, and getting behind a PAC that supports a slate of candidates is always a high-risk proposition. I would never advise a client to get involved with a PAC; too many of them have dubious practices that go unchecked. If you favor what the PAC advocates, align with a legacy organization in the issue sector that is publicly accountable. *Art Stewart, vice president for corporate development, Maine Pointe*

secure beneficial tax legislation and business contracts. But this argument has many flaws.

For one, when a company gives money to a PAC (or a super PAC), it has no control over how the money is ultimately spent, as the Natural Foods case makes clear. Even if your donation goes directly to a campaign, you can't ensure that your candidate, if elected, will feel beholden to you on every issue. Elected officials decide on hundreds, if not thousands, of pieces of legislation each year, and because of the way the system works, they have to make deals and trade votes, which can work against your interests. Politicians have also been known to pass some of their own campaign money on to others to secure a vote, a committee assignment, or a leadership position. Your influence as a corporate donor is extremely limited, and your donation may actually be put to work against you.

Lobbying is a far better use of corporate funds. You have more control over where the money goes.

There is another problem, which Betty Martin touches on: Who decides which political action committees or candidates to support—a board committee, the CEO, or someone else? And how can you be sure that the decision maker isn't favoring donations that enhance his or her personal power but not necessarily the standing of the firm? Some CEOs do this.

In my view, lobbying is a far better use of corporate funds. Although I have reservations about how it is done, at least it's issue-specific, you have more control over where the money goes and how it's used, and you get more-specific and documented results.

Wasted money is one risk. A damaged reputation is another. The more corporations dominate the political system, the greater the chance of public backlash. Natural Foods customers have reacted to a particular contribution, and that is certainly a danger. But a growing number of Americans see the issue more broadly: They don't want to support companies that try to "buy" politicians and corrupt the system.

To protect Natural Foods from this future, Harold should tell the board he wants the company to stop making campaign contributions. I introduced shareholder resolutions to this effect at Starbucks and at the health care provider WellPoint. They were voted down, because executives and other investors wanted to reserve the right to make donations at some point in the future. This was shortsighted and will come back to haunt management.

If Natural Foods continues to make political donations, it will see more and more controversies like the one it's facing now.

A version of this article appeared in the November 2014 issue of *Harvard Business Review*.



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