City and selling you tacos made under unsanitary conditions. (I will spare you the details—let's just say I don't wash my hands frequently.) When you later get sick, you realize you paid more than you would have had you known how unsanitary the tacos were. The quality problem is ubiquitous, and even the simplest kind of exchange has problems. If you had known the tacos might be unsanitary, you would have offered a lower price. If I adopted costly but safe food handling methods and sold you healthy tacos, but you couldn't observe my safe handling and still offered the low price, then I would be the one who lost out in the exchange. So I would not bother with safe food handling, selling you the lousy tacos you expected. I could even keep all the best taco ingredients and safest procedures for tacos consumed by my own family, and sell you the tacos made with shoddy ingredients and food safety procedures. So the market does not supply healthy tacos! The economist George Akerlof of Berkeley won the Nobel Prize for this kind of insight, applied to sales of used cars.[14] Even slightly used cars sell for far less than new cars because buyers have no information on the cars' quality (and used car sellers have a tendency to sell lemons).

Many other types of cheating exist. For many transactions, payment at the time we get the service is not efficient. Either the service comes first, or the payment comes first. So, whoever acts second can renege on the contract—by not paying or by not delivering the service. I can arrange to have fresh meat, tomatoes, chilies, cilantro, and onions delivered to my taquería by farmers. It has to be worth the trip for them to deliver the produce, so they will demand payment in advance. Now they might not show up, disappearing with my advance payment. Credit markets have this problem in spades—the borrower has no incentive to pay back the loan unless the lender can enforce repayment.

Another trick by the supplier could be to appear before the lunchtime peak and demand extra payment above what I have already paid, knowing he has me in a tight spot—it being too late for me to find another supplier. This is the "hold-up" problem—often at a point in a transaction, one party has a stranglehold on the other and can extort additional payment. A contemporary of Julius Caesar's, Crassus, made a fortune in early Rome with a private fire company that would negotiate a price for extinguishing a fire as it was raging.[15]

Can I Trust You?

There are solutions to cheating on market transactions. Maybe you and I are very honest, and we don't cheat each other. Some honesty and fairness seems biologically hardwired into us as Homo sapiens, which makes possible more trade than pure self-interest would predict.[16] Over and above this biological minimum, there are variations in trust across people and groups. Some who emphasize culture say some ethnic groups have evolved norms of honesty. Others argue that political, social, and economic incentives determine honesty.

Different societies have different amounts of "social capital" or "trust," that is, how much people follow rules without any coercion. Trust measures the confidence we have in perfect strangers. If each of us trusts the other, even a stranger, then the cheating problem does not arise. World Bank economists Steve Knack and Phil Keefer examined the effects of trust by using the results of surveys that asked people from different nations, "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?" Knack and Keefer measured "trust" as the percentage of people who chose the first answer. They found that low-income societies have less trust than rich societies, and societies with less trust have less rapid economic growth.[17] Figure 7 shows the strong positive association between trust and income. If we order the survey sample into four equal size groups, going from low trust to high trust, per capita income is a lot higher in the high-trust group than in the low-trust group. In rich Denmark, where trust is so high that mothers leave babies unattended on the street while they shop, 58 percent say they can trust people. In the poor Philippines, only 5 percent are trusting.

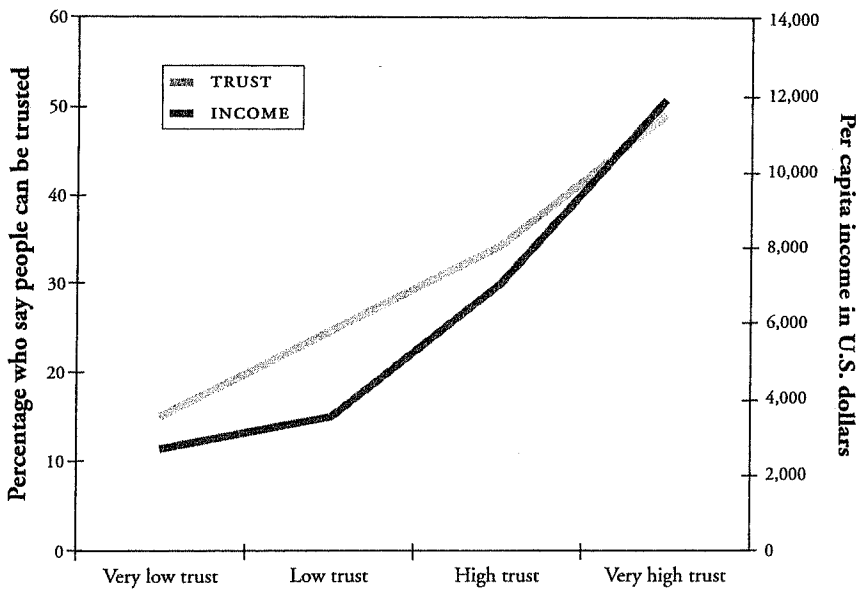
Note that what is important here is whether you trust *strangers.* Almost every society has cooperative relationships between kinfolk. What is important is the radius of trust. Do you trust only the members of your immediate family? Or does the circle widen to include your extended family, or your clan, or your village, or your ethnic group, or all the way to strangers? In a low-trust society, you trust your friends and family, but nobody else. As a Filipino businessman lamented, "We have no institutional loyalty, only personal loyalty."[18]

Trust is also associated with unforced good behavior toward strangers.

Reader's Digest did a survey of American and European cities in which wallets containing money were randomly dropped on the street. The survey then counted how many wallets were returned with the money intact. The percentage of returned wallets is strongly associated with the percentage answering yes to the trust survey question. Denmark performed well on returned wallets (almost *all* of them were returned), just as it did on trusting strangers. Casual observation suggests that trust is higher in small towns than in impersonal cities. In Bowling Green, Ohio, you buy a movie ticket from a girl in the window out in front of the cinema. You then walk into the cinema lobby, through an entrance anyone could enter, without anyone's checking to see whether you've bought a ticket!

The larger the radius of trust, the less you worry about cheating in business transactions. A low-trust society such as Mexico features a strong insider/outsider mentality. The slang term for your buddies is *cuates* (your twins). You would do anything for your *cuates,* but ripping off a stranger is okay. You are amazingly courteous to a social acquaintance, but anonymous

Fig. 7. Trust and Per Capita Income



interactions tend to be rude. So you leap to hold the door open for a lady in a social situation, but later shove some ladies aside to get into a subway car.

Trust affects virtually every dimension of doing business. Malagasy grain traders carry out inspections of each lot of grain in person because they don't trust employees. One third of the traders say they don't hire more workers because of fear of theft by them. This limits the grain traders' firm size, cutting short a trader's potential success.[19] In many countries, companies tend to be family enterprises because family members are the only ones felt trustworthy. So the size of the company is then limited by the size of the family.

Other Solutions for Cheaters

Even if we don't trust one another, there are other bottom-up solutions to opportunism. As far as not delivering products or not repaying debts, there are credit reporting agencies and Better Business Bureaus that can handle these problems. Warranties protect the consumer against product defects.

A poor country cannot use these solutions as much as a rich one. The transactions are not large enough, and communications are too costly for credit reporting agencies or Better Business Bureaus. The supplier can abscond by not honoring a warranty just as it can default on a debt.

Don't jump to the conclusion that courts are a simple answer. The costs of legal action are not worth it with tiny transactions. One study found that African manufacturers seldom used courts to settle disputes. As predicted, the use of courts was less likely the smaller the size of the firm.[20] Institutions such as courts are usually not reliable in poor countries anyway. They are more corruptible—the richer or stronger party will pay bribes or intimidate the judge into seeing things their way.

Credit reporting agencies also work less well in poor societies—tracking down con artists is hard because they leave no paper trail. You don't have too many driver's licenses if few people drive. Formal addresses are seldom clear in shantytowns. You don't have phone numbers if you don't have phones. The lack of formal or private institutions to prevent cheating means that quality will be low (e.g., food establishments sell poor and unhealthy food).

Most transactions in poor countries will be anonymous cash-and-carry transactions trading poor-quality goods for money. The closest approximation in the rich countries might be flea markets or garage sales. The economist Marcel Fafchamps (on whose work this chapter bases some of its exposition) quips that Africa has a flea-market economy rather than a free-market economy.

It's Whom You Know . . .

Nevertheless, poor people are inventive in searching for solutions to cheating. In West Africa, the age group is an association of all men in a tribe who come of age at the same time. In Nigeria, according to the district head of Owokwu, "Age-groups are . . . generally self-development oriented. They . . . act as thrift and credit associations, procure farms for their members. . . . People of the same age have to qualify to be members of the group by being upright members of the community. They also have to be hardworking, of sane mind, and not convicted of any crime."[21] The age group prevents opportunistic behavior by its members.

Another solution is to have an ongoing relationship of trading, so one of us will not cheat the other and risk losing all future trade. Potential business partners stay on probation for a while until you trust them. Marcel Fafchamps reports that Malagasy grain traders don't grant a client trade credit until after they have done about ten cash transactions with him. African manufacturers report that they require six to twelve months of repeated interaction with a client until they grant trade credits.[22] Once businessmen form a trusting relationship, they continue it to save on the costs of starting up a new one. One survey found that the average business relationship in Africa lasted seven years.

We could also belong to a multimember network of businesses that sanctioned our behavior and issued referrals to third parties—other taquería owners could form a business association that shared information on who were the reliable suppliers. A supplier cheating one taquería would risk losing the whole market.

These networks form at lowest cost among people who interact for other reasons. Economic historians Nathan Rosenberg and L. E. Birdzell relate how many financiers and entrepreneurs behind America's nineteenth-century industrialization learned to trust one another by serving together in the Civil War.[23] A more common setting for social interaction is the family or ethnic group, whose members develop trust in one another through encounters such as those at weddings, funerals, birthday parties, and ethnic festivals. A web forms of socially linked businessmen who trust one another enough to extend credit, to recommend suppliers or buyers, and to not engage in hold-ups. One ethnic group is usually prominent in business in a poor society. In pre-industrial Europe, it was the Jews. In East Africa, it's the Indians. (Indians own almost all businesses in Kenya, although they make up only 1 percent of the population.) In West Africa, it is the Lebanese. In southern Africa, it is whites and Indians. Among indigenous African groups, often one dominates trading—the Bamileke in Cameroon, the Luba in the Democratic Republic of the Congo, the Hausa in West Africa, the Igbo in Nigeria, and the Serahule in the Gambia. In Southeast Asia, the overseas Chinese (the "bamboo network") play this role. Often there are subgroups—for example, the overseas Chinese came largely from the coastal enclaves stretching from Canton to Fuzhou (the same region leads the boom in China itself today).[24]

These ethnic networks solve many of the cheating problems. As one observer of the "bamboo network" noted, if a Chinese businessman reneges on an agreement, he goes on the blacklist. Since the overseas Chinese straddle many international boundaries, they promote international and domestic benefits from trade. The economist James Rauch found that international trade is unusually high between any two countries that both have large minorities of overseas Chinese.

Other ethnic networks have evolved other strategies to enforce good behavior. The Hausa in Ibadan, Nigeria, both own houses and broker long-distance trade in cattle and kola nuts. If the brokers cheat their business partners and then disappear from Ibadan, their problem is that they leave behind valuable houses as hostages. The chief of the Hausa quarter will prevent these cheaters from selling their houses when they go on the lam.

The economist Avner Greif describes a "multilateral punishment strategy" that keeps agents from cheating a network of merchants. He argues that the higher the probability that merchants will hire an agent again even after he cheats, the more likely he is to cheat. If an individual merchant blacklists an agent who cheated him, other merchants could hire the agent—so bilateral punishment doesn't work as well as multilateral punishment. If everybody in the network agrees that they will never hire an agent who has ever cheated any of them, that destroys the employment prospects of a cheating agent. The network consists of merchants who interact frequently enough to convey information about cheating agents. Hence, with multilateral punishment, merchants can trust agents not to cheat. Greif applied this idea to the eleventh-century Maghribi traders (Jewish merchants based in Cairo), who operated around the Mediterranean using agents, even in the absence of any courts.[25]

The ethnic networks also work as referral services for finding new business. The bamboo network gathers information on who needs what supply components, subassembly plants, financing, and so on. The people involved know one another, and can pass this information on to third parties in the network who do not know their potential business partner. The network expels anyone who misbehaves, who then loses all access to information.[26]

The Market Net

I am in Addis Ababa's city market, the largest open-air market in Africa. No shortage of markets here. I go to buy handicrafts and gifts for the kids. The taxi driver recommends a particular shop, and I make a number of purchases there. Afterward, the shop owner takes me to see other shops in the market. We talk as we stride along, and he tells me he is a Gurage, Ethiopia's entrepreneurial minority. The Gurage make up only 4 percent of Addis Ababa's labor force but own 34 percent of the businesses. He takes me to other Gurage businesses in the market, where he bargains on my behalf (getting me better bargains than I got in his shop). His referrals to other Gurage shops created the opportunity for their owners and me to do deals.

These ethnic specializations can become self-perpetuating. The Luo tribes-

people in Kenya, who live next to Lake Victoria, are fish traders. Such is their reputation for fish trading that the Luo entered the business of fish trading in Mombasa, far from Lake Victoria, on the coast of the Indian Ocean. If Kenyans think of the Luo as having a network that ensures high-quality fish, then they will prefer to buy fish from Luo traders rather than from other ethnic groups. The Luo will drive other ethnic groups out of the fish-trading business, but the other groups may find another niche—for example, the Indians, with their network of retail businesses in Nairobi. Kenyans now would not buy retail products from a Luo retail shop in Nairobi, just as they would not buy fish from an Indian fish trader. The next generation of Luo will find it more rewarding to become fish traders than shop owners, just as the next generation of Indians will make the reverse decision.

Ethnic specialization is widespread. Even in market-rich New York City, there are ethnic concentrations by occupation. Hasidic Jews famously dominate the diamond trade on Forty-seventh Street in Manhattan. Studies find that a remarkably high share of all nail salons in many American cities are Vietnamese owned and operated. These patterns may reflect the same ethnic "brand-name" effects as in Kenya. Fafchamps speculates that the caste system in India, with its rigidity of hereditary occupations by caste, may be the result of such a process. Since some occupations are more rewarding or high skilled than others, this is a recipe for persistent ethnic (or caste) income inequality.

However, ethnic specialization is not as ubiquitous in rich countries as in poor countries because there is an impersonal solution in rich countries to establishing a reputation for quality and fair dealing: creating a large corporation. The corporation spends a large upfront amount to create a brand-name reputation and has a lot to lose if it cheats. The size of transactions is too small in poor countries to make the corporate solution work.

The ethnic differentials also persist because the networks freeze out the outsiders. In Zimbabwe, whites and Asians own most of the business firms, which seldom deal with indigenous African-owned firms.[27] Refusing to deal with outsiders limits entry into particular sectors, limiting competition and giving above-normal profits to the established well-connected firms. Those in the networks also may have a competitive advantage over outsiders because they share technical knowledge with one another. Economists Tim

Conley and Chris Udry found that Ghanaian farmers shared technical knowledge within their social network about a new opportunity to grow pineapples for export to Europe, such as how much fertilizer to use.

However, networks are far from a perfect solution to making markets work. The networks exclude as well as include, missing many entrepreneurs and suppliers when they limit trade to a minority. The gains from trade through personalized exchange are much less than through the impersonal exchange made possible by formal institutions.[28]

Also, if business networks form among minority ethnic groups, this situation can breed ethnic hostility to markets among the majority population. Resistance to market reform in Russia is bound up with anti-Semitism and other prejudices, because some perceive that Jews, ethnic groups from the Caucasus, and other ethnic minorities have disproportionately benefited from free markets.

The well-connected people advance rather than the well qualified. Firms in poor countries are very often family firms. As a trading friend says, the firm does better to hire the family idiot rather than the village genius—the former at least can be trusted not to cheat them. When formal institutions establish the rules of the game, the market finds the village genius and uses him according to his merits. The social networks may retard formal institutions, as network members will out-compete the formal institutions until the latter reach some critical mass.

Old-school networks do connect businessmen in rich countries. However, because formal institutions work better in rich countries, these networks recruit their members more according to merit than in poor countries—the old-school ties will be valuable only if it was a good school.

Feeling confused? You are not yet confused enough. How can top-down Planners make markets work when it requires understanding not just free markets but also the bottom-up search for the social norms, producer and consumer networks, and kin relationships that facilitate exchange? Whether you and I can become better off through markets depends now on more than our individual choices. All in a society must develop the informal social ties that make our individual market choices possible. The chances are low that the international jet set will understand us enough to make markets work for us. The quest to help the poor has put far too little effort into learning about their informal social arrangements.

Showdown at Predators' Pass

Another problem society must solve is protection of property and person. High-value property magnifies the need for protection. Without rules to protect us, you and I play a disastrous game of threat and self-protection. Suppose each of us has the same amount of money but only two choices as to what to do with it—devote all our funds to producing new goods, thus increasing our funds, or spend some of our resources on guns, which enable us to protect our own property and also seize our neighbors' property at gunpoint. If you buy a gun and I don't, then you get my money and your original money less the cost of the gun, and I end up with nothing. If I buy a gun and you don't, then the opposite is true. If we both buy guns, then we have a predators' equilibrium, neither of us produces anything, and we each just keep our original money.

We would both be better off by not buying guns and just producing. Yet in a lawless world, that would never occur. Each one of us can always do better by buying a gun, whatever the other one does. If you don't buy a gun, I can seize your property and increase my funds more than by production. If you do buy a gun, I can at least defend my property against you. So buying a gun is always my best move; the same holds for you, and so we both wind up with less money than if we had both been peaceful. In terms of game theory, this game is the classic prisoner's dilemma.

This assumes that buying guns is legal. In the United States, where you can buy assault weapons on the airport highway but where airport security scrutinizes your nail clippers, this may be a good assumption. One way to avoid the predators' equilibrium is to allow only honest policemen to have guns.

But predation doesn't happen as often as this theory predicts, even without a policeman looking over your shoulder. Many opportunities for pilfering go unrealized. The social norm that stealing is disgraceful is a sanction against predation. Most kinds of social conflict resolution don't involve

armed coercion. Academic seminars can be intellectually violent, but, fortunately, professors don't pack semiautomatic weapons.

These social norms are more effective in communities with face-to-face interactions as opposed to situations with anonymous social interactions—one reason why small towns have less crime per capita than the big cities. Social norms also seem to be stronger among rich people than among poor people, as a rich person loses more economic opportunities and income from social disgrace. This is why you can usually be sure an executive in a suit will not mug you.

Social norms against predation don't work so well in many poor communities today. In a Brazilian urban slum, young men and women said it was every person for himself: "People are like a dog . . . only protect their house . . . if outside the house someone is robbed or dead . . . nobody cares."[29] In the slums of Dhaka and Chittagong in Bangladesh, "musclemen" kidnap and rape young girls. They demand protection money from slum dwellers on the threat of burning down their houses.[30] A formerly prosperous woman named Nasibeko of Kuphera village, Malawi, reports, "Our life was fine until one day when our cattle were stolen. After that, our lives became miserable." Farmers in Mtamba, Malawi, say, "We can't grow cassava these days to support us when the maize is finished because thieves will come to steal it."[31]

Responding to ineffective social norms, poor communities often form their own self-protection groups. In their more benign form, such groups provide community safety. In some villages in Tanzania, self-protection groups called *sungusungu* deter cattle theft. The young men of the community take turns participating, and the women provide food for them as implicit payment. Nigerian age groups also help provide law and order in local communities. And in Phwetekere, Malawi, villagers started a neighborhood watch to discourage crime.

Unfortunately, self-protection groups can get out of hand. In a less benign form, vigilante bands capriciously respond to rumor and innuendo, playing the role of judge, jury, and executioner. A villager in Phwetekere, Malawi, reported to an interviewer that the village had burned a thief to death the week before the interview.[32] I once witnessed a mob in Nairobi,

Kenya, strip an accused thief naked and haul him down the street in a cart, while beating him.

An even less savory possibility for controlling predation (as well as cheating) is a Mafia-like organization. The Chinese in Southeast Asia are famous not only for trade but also for triads, Mafia-like gangs. If someone cheats a triad member, he has a violent way to persuade the cheater to pay. Although any such information is speculative, one study of Hong Kong businesses estimated that 40 percent of them had triad members on their boards of directors.[33]

Drug lords dispense justice in slums in Jamaica.[34] The Mafia was omnipresent in Russia after the Soviet collapse Even a murderous Mafia can meet a genuine social need when law and order collapses (as it did in Russia, or earlier in Sicily in the nineteenth century). The Mafia can prevent anyone from robbing anybody else in their territory with just the threat of violence to deter the robber. The problem is that there is no good way to exit from the Mafia's protection, which means the organization almost always overstays its welcome.[35]

Elsewhere around the world, warlords, clan leaders, semi-feudal landholders, tribal chiefs, and village headmen often dispense justice in many poor societies. Villagers in Malawi report high satisfaction with dispute resolution by village headmen.[36] Mafia dons, warlords, and feudal landlords probably do not achieve as much client satisfaction. These examples show that bottom-up solutions don't always lead to attractive outcomes. Yet the Western world evolved gradually through such bottom-up mechanisms, some combination of benevolent social norms, self-protection societies, and local strong men. Perhaps the story of the Western state is just that warlords sorted themselves out, as the strongest warlord put down the rest and gradually evolved into a more benevolent, accountable government. Some scholars have speculated that the benevolent outcome came about in part because Europeans could often simply move from a bad jurisdiction to a better one.

This is of course a vast oversimplification. Western social scientists don't begin to comprehend fully the complex process of state formation and rule of law in the West, so they shouldn't be too quick to predict how it will work anywhere else.