

happen. If we could predict the future, insurance would be meaningless. If my insurance company could predict fires much better than I could, it would sell me insurance only if I didn't need it. And if I knew that my house would burn down, the insurance company should be calling the police rather than selling me fire insurance. Since insurance depends on mutual ignorance, then any advance in medical science, which pushes back the boundaries of ignorance—whether for the insurers, the insured, or both, will weaken the basis of insurance. The more we know, the less we can insure. This is a worrying prospect if we want to give people a chance to protect themselves against the high costs of bad luck.

Making lemonade

A slightly vexing aphorism recommends, “If life deals you lemons, make lemonade.” How can we make lemonade out of Akerlof's lemons? To return to Akerlof's original example of the market for secondhand cars, both buyers and sellers have an incentive to try to fix the problem: sellers want to get a decent price for their peaches, and buyers want to buy peaches. If inside information is wrecking the chance of a mutually beneficial deal, both sides will want to find a way to bridge the information gap.

Akerlof won the Nobel Prize in 2001 for his work on the problem of asymmetric information; he shared it with two economists who proposed partial solutions. Michael Spence argued that the person with the information might be able to communicate it in a way that the person without the information could trust. Joe Stiglitz looked at the problem in reverse and explored ways in which the person without the information might uncover it.

Spence realized that it wasn't enough for a seller of peaches simply to say, “All my cars are peaches,” because talk is cheap. A seller of lemons can also say, “All my cars are peaches.” The buyer wouldn't know who was telling the truth, so the claim itself doesn't carry any information. Spence realized that a real signal of quality would be one that a lemon-seller could not make, or at least, could not afford to make.

An example would be buying an expensive car showroom, an investment affordable only by a businessman who plans to stick around for the long term. A peach-seller expects satisfied customers to return, and to tell their friends about his reliable, trustworthy cars. Over the years the sales would pay for the showroom. A lemon-seller couldn't operate like that; instead, he would sell a few overhyped lemons and then have to move someplace where his reputation for dishonesty could not follow.

It's for this reason that banks always used to build such impressive buildings. In the days before government oversight, who knew whether they were depositing their money with a fly-by-night operation? Customers realize that crooks planning to run off with the money do not first clad their branches with bronze and marble. This is one reason, too, why you will pay more at an established store than at a market stall if you buy a product about which you lack inside information about quality and durability. The established store will still be there to refund your money in the case of a complaint, and that very possibility gives you an assurance that a complaint is less likely to be necessary.

Other economists have used Spence's theory to explain enormously expensive advertising campaigns with no informational content. What, after all, is the information contained within a soft-drink advertisement? "Coca-Cola. Real." Pardon? The only information that potential customers can glean from such an advertisement is that it was expensive to make, and that therefore the Coca-Cola company plans to stick around with the same commitment to high-quality products that it always had.

Spence himself first used his insight to show why students might choose to pursue a degree in philosophy, which is difficult but does not lead to specific career opportunities, like an economics degree or a marketing degree. Assume that employers would like to hire smart, diligent workers but can't tell from an interview who is smart or diligent. Assume also that everyone has to work hard to obtain a philosophy degree, but lazy, dumb people find it particularly troublesome.

Spence then shows that smart, diligent people can prove they're smart and diligent by going to the trouble of getting a philosophy degree. It's not that lazy, dumb people can't get that degree but that they wouldn't want to: employers will pay philosophy graduates enough to compensate them for the trouble but not enough to persuade lazy, dumb people to bother. The employers are willing to do this despite the fact that the philosophy degree itself does not improve the candidate's productivity at all. It is merely a credible signal, because a philosophy degree is too much trouble for lazy, dumb people to acquire. Since Spence himself majored in philosophy at Princeton, perhaps there is something in his idea.

Spence proved that one way to bridge the information gap in markets previously hindered by inside information is for trustworthy vendors to find ways to signal their reliability. High-quality job applicants, banks, used-car salesmen, and soft-drink manufacturers may find it worthwhile to spend excessive amounts of time and money (by pursuing a degree that does not really add to one's qualifications, paying for lavish decorations, buildings, and advertising) simply to distinguish themselves from low-quality job applicants, banks, used-car salesmen, or soft-drink manufacturers.

Spence's ideas suggest that the lemons problem is not insoluble, but they are not particularly reassuring. In some variations of Spence's model, everyone would be better off if the wasteful signal were impossible. If studying philosophy was banned, employers would be unable to distinguish between lazy workers and smart workers and would pay both the same wages, an average of their expected productivity. The lazy workers would be better off; the smart workers might also be better off if the new, lower, wage is more than the old wage minus the cost of getting a philosophy degree. And the employers don't mind; they employ worse workers on average but also have to pay less for them. Akerlof showed that inside information could reduce people's ability to find trades that made both sides better off. Spence showed a way of making those trades possible but also found that the social cost of doing so can be too high.

While Spence asked what the informed side could do to credibly signal information, Stiglitz studied what the uninformed side could do to uncover it. He explicitly considered markets for insurance and concluded that the uninformed insurer was not completely helpless in the face of customers who could predict the likelihood of needing to file insurance claims. The insurer could offer different deals, for instance, reducing the premium but increasing the deductible. This has the effect of reducing the level of insurance: the low premium makes the insurance cheaper, but the higher deductible, which is the amount by which any claim is reduced, means that any claim would pay out less. Low-risk customers would be attracted by that kind of deal, because the insurance is cheaper and they don't expect to claim very often anyway, but high-risk customers would rather pay the higher premium because they expect to claim frequently, so a high deductible will cost them a lot. So insurers could persuade different types of customer to reveal their inside information. This is a little like the self-targeting strategy used by coffee bars in chapter 2. Starbucks offers frills like whipped cream and flavored syrup to persuade customers to reveal whether or not they are price conscious. Aetna Insurance offers four different packages to individuals, with deductibles ranging from \$500 to \$5,000, to entice policy buyers to reveal their predictions for how many insurance claims they will file. But again, Stiglitz did not conclude that Akerlof's lemons problem could be costlessly solved. On the contrary, he showed that in response to inside information, banks might deny loans to whole sections of society, firms might prefer to pay high wages to privileged insiders rather than lower wages to more workers, and insurance companies would prefer to exclude high-risk individuals. Spence and Stiglitz both showed that you can make lemonade from Akerlof's lemons—but that you cannot get rid of the bitter aftertaste.

Lemons, health care, and the United States

The difficulty of solving the lemons problem may explain why the American health-care system is malfunctioning so badly. The