THINKING, FAST AND SLOW

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FARRAR, STRAUS AND GIROUX / NEW YORK

particular type in bargaining over arms reductions), although they actually view that good as a bargaining chip and intend ultimately to give it away in an exchange. Because negotiators are influenced by a norm of reciprocity, a concession that is presented as painful calls for an equally painful (and perhaps equally inauthentic) concession from the other side.

Animals, including people, fight harder to prevent losses than to achieve gains. In the world of territorial animals, this principle explains the success of defenders. A biologist observed that "when a territory holder is challenged by a rival, the owner almost always wins the contest—usually within a matter of seconds." In human affairs, the same simple rule explains much of what happens when institutions attempt to reform themselves, in "reorganizations" and "restructuring" of companies, and in efforts to rationalize a bureaucracy, simplify the tax code, or reduce medical costs. As initially conceived, plans for reform almost always produce many winners and some losers while achieving an overall improvement. If the affected parties have any political influence, however, potential losers will be more active and determined than potential winners; the outcome will be biased in their favor and inevitably more expensive and less effective than initially planned. Reforms commonly include grandfather clauses that protect current stakeholders—for example, when the existing workforce is reduced by attrition rather than by dismissals, or when cuts in salaries and benefits apply only to future workers. Loss aversion is a powerful conservative force that favors minimal changes from the status quo in the lives of both institutions and individuals. This conservatism helps keep us stable in our neighborhood, our marriage, and our job; it is the gravitational force that holds our life together near the reference point.

LOSS AVERSION IN THE LAW

During the year that we spent working together in Vancouver, Richard Thaler, Jack Knetsch, and I were drawn into a study of fairness in economic transactions, partly because we were interested in the topic but also because we had an opportunity as well as an obligation to make up a new questionnaire every week. The Canadian government's Department of Fisheries and Oceans had a program for unemployed professionals in Toronto, who were paid to administer telephone surveys. The large team of interviewers worked every night and new questions were constantly needed to keep the operation going. Through Jack Knetsch, we agreed to generate a questionnaire every week, in four color-labeled versions. We could ask about anything; the only constraint was that the questionnaire should include at least one mention of fish, to make it pertinent to the mission of the department. This went on for many months, and we treated ourselves to an orgy of data collection.

We studied public perceptions of what constitutes unfair behavior on the part of merchants, employers, and landlords. Our overarching question was whether the opprobrium attached to unfairness imposes constraints on profit seeking. We found that it does. We also found that the moral rules by which the public evaluates what firms may or may not do draw a crucial distinction between losses and gains. The basic principle is that the existing wage, price, or rent sets a reference point, which has the nature of an entitlement that must not be infringed. It is considered unfair for the firm to impose losses on its customers or workers relative to the reference transaction, unless it must do so to protect its own entitlement. Consider this example:

> A hardware store has been selling snow shovels for $15. The morning after a large snowstorm, the store raises the price to $20.
> Please rate this action as:
> Completely Fair Acceptable Unfair Very Unfair

The hardware store behaves appropriately according to the standard economic model: it responds to increased demand by raising its price. The participants in the survey did not agree: 82% rated the action Unfair or Very Unfair. They evidently viewed the pre-blizzard price as a reference point and the raised price as a loss that the store imposes on its customers, not because it must but simply because it can. A basic rule of fairness, we found, is that the exploitation of market power to impose losses on others is unacceptable. The following example illustrates this rule in another context (the dollar values should be adjusted for about 100% inflation since these data were collected in 1984):

> A small photocopying shop has one employee who has worked there for six months and earns $9 per hour. Business continues to be satisfactory, but a factory in the area has closed and unemployment has increased. Other small shops have now hired reliable workers at $7 an hour to perform jobs similar to those done by the photocopy shop employee. The owner of the shop reduces the employee's wage to $7.

The respondents did not approve: 83% considered the behavior Unfair or Very Unfair. However, a slight variation on the question clarifies the nature of the employer's obligation. The background scenario of a profitable store in an area of high unemployment is the same, but now

> the current employee leaves, and the owner decides to pay a replacement $7 an hour.

A large majority (73%) considered this action Acceptable. It appears that the employer does not have a moral obligation to pay $9 an hour. The entitlement is personal: the current worker has a right to retain his wage even if market conditions would allow the employer to impose a wage cut. The replacement worker has no entitlement to the previous worker's reference wage, and the employer is therefore allowed to reduce pay without the risk of being branded unfair.

The firm has its own entitlement, which is to retain its current profit. If it faces a threat of a loss, it is allowed to transfer the loss to others. A substantial majority of respondents believed that it is not unfair for a firm to reduce its workers' wages when its profitability is falling. We described the rules as defining dual entitlements to the firm and to individuals with whom it interacts. When threatened, it is not unfair for the firm to be selfish. It is not even expected to take on part of the losses; it can pass them on.

Different rules governed what the firm could do to improve its profits or to avoid reduced profits. When a firm faced lower production costs, the rules of fairness did not require it to share the bonanza with either its customers or its workers. Of course, our respondents liked a firm better and described it as more fair if it was generous when its profits increased, but they did not brand as unfair a firm that did not share. They showed indignation only when a firm exploited its power to break informal contracts with workers or customers, and to impose a loss on others in order to increase its profit. The important task for students of economic fairness is not to identify ideal behavior but to find the line that separates acceptable conduct from actions that invite opprobrium and punishment.

We were not optimistic when we submitted our report of this research to the *American Economic Review*. Our article challenged what was then accepted wisdom among many economists that economic behavior is ruled by self-interest and that concerns for fairness are generally irrelevant. We also relied on the evidence of survey responses, for which economists generally have little respect. However, the editor of the journal sent our article for evaluation to two economists who were not bound by those conventions (we later learned their identity; they were the most friendly the editor could have found). The editor made the correct call. The article is often cited, and its conclusions have stood the test of time. More recent research has supported the observations of reference-dependent fairness and has also shown that fairness concerns are economically significant, a fact we had suspected but did not prove. Employers who violate rules of fairness are punished by reduced productivity, and merchants who follow unfair pricing policies can expect to lose sales. People who learned from a new catalog that the merchant was now charging less for a product that they had recently bought at a higher price reduced their future purchases from that supplier by 15%, an average loss of $90 per customer. The customers evidently perceived the lower price as the reference point and thought of themselves as having sustained a loss by paying more than appropriate. Moreover, the customers who reacted the most strongly were those who bought more items and at higher prices. The losses far exceeded the gains from the increased purchases produced by the lower prices in the new catalog.

Unfairly imposing losses on people can be risky if the victims are in a position to retaliate. Furthermore, experiments have shown that strangers who observe unfair behavior often join in the punishment. Neuroeconomists (scientists who combine economics with brain research) have used MRI machines to examine the brains of people who are engaged in punishing one stranger for behaving unfairly to another stranger. Remarkably, altruistic punishment is accompanied by increased activity in the "pleasure centers" of the brain. It appears that maintaining the social order and the rules of fairness in this fashion is its own reward. Altruistic punishment could well be the glue that holds societies together. However, our brains are not designed to reward generosity as reliably as they punish meanness. Here again, we find a marked asymmetry between losses and gains.

The influence of loss aversion and entitlements extends far beyond the realm of financial transactions. Jurists were quick to recognize their impact on the law and in the administration of justice. In one study, David Cohen and Jack Knetsch found many examples of a sharp distinction between actual losses and foregone gains in legal decisions. For example, a merchant whose goods were lost in transit may be compensated for costs he actually incurred, but is unlikely to be compensated for lost profits. The familiar rule that possession is nine-tenths of the law confirms the moral status of the reference point. In a more recent discussion, Eyal Zamir makes the provocative point that the distinction drawn in the law between restoring losses and compensating for foregone gains may be justified by their asymmetrical effects on individual well-being. If people who lose suffer more than people who merely fail to gain, they may also deserve more protection from the law.

SPEAKING OF LOSSES

"This reform will not pass. Those who stand to lose will fight harder than those who stand to gain."

"Each of them thinks the other's concessions are less painful. They are both wrong, of course. It's just the asymmetry of losses."

"They would find it easier to renegotiate the agreement if they realized the pie was actually expanding. They're not allocating losses; they are allocating gains."

"Rental prices around here have gone up recently, but our tenants don't think it's fair that we should raise their rent, too. They feel entitled to their current terms."

"My clients don't resent the price hike because they know my costs have gone up, too. They accept my right to stay profitable."