



## Snakes & Ladders

*The road to hell is paved  
with good intentions.*

Johann Rambach, 1730

**A**T ONE POINT DURING FRENCH Colonial rule in Indochina, an infestation of rats in Hanoi became so troublesome that officials decided to offer a cash reward for every rat's tail turned in to the authorities.

It wasn't long, of course, before a swarm of tailless rats were scurrying around the city. Rat-catching had become a lucrative cottage industry, with people capturing rats, severing their tails, and then releasing them back into the city's sewers, where they would procreate and produce more future revenue.

The propensity to create such 'perverse incentives'—directives which ultimately result in the opposite of the desired outcome—is so common that social scientists have coined a name for it: the *Cobra effect*.

The phenomenon is named for a similar bounty program in colonial India, in which people began breeding venomous cobras in order to kill them and collect a reward.

Perverse incentives can have consequences far beyond economic loss or embarrassment. The accident at Chernobyl was in large part caused by strong incentives to proceed with a scheduled test of the safety systems, despite clear warnings that the reactor was unstable.

As Martin Cruz Smith wrote in his colorful account of the disaster, *Wolves Eat Dogs*, not wanting to jeopardize their monthly bonuses, "like good Soviets, the operators marched forward, hands over their balls."

The government's determined effort to prove the plant could be run safely resulted instead in the callous operators completely destroying the reactor, a massively perverse outcome that ultimately contributed to the collapse of the USSR itself five years later.

Another disastrous example is China's one-child policy. In effect from 1980-2015, the government mandated limit of one child per family was expected to cut China's rapid population growth and boost its economy.

Instead, it resulted in a rapidly shrinking labor force and a slowdown in economic growth—along with, tragically, a generation of abandoned babies, child trafficking, and illegal children, due to parents' traditional preference for boys over girls and for large families to support them in their old age.

In 1976, Venezuela nationalized its oil industry, intending to keep profits within the country. But the policy triggered a chain of unforeseen consequences, beginning with an underinvestment in infrastructure and a resulting decline in production, followed by crippling debt, taxation, and inflation.

This in turn led to a food crisis, price controls, and a massive drop in agricultural production as farmers refused to work. The end result was a massive decline in oil production, increasing social unrest, and ultimately, the imposition of slave labor.

These kinds of situations abound in centralized, command economies like those of the Soviet Union and China, but they aren't restricted to Communist countries.

U.S. housing policies in the early 2000s—intended to boost home ownership among poorer families—led to the government purchasing over 70% of the 27 million outstanding subprime mortgages that later blew up in the 2008 housing crisis.

The resulting collapse of the banking and mortgage lending industry ultimately caused a far greater number of low income people to lose their homes. (The financial crisis itself was, of course, largely the result of government policies which encouraged excessive debt and speculation.)

Perverse incentives are rampant in the medical industry, with the entire U.S. medical and insurance system geared toward treatment rather than prevention, maintenance rather than cure, and profitable drugs and surgery rather than less expensive or invasive measures. (Bonuses paid to hospitals to treat Covid-19 cases predictably resulted in a diagnosis of Covid being applied to everything from the common cold to victims of automobile accidents.)

Laws against discrimination intended to increase opportunities for women, minorities and the disabled unintentionally encourage employers to avoid hiring them in the first place out of fear of expensive lawsuits. Lawyers billing by the hour are incentivized not to settle cases in a timely manner, and real estate agents working on commission often have an inherent conflict of interest with the buyers or sellers they represent.

Perverse incentives even show up in sport, with sports teams sometimes incentivized to end a losing season with further losses in order to get a first pick in next year's draft.

In an effort to avoid these kinds of bad outcomes, policymakers have developed a 'Ladder of Intervention,' which gives preference to voluntary incentive strategies (often called *nudging*) before moving 'up the ladder' to more coercive measures with less predictable outcomes. (If you want to address an epidemic of obesity, taxing junk food is a nudge. Banning it is not.)

Virtually all of these examples suggest, however, that the ultimate cause of perverse outcomes is bureaucratic interference in the free market, which inevitably spurs changes in behavior among the targeted population.

In any event, with all this attempted manipulation, one can't help but wonder who the real rats in this story are. ■