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Where's My Million?

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Are lotteries harmless? Not a chance, says a Colby professor who is making a racket with research about their methods.

By Kevin Cool

“Lotteries: Taxation for people who are bad at math”
bumper sticker

In the glare of dozens of TV cameras, surrounded by microphones, a retired electrician last spring stepped out of an obscure middle-class life in an Illinois suburb to become the richest man in his town and a celebrity, however briefly. He had purchased the winning ticket in the Powerball Lotto, whose $195 million jackpot was the largest in history at that time. Three months later, 13 Ohio men who had pooled their money to participate, set a new record payoff with their $296 million prize. In living rooms across the United States, millions of people who bought tickets and won nothing watched in amazement and thought “that could have been me.”

And maybe someday pigs will fly. The odds are about the same.

Grossman Professor of Economics Jan Hogendorn probably would have watched the proceedings of the Powerball sweepstakes with bemused detachment had he not been studying lotteries so carefully, and his reaction to the publicity surrounding the winners perhaps would have been less pronounced had he not come to the conclusion, after several months of research, that lotteries are out of control.

Hogendorn is no anti-gambling crusader. He embarked on the research, he says, to understand how lotteries squared with traditional models of economic decision making; to figure out why, given the often astronomical odds against winning, lotteries are so popular. “For a rational economist, lotteries are difficult to reconcile,” Hogendorn said. “Lotteries aren’t a fair bet.”

His findings hint at troubling issues surrounding lotteries beyond the question of whether playing them is foolish. Implicitly, campaigns to market lotteries in some states specifically target low income persons, use misleading advertising and exploit the government’s credibility to leverage ticket sales, Hogendorn says. In the worst cases, he says, lotteries border on fraud; at the very least, their marketing practices are deceitful and crass.

In most states where lotteries are administered, the possibility of winning the big prize is so remote—the Powerball odds were 80 million to one—that nothing in human experience is useful for comparison. Not even the historically reliable “being struck by a bolt of lightning” odds comes close to approximating the minuscule likelihood of a Powerball victory, says Hogendorn. “Lightning insurance would be a better investment,” he said.

According to Hogendorn, the decision about whether to buy a lottery ticket pivots on one fundamental question: what is a dollar worth? Research by Milton Friedman and Leonard Savage of the University of Chicago regarding the “marginal utility” of money helps explain the unusual enthusiasm of lottery players to fork over their greenbacks, says Hogendorn. “Friedman and Savage explain that increases in income that raise the
relative position of individuals in their own class but do not shift them out of their class yield diminishing marginal utility, while increases that shift them into a higher class with improved social and economic status yield increasing marginal utility,” Hogendorn said. In other words, a dollar isn’t worth much compared to the chance at getting rich.

A recent study conducted at four urban shelters revealed that 86 percent of the residents had played the lottery and more than 40 percent still were purchasing tickets regularly. Hogendorn says these findings aren’t particularly surprising. The truth is, he concedes, buying a lottery ticket offers a chance—remote, but a chance nevertheless—to swiftly and irrevocably change one’s life forever. It’s a powerful inducement. “If I’m a homeless person, what other thing can I do that will offer me the same opportunity to change my life and pull me out of poverty so quickly?” said Hogendorn. “It only costs me a dollar. I could try to save a few bucks and go back to school or invest my meager income in the stock market, but those won’t pay off for a long time, if they pay off at all.”

Acknowledging that the findings are controversial, Hogendorn says data clearly show that poor people are the biggest losers in lotteries. “The common refutation from the lottery people is that the poor don’t spend more money in the lottery than rich people, but that’s an ineffective response. Poor people are spending more as a percentage of their income,” he said.

While persons in higher income brackets might play the lottery as a fun way to blow a couple of bucks, he says, poor ticket buyers are more likely to view the activity as a form of investment. “The poor have fewer alternative ways to invest, in real estate, the stock market or elsewhere, so the lottery is seen less as a form of entertainment, but more as a chance to transform their lives,” Hogendorn said.

Lottery administrators understand this and exploit it, Hogendorn says. “They are selling hope.”

For example, a lottery advertisement in a poor Chicago neighborhood pictures a black hand holding a ticket under the slogan, “This could be your ticket out.” In Ohio, lottery officials suggested to their administrators that advertising be concentrated during periods of the month when government benefit checks and Social Security payments were released.

The Landau Guide, a widely used book that describes ways to successfully operate a lottery, emphasizes the importance of providing a prize that “will improve people’s circumstances in a way they cannot achieve otherwise,” Hogendorn said. “The top prize is the main benchmark. [Landau] implies that advertising of big winnings can decisively overcome normal risk aversion and the caution that would ordinarily be generated by the very long odds.”

Another major factor in lottery ticket buying is plain old optimism, Hogendorn says. “[Ticket buyers] act on the assumption that when you’re hot you’re hot,” he said. It’s an ancient form of foolhardiness. And it is not confined to the poor and uneducated. A recent study of Yale undergraduates revealed that 40 percent believed they could improve their chances of predicting a coin toss by “practicing.” Presumably, Hogendorn says, they were deluded by what Adam Smith described in The Wealth of Nations as “the overweening conceit which the greater part of men have of their own abilities [and] the absurd presumption in their own good fortune.”

Perhaps that helps explain why a New York man spent $3,000—money he had planned to use for vocational school—to purchase Powerball tickets during last summer’s jackpot frenzy. The popularity of lotteries may say more about human nature than about economic decision making. But for a rational economist, it’s not that simple, Hogendorn says.

“Economists consider consumer preference to be reasonable. If you want to buy a Beanie Baby an economist considers that to be a reasonable exercise of your choice. But in the case of lotteries, with the value of the bet being so negative, a rational economist must consider what external factors are involved beyond the value of the bet.”

Even given the “desirability” of playing the lottery for social movement, fun or misguided perspectives about luck, fewer people would be duped if the government wasn’t pushing it so hard, Hogendorn says.

Lotteries use a marketing device called “framing,” he says. It involves a three-pronged strategy to sell consumers on the benefits of lottery gambling. “The government presents the lottery as legitimate and therefore removes the stigma of doing something ‘wrong,’ it paints lotteries as a conveyor of social benefits and confirms that winning the big prize is a valid possibility,” he said. In combination, these messages produce a mindset that helps overcome players’ normal risk aversion, Hogendorn says.

“If the government says something is legitimate it’s more
convincing than if the Psychic Network says it," he said. "Compare the current situation with the way it was when the numbers racketeers were run out of Chicago. The rackets were advertised by word of mouth. You would have to weigh in your own mind, first, how that information was coming to you, and, two, that because the government had declared the activity illegal that it wasn't legitimate. There was always some level of mistrust. But now, with the government not only saying that this is legitimate but actually trying to persuade people that it's a good thing, why would anybody pause to consider whether this was a legitimate activity?"

On the second point, that lotteries earmark proceeds for specific programs as a means to buoy public support, Hogendorn is equally trenchant. "I find it objectionable that states attempt to fool consumers into thinking that they are raising valuable support for good causes when the reality typically is that the money is merely replacing other funds that are shifted somewhere else," he said. Research has shown that earmarked lottery revenue often is used to underwrite budget cuts in areas such as education and sometimes results in a net loss of money, according to Hogendorn. Legislators are less likely to appropriate funds to support education if they believe it is the beneficiary of a lottery gravy train, he says.

"I think of it this way," Hogendorn said. "There would be resistance to buying lottery tickets on the part of a lot of people because it does not sound like a sensible bet—the odds are too low. But their thinking can be changed if they receive persuasive information that even if they lose, they are doing something for the public good. Their reluctance to do it is reduced by the state's activity."

Finally, Hogendorn says, the suggestion that winning the big prize is a reasonable possibility is an attempt to deceive the public. The odds of winning seldom are realistically presented and in some cases are purposely vague and misleading. Hogendorn discovered a Connecticut Lotto advertisement that stated the chance of winning at "30 to 1" without indicating that those were the odds for winning any prize, not of any size. The chances of winning the big, multi-million dollar prize were 10 million to one. "It is governments that are explicitly using techniques like these to get people to participate," he said.

"There is no doubt in my mind" that government sanctioning of lotteries has contributed to the proliferation of casinos and other gambling venues, Hogendorn says. Internet lotteries are the latest and perhaps most troubling offshoot of government-sanctioned gambling, he says, because they are almost impossible to regulate and monitor. And they invite the participation of underage players who could not legally purchase a lottery ticket over the counter. Hogendorn says that when his student research assistant dialed up an Internet lottery in Liechtenstein there was no attempt made to verify his age. "Most impressive of all," Hogendorn said, "the credit card used for the bet belonged to my mother, who is dead."

Hogendorn does not want to ban lottery advertisements or restrict their number, but he says he would like greater oversight of lottery operations from a consumer perspective. "I think that lottery sponsors should be subject to the same regulations that private firms must abide by in their advertising," he said. "The states get away with things a private firm could never get away with."

He also believes that government sponsorship of lotteries is fundamentally coercive and that in the hands of private companies, consumers would be making choices based on the "fairness of the bet" rather than factors unrelated to the games themselves. "If you police the ads and take away the automatic legitimacy of government sponsorship, people could assess whether their participation in the lottery was a good idea. The state could still take its cut by taxing the profits of the private company. To me, that would be preferable," Hogendorn said.

Does he think that will happen? "I wouldn't say it will never happen; never is a long time," Hogendorn said. "The enormous popularity of lotteries in the early nineteenth century turned to revulsion and eventual extinction for most state lotteries by the late part of the century. But I see no evidence that people will change their minds about lotteries if the advertising is not reformed."

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**Image Description**

The image shows a cartoonish illustration of a man smiling and holding a lottery ticket, with other people running behind him, possibly indicating the excitement or competition associated with lottery games. The background includes various lottery-themed elements such as money and lottery balls, emphasizing the gambling context.