THE YOUNG ECONOMIST

A BETTOR WORLD

Once apprenticed to a bookie, **JUSTIN WOLFERS** *of Wharton now draws economic insight from the behavior of gamblers.*

BY CAREN CHESLER PHOTOGRAPHS BY FRAN COLLIN

Justin Wolfers, photographed in an unusual chair in his Philadelphia home, March 23, 2007.

SITTING IN FRONT of a roaring fire in his Philadelphia townhouse, an Australian-born economist named Justin Wolfers puts his feet up on an ottoman, revealing a pair of pink and black wingtips. His living room is filled with white leather furniture, the dining room sports an Italian glass table surrounded by orange chairs, and the kitchen could be a stage set from the Food Network.

He takes a sip of red wine and asks his guest, "Would you bet me five dollars I'm wearing red

underwear? No, you wouldn't. Why not? Because you know I have better information than you do." His point is that smart people with good information are attracted to markets by the existence of ignorant bettors. Wolfers knows the concept well: in college, he worked as a runner for a Sydney bookmaker.

An assistant professor of business and public policy at the Wharton School of the University of Pennsylvania, Wolfers, age 34, is fascinated by what are called prediction markets. The behavior of people who place bets at a track, with their own money at stake, has always been a great predictor of the outcome of races. Today, the concept is being applied in more serious contexts. Last year, for instance, the aggregate of small bettors who placed wagers on electoral results on TradeSports, a Web-based market, forecasted the outcome of every U.S. Senate race correctly. Companies like Best Buy, the electronics retailer, now maintain in-house markets where employees bet on how products will sell. The results help with pricing and inventory decisions.

Wolfers says that companies have shifted to prediction markets because they work better than the traditional means for gathering data and making forecasts, such as sales meetings. "Think of what a meeting is," Wolfers says. "It's some fat, obnoxious guy who talks for three minutes despite the fact that he knows nothing. In the meantime, there's a woman who sits in the back and says nothing because she may feel her opinion isn't taken into account. And then there's the brown-noser, who wants to be senior VP and will say anything the boss wants to hear."

When you set up a prediction market in which employees bet actual cash, you weed out those who don't know anything. As for the sycophant: if the boss isn't watching, he's more likely to bet what he really thinks. With a prediction market, everyone brings a small piece of information to the table, and the consensus proves surprisingly accurate.

Prediction markets aren't this young economist's only interest. Wolfers is what some call a forensic researcher, who sifts through data to test popularly held beliefs. He investigated voting behavior and confirmed that the electorate rewards—or punishes—state governors for economic trends beyond their control. He used the flow of news on election day last year to find that a rise in the probability of a Republican victory was causing (rather than following from) an uptick in equity prices. He even used a blind taste test to confirm that his current wine glasses make the wine taste better.

One of his most controversial findings is that the death penalty does not save lives by discouraging potential murderers. In 1976, the U.S. Supreme Court overturned a national prohibition on capital punishment, citing studies that concluded that capital punishment does indeed deter crime. But those findings, Wolfers and his colleague John Donohue found, depended on faulty statistical assumptions.

There is 'profound uncertainty' that capital punishment deters crime, Wolfers concluded. 'The Supreme Court decision cited academic research that was wrong.'

"The fundamental difficulty," they wrote, "is that the death penalty—at least as it has been implemented in the United States—is applied so rarely that the number of homicides that it can plausibly have caused or deterred cannot be reliably disentangled from the large year-to-year changes in the homicide rate caused by other factors." Their conclusion, in an article in the Stanford Law Review, was that there is "not just reasonable doubt about whether there is any deterrent effect of the death penalty, but profound uncertainty."

Says Wolfers: "The Supreme Court decision cited academic research that was wrong. At the very least, you want these guys to debate the issue with facts that are true."

Wolfers earned his bachelor's in economics at the University of Sydney with first-class honors in 1994, then went to work at the Reserve Bank of Australia, the country's central bank. In 1997, he arrived at Harvard for Ph.D. work, planning to return home with his sights on becoming Secretary to the Treasury some day. Unlike his father, a political science professor, he preferred public policy to academe.

But after just a few months at Harvard, one of his advisers invited Wolfers to a meeting of the National Bureau of Economic Research, the prestigious organization headed by Martin Feldstein, who chaired President Reagan's Council of Economic Advisers. The room was filled with some of the best economists in the world, conducting exciting, original research. Wolfers decided then on the academic life in the United States. He would not be returning to Australia.

Economist Wolfers is fascinated by the power of 'prediction markets,' which use the dynamic of gambling to make remarkably accurate forecasts on everything from elections to new-product revenues.

"I realized that what was happening in that room—50 central banks from around the world were more or less going to take those ideas and implement them. I thought, wow! This is a lot more exciting than being the guy back home who replicates their research," Wolfers said.

Marriage and divorce are recurring research topics for Wolfers, whose own parents divorced when he was 14. He sees widespread misconceptions. Americans often compare today with the 1950s to highlight the deterioration of family life. But he found that the 1950s were anomalous—a time of exceptionally high family stability by historical standards. Also, contrary to what is commonly believed, men are not getting married later in life. Most men still marry in their early twenties, about the same age men wed 100 years ago. The significant difference today, he says, is that the age gap between a man and his wife has narrowed.

Wolfers and his domestic partner, Betsey Stevenson, who is also an assistant professor in the same department at Wharton, studied 150 years of marriage and divorce data and concluded that, contrary to popular belief, more lenient laws have not led to a significant long-term increase in divorce. Instead, rates spiked when divorce became easier, then retreated toward their earlier levels. Meanwhile, the two concluded in an article last year in The Quarterly Journal of Economics that the liberalization of divorce laws coincided with sharp declines in rates of domestic violence, as well as declines in suicide rates among married women—though not married men.

The best-known research that Wolfers has conducted involves cheating by basketball players. Because teams are often unevenly matched, with easily predictable winners and losers, bookmakers offer bets on whether the difference in a score will exceed a certain number of points, called the "spread." Establishing a spread is an attempt to divide gamblers evenly in their guesses. One hazard of this approach is that players on a team that is heavily favored, especially in basketball, can bet

against themselves, then try to fail at beating the spread (by missing easy shots or letting the other team score) while still winning the game. This practice is known as "point shaving."

In The American Economic Review last year, Wolfers examined 40,000 National Collegiate Athletic Association basketball games from the last 16 years and found striking results: When a team was favored by 12 points or fewer, the winner beat the spread about 50 percent of the time, as one would expect. But in games in which teams were favored by more than 12 points, the winning team covered the spread only 47 percent of the time—an indication that something other than chance was at play. Wolfers concluded that point shaving appears to occur in about 5 percent of the games in which there is a heavy favorite. The finding caused an uproar in the sports world.

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"He's very creative, in terms of asking interesting research questions," says Eric Zitzewitz, a highly regarded assistant professor of economics at Stanford's business school who has known Wolfers for years and collaborated with him on such projects as a chapter on prediction markets in the book, *Information Markets: A New Way of Making Decisions*, published by AEI-Brookings Press.

Zitzewitz says it was Wolfers's idea to use an online prediction market to assess the economic impact of the war in Iraq, before the U.S. invaded. Up to that point, academics had only used prediction markets for retrospective insight into historical events. But in the Iraq study, which Zitzewitz and Wolfers wrote with Australian economist Andrew Leigh, the authors used markets to evaluate the cost of a policy before it was instituted—an approach that suggests such markets could be used to guide policy. They noted that prices of oil on futures markets implied a belief that an oil price spike caused by war would dissipate after about 18 months, limiting the size of an "oil dividend." This prediction, as it happens, has not been borne out by events—oil is still well above its pre-war prices. But analysts believe that today's prices may be due to other factors that were not considered before the Iraq war, including the disruptions caused by Hurricane Katrina.

While Wolfers's study was inconclusive, Zitzewitz said that "it was a really creative way of approaching the policy-relevant question, 'Should we go to war?' Justin is technically competent, and he's well trained, but he's not super-mathematical. He doesn't delve into new econometric techniques. He simply takes existing techniques and applies them to really interesting questions."

Not every economist is so enthusiastic. Paul Rubin, who wrote one of the death penalty studies that Wolfers attacked, criticizes him for publishing the article in a student-edited law journal rather than an economic journal, where his paper would have been subjected to more rigorous scrutiny. In addition, Rubin says, when the study was concluded, Wolfers gave him only three days to comment on what was a lengthy, detailed econometric critique.

Wolfers is undeterred. After all, the death penalty research was also published as a working paper by the National Bureau of Economic Research, where he has been a research fellow for the past four years. And he continues to apply economic principles to interesting social issues. He's currently studying whether NBA referees racially discriminate, looking at whether the number of fouls earned by black and white players varies with the race of the referee. He also continues to research whether there are alternative methods for forecasting election outcomes. And he and Stevenson are looking more deeply at what has caused the dramatic changes in the American family over the last century.

He likes the life he's chosen. "I could do the same work I'm doing now for an Australian institution, and the truth is, no one would listen," he says. But from his perch at Wharton, his work finds its way to financiers, business leaders, and policymakers all over the world. ■

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