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## The Art of the Save, for Goalie and Investor

By PATRICIA COHEN

When it comes to choosing what to do, sometimes the best thing is nothing.

Consider Radek Cerny, the No. 1 goalkeeper for Tottenham Hotspur, who was facing off against Manchester United's exuberant young midfielder, Cristiano Ronaldo, for a penalty kick during the recent fourth round of the Football Association Cup in Britain. As Ronaldo's foot swung back for the kick, Cerny leapt to the left expecting a sharp shot to that corner. The ball barreled into the lower right.

Goal!

Cerny's mistake, in Ofer H. Azar's eyes, is that he moved to one side instead of remaining in the center, where he would have had a greater chance of stopping the ball.

Mr. Azar is not a coach or a goalie. Actually, he does not even play soccer. He's a lecturer in the School of Management at Ben-Gurion University of the Negev in Israel. Mr. Azar, however, is interested in decision-making, and the split-second response of goalies to penalty kicks struck him and several of his colleagues as a perfect real-life test case of why people sometimes make irrational decisions.

Classical economists often criticize experiments on how emotions influence financial decisions because they do not involve meaningful monetary rewards. Examining professional soccer players seems to solve that problem.

"Incentives are huge," Mr. Azar and his collaborators argue in a paper that appeared not long ago in *The Journal of Economic Psychology*. What's more, "goalkeepers face penalty kicks regularly, so they are not only high-motivated decision-makers, but also very experienced ones."

The Israeli scholars are not looking to break into the Premier League. Their point is that a preference for action over inaction can play a significant role in all kinds of economic choices.

When the economy has been doing poorly, officials are more likely to "be tempted to 'do something,'" they argue, even if the risks outweigh the possible gains. "If things turn bad, at least they will be able to say that they tried to do something, whereas if they choose not to change anything and the situation continues to be poor (or becomes worse), it may be hard to avoid the criticism that despite the warning signs they 'didn't do anything.'"

That sort of thinking can affect whether managers stick with their firm's current strategy or change course. And, apparently, whether goalkeepers stand still or take a leap.

The soccer field has turned out to be a popular laboratory among economists, with penalty kicks a particular favorite.

Awarded after certain kinds of fouls, or sometimes to decide a championship match, a penalty kick pits one player against the goalkeeper. (Mano a pie instead of mano a mano, though, since the goalie is allowed to use

his hands.)

Standing just 36 feet away, the kicker sends the ball hurtling at the goal at 60 to 80 m.p.h., giving the goalie just 0.2 to 0.3 second to respond. Given the speed, the goalkeeper has to decide what to do even before observing the direction of the kick. Stopping a penalty kick is considered one of the most difficult challenges in sports. Not surprisingly, 80 percent of all penalty kicks score.

For their study, Mr. Azar, along with Michael Bar-Eli, a sports psychologist; Ilana Ritov, a psychologist; and two graduate students, scanned the top leagues in the world, collecting data on 311 penalty kicks. Then they computed the probability of stopping different kicks (to the left, the right or center) with different actions (jumping left, right, or staying put) to see which one “maximizes his chance of stopping the ball.”

According to their calculations, staying in the center gives the goalkeeper the best shot at halting a penalty kick — 33.3 percent, instead of 14.2 percent on the left and 12.6 percent on the right.

Yet when the group analyzed how the goalkeepers had actually reacted to these penalty kicks, they discovered the goalies remained in the center just 6.3 percent of the time.

The reason, Mr. Azar contends, is rooted in how the players feel after failing to block the ball.

Their soccer speculations build on the work of Amos Tversky and the [Nobel Prize](#) winner Daniel Kahneman, who explored the idiosyncrasies of decision-making. In a landmark study, the two psychologists found that people had more regrets when they lost \$1,200 because they chose to act, (in this case, change an investment), than people who lost \$1,200 because they left their investments untouched.

What Mr. Azar and his collaborators wanted to show was that in certain situations, those results could be reversed: when acting was the standard response — like a goalkeeper’s jumping to one side on a penalty kick — not acting would make someone feel a deeper emotional pang. The result is an unconscious bias toward action.

To check, they asked 32 goalkeepers in Israel’s Premier League and National League to rate how bad they felt on a scale of 1 to 10 after missing penalty kicks. As it turned out, about half of the group said “10” no matter where they stood.

Of the remaining 15, 11 felt worse when they remained in the center instead of jumping to the side. Nothing definitive, the authors acknowledge, but it does at least suggest “that goalkeepers feel worse about a goal being scored when it follows from inaction (staying in the center) than from action (jumping).”

Outside the stadium, Mr. Azar and company argue that “action bias” can influence not just goalies but also investors as they decide to sell their stocks (action) or leave their portfolio untouched (inaction) during a downturn, and whether a worker chooses to look for a better job or stay put.

Marcel Zeelenberg, a social psychologist at Tilburg University in the Netherlands, has found that a bias toward action or inaction often depends on whether a previous result was good or bad. After a team has a big loss, for example, the expectation is that the coach should replace the starting players, whereas after winning, leaving the lineup unchanged is considered the normal response.

In an e-mail message, Mr. Zeelenberg said he thought the Israelis’ “paper is convincing because it uses real, already existing data to test a theory that was recently developed and tested only in the lab.”

Paul Romer, an economist at the Graduate School of Business at [Stanford University](#), said the study

illustrated an important point about economic decision-making.

“How people feel about various kinds of activities means a lot about what they decide to do,” Mr. Romer said. “In many situations, we just look at the narrow monetary payoffs and we forget about the effects of preference or feelings.”

For instance, going to school for an extra year will mean higher wages in the long run, Mr. Romer said, but “going to school can be very rewarding and satisfying for some, and very painful for others.” By looking solely at the financial rewards, “you might miss the single most important factor in determining that decision.”

Shame, humiliation, feelings about one’s competence — all of these emotions play a huge role in decision-making.

“There is a very large social component to feelings,” Mr. Romer said. “Economists typically assume that people understand what makes them feel good,” but “people actually don’t always understand what makes them happy.”

So what do the men on the field think?

Danny Cepero, a goaltender with the New York Red Bulls, said he could understand the emotional downside of doing nothing. If you stay put because you think a ball is coming straight up the middle and miss, he said, “you look like a fool.

“Definitely it’s more acceptable to pick a side and just go.”

Still, Mr. Cepero was skeptical that staying in the center makes the most sense. “You rarely see a goalkeeper stand in the middle and make a save,” he insisted.

To Des McAleenan, the Bulls’ goaltending coach, no computer analysis can capture the complexity of players’ responses. “Now, everybody’s got extensive dossiers on the opposition,” he said.

The journal article does point out that the center strategy is not an absolute rule; if goalkeepers spend more time in the middle, penalty kickers would undoubtedly shift their strategy and their aim.

But for the moment, Mr. Azar’s team would advise those who play soccer or the market that nothing is sometimes better than something.

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