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EVERYDAY ECONOMICS

What Good Marathons and Bad Investments Have in Common

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My sister-in-law, Jane Richards, ran last year's Berlin Marathon. Throughout the course, she retched repeatedly. She collapsed only a few steps after finishing. Her body was a wreck, and she said the race was more painful than childbirth. Yet she scores it as one of the best experiences of her life.

She had finished in 2 hours 59 minutes 59 seconds.

Jane is justifiably proud of her accomplishment.

But when viewed through the standard calculus of costs and benefits, her elation is puzzling. What's so special about running an oddly specific and arbitrary distance (26 miles 385 yards, which is roughly the distance that the Greek soldier Pheidippides ran to Athens to report news of a victory from the front) within an equally odd and arbitrary period of time?

Jane's life as a 2:59 marathoner is no different than if she had run 3:01. It didn't qualify her for any special awards or privileges, and even if she had run much slower, she would have been eligible for a prized entry into the Boston Marathon (she did not run that race.)

To Jane, triumph didn't lie in an arbitrary pairing of time and distance, but rather in setting and then meeting a goal. These arbitrary goals, a group of social scientists argues in a new academic study, provide a window into how we weigh the joy of victory against the sting of defeat. Less happily, the same instinct to finish a marathon in under three or four hours also causes many people to make big mistakes when buying and selling real estate or stocks, or when negotiating with their boss.

To better understand goal-motivated behavior, Eric Allen, Patricia Dechow, Devin Pope and George Wu downloaded the online results of nearly every major marathon and many minor marathons around the world, giving them a database of nearly 10 million marathon finishes. Viewed from afar, the distribution of finishing times resembles the sort of bell-shaped distribution found in sporting results, economic numbers, elections and other groups of data.

But zooming in reveals big heaps of finishes at the three-, four- and five-hour marks. There's also a similar pattern at half-hour intervals (and to a lesser degree, at 10-minute intervals). Goals really work as motivators, as we see many runners sneak in just under their targets (the shaded peaks are at 2:59, 3:29, 3:59 and so on), and few who just miss (finishing times like 3:01, 3:31, 4:01 are relatively rare).

Achieving these goals is partly a matter of careful planning and pacing.

When the researchers examined the distribution of the first half of the marathon, they again found heaps of athletes running slightly ahead of their goal, and few who dared lag.

But part of their success reflects grit over the closing stretch. Most marathoners run the final 2.195 kilometers (1 mile, 640 yards) about 8 to 10 percent slower than they run the preceding distance. The clear exception is those who need to stay on pace to meet their goal; they push themselves

harder and slow much less toward the end.

The broader implications of all this come from realizing that the cost-benefit trade-off that marathoners face is remarkably similar to what we all face when trying to decide how hard to work, how hard to study and how to invest.

In the usual analysis, economists suggest it's worth putting in effort as long as the marginal benefit from doing so exceeds the corresponding marginal cost of that effort. The fact that so many people think it worth the effort to run a 2:59 or 3:59 marathon rather than a 3:01 or 4:01 suggests that achieving goals brings a psychological benefit, and that missing them yields the costly sting of failure.

But in other domains, this discontinuity between meeting a goal and being forced to confront a loss can lead to bad economic decisions. Because losses are psychologically painful, we sometimes strain too hard to avoid them.

For instance, when you sell your house, your goal may be to get at least what you paid for it. But this simple goal has led to disastrous decisions for those who bought homes in Florida or Nevada during the housing bubble. Too many homeowners set their selling prices with an eye on recouping past investments rather than on current market conditions, and as a result, their homes didn't sell, deepening their financial distress.

A similar unwillingness to recognize losses in our stock portfolios has led many investors to hold onto their losing stocks too long, even if this requires selling out of their winning stocks too early.

The pain of a loss looms so large in the labor market that few workers are willing to accept even a small pay cut, even if that's what is necessary to keep their jobs. Just as the distribution of marathon times shows a big spike at 3:59, the distribution of wage changes has a big spike at 0 percent change.

But this makes little sense, as it leads many workers to readily accept a decline in the purchasing power of their wages when it's caused by inflation, but to reject a similar real wage decline during a period of low inflation, even when doing so could help them keep their jobs. One result is that particularly during periods of low inflation, struggling businesses find it cheaper to fire

existing workers and hire their replacements at a lower wage than to try to negotiate a pay cut.

Goals can be useful when they motivate us to perform better, but they’re harmful when focusing on arbitrary targets leads to arbitrary decisions. My advice: Treat your economic life like a marathon, not a sprint, but focus on the goals that really matter — economic security for your family — rather than on arbitrary round numbers.

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