

Homo Economicus Isn't So Stupid After All

Gerald E. Loeb, March 10, 2017

Economists continue to despair over the supposedly illogical behavior of humans as they make economic and political choices that mess up economists' theories based on maximizing value. Human choices often appear to be wantonly destructive of value as computed by the economists. These frustrating humans play the lottery despite obviously negative returns, they support economic policies that seem likely to depress their standard of living, and they engage in unnecessarily risky behaviors of all sorts. Are they just stupid?

The fault, dear economists, lies not in your subjects but in your premises.

The starting assumption – that humans truly care about their absolute standard of living – is actually impossible because nervous systems aren't any good at making absolute measurements of any kind. The nervous system is tuned to notice what mathematicians (and economists) call derivatives, or the slopes on lines. For example, you probably can't estimate the weight of a bag of potatoes to better than +/-50% but you notice instantly when one falls out. These derivatives occur over both time and space. What humans actually care about is not their standard of living, but whether it is getting better (temporal derivative) and whether it is better than their neighbors' (spatial derivative). No matter how well-off or miserable they actually are according to their standard of living, humans tend to be happy if things are getting better and unhappy when they are getting worse. They will also happily accept policies that beggar their rich neighbors more than they beggar themselves, to wit the following Russian joke:

Boris is unhappy because his neighbor Ivan has a goat while Boris has none. One day, Boris finds a magic lamp with a genie who offers him one wish. After careful consideration, Boris asks the genie to kill Ivan's goat.

So now we seem to have an explanation for why human behavior is doomed to be illogical; wrong again. It is illogical only if you assume that humans in general would be better served by decisions that tended to maximize their absolute standard of living rather than these ephemeral derivatives. If human decisions were actually as pernicious as the economists say, then why hasn't evolution produced smarter humans that would eat the dummies' lunch? After all, we don't see other animals killing their neighbor's goat and not eating it.

Humans are different from (most) other animals in a very important way. The lifestyles and decisions of virtually all other animals are determined by their genes and genes evolve at a glacial pace. Simply following spatial and temporal derivatives ever upward is the most for which an individual can hope. If they get stuck in what mathematicians call a "local minimum" then too bad. But humans get to invent their own lifestyles and strategies through cultural rather than genetic evolution. That's why our singular species has covered the planet with societies that are matriarchal, patriarchal, monogamous, polygamous, nuclear, communal, autocratic, democratic, warlike, pacifist, capitalist, communist, etc. etc. Within the lifespan of a single individual human, it is possible to invent or discover a new and perhaps more successful strategy. Any society that makes such a discovery has a huge competitive advantage, just as if it had mutated a gene that made individuals stronger or faster. So humans are programmed to believe that it may be fabulously rewarding to march to the beat of their own drummers. Doing something that seems to be counterproductive may be the way out of one of those local minima, leading to unheard of good fortune. Sure, it mostly leads to a loss and perhaps even an ignominious death for the individual adventurer, but it leads often enough to success for the whole tribe that this "entrepreneurial" gene is worth preserving. An acute sense of disappointment at stagnation over time or loss of stature compared to neighbors provides the impetus for humans to engage in risky behavior instead of the usual strategy of other animals – incremental attempts to find gradients that head in a better direction across time and

space. Interestingly, a tendency to be driven by these temporal and spatial derivatives instead of absolute well-being guarantees that entrepreneurial behavior will tend to appear at all ranks in the socioeconomic scale. Instead of becoming fat, dumb and lazy, those blessed with affluence are just as likely to be driven to risk-taking as the poor and supposedly desperate.

One chestnut of behavioral economics concerns why anyone would play the lottery (famously defined by Ambrose Bierce as “a tax on people who are bad at math”). Only about 2/3 of what is wagered in lotteries is returned as prizes, giving it a return that is three times worse than the worst casino game. The behavioral economics excuse for why mostly poor people play the lottery has to do with the “nonlinear” value of money. The few hundred dollars lost to regular wagering is insufficient to materially change their lives if it were saved and invested (e.g. in education, real estate, starting a business, etc.), but a win, however unlikely, would achieve such a goal. That’s sensible but it can’t explain another paradox – people are much more likely to play the lottery when the jackpot is \$100M rather than \$1M. If they just wanted to materially change their lives, \$1M would do quite nicely and the odds of winning at all are then much better. In fact, numerous studies have shown that huge winnings (much greater than \$1M) generally lead to instability, stress and unhappiness. So once again, economists must find another logical explanation or conclude that humans are fundamentally illogical.

Can the entrepreneurial gene explain lottery behavior? The tendency to indulge in risky behavior would benefit from some guidance on which risky opportunities to seize. The sense of despair from negative temporal and spatial derivatives provides the motivation, but what about the timing and direction? Humans are social animals. They supplement their limited personal perspectives on the world with information acquired by and readily gleaned from their compatriots. A flock of birds is often misled but occasionally well-served by rising as a whole when the first individual is startled. This gives us a basis for fads and other crowd-driven behaviors like buying a lottery ticket or opening a Pinkberry frozen yoghurt franchise or fomenting a “color revolution.” Timing is (or seems to be) everything.

So the next time you realize you are doing something mathematically stupid, just tell yourself that you are generously taking a chance for the good of the tribe.