Digital Homo Economicus

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All economic theories are built on presumptions about human nature. What happens when our understanding of human nature goes digital? What happens to our ideas about the integrity of economic behavior when human nature becomes reinterpreted through the lens of the new digital society?

Biology, ethics and economics are converging at this intersection and are pointing toward a new digitized version of human behavior and ethics. Our ability to analyze biological data, to unravel the genome and study the brain through chemistry and physics poses the possibility of digitizing the famous thesis that human behavior can be interpreted in terms of an idealized Homo Economicus, or “Economic Man”.

Economic Man/Human\(^1\) is the big idea that enabled economics to branch out from philosophy and claim to be a scientific academic discipline in its own right. This transformation in economics emerged during the 19\(^{th}\) century, spurred by John Stuart Mills’ efforts to formulate political and economic policy by analyzing the human “as a being who desires to possess wealth and who is capable of judging the comparative efficacy of means for obtaining that end.”\(^2\)

The classical idea of Homo Economicus has generated much practical work in economics. It has also been pronounced dead, or at least endangered, countless times over the past 200 years. It is of course an oversimplification, and that’s generally the nub of the problem with economics. People are too complicated to be reduced down to mathematical descriptions of some idealized utility functions. Peter Drucker wrote The End of Economic Man in 1939, for one example. Not even John Stuart Mill, who is generally credited with moving economics in this direction, believed in Homo Economicus as a valid description of human nature. He knew it to be an abstraction that failed to capture the passionate side of human motives.\(^3\)

Genetics, brain science and the analytics of “big data” are reformulating our understanding of human behavior however, and this suggests that we may expect the theory of Homo Economicus to be reinvigorated and have a long life.


Economists have gotten a lot of mileage out of theories based in the human capacity to make rational choices based on quantifiable utility functions. If only there were a way to quantify the irrational aspects of human behavior also, then there would seem to be no limit to frontiers open to economic analysis.

This is precisely the direction being proposed by new research such as that of John Coates, who writes in his new book of advances in neuroscience and physiology which explain what happens in the body and brain when people make irrational choices in stressful situations. Coates is a former derivatives trader from Deutsche Bank who now does research into the neuroscience of decision-making in financial markets. He comes to the conclusion that “irrational exuberance” of the sort that destabilizes financial markets can be probed and understood through better physiology and brain science. These new scientific capabilities point the way forward for theoretical applications of Homo Economicus.

The new and improved version of Homo Economicus will offer to analyze both the rational choices and the irrational reactions of consumers and market makers in terms amenable to data analysis. Consumers are already being treated as digital abstractions by marketing techniques such as Net Promoter Scores, in which their market value to a vendor or advertiser receives a numerical ranking based on their influence through digital social media. When these data are combined with digital formulations of human behavior based on analysis of biological reactions to any number of circumstantial stimuli, the capacity of the digital version of Homo Economicus would seem to be unlimited.

As always, these new technologies will bring with them a blessing and a curse. The blessing is obvious: enhanced abilities to build efficiency into markets and wisdom into regulatory policies. The curse will lie in the potential to subjugate human relationships to digital analysis in the marketplace. Every facial expression and vocal tick will be analyzed by the advertiser, and every human reaction will become open to more sophisticated forms of manipulation based in predictive theories.

As always, the challenge of using these new technologies and theories will be to recognize them as tools, but never as definitions of human nature. Human integrity resides ultimately in the imago Dei, in relationship with the Triune God. While physiology and neuroscience have a lot to teach us about how our bodies react to the stress of ethical dilemmas and financial choices, these sciences do not define what it means to be human. Only God can do that.

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