

Economic man – or straw man?

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Abstract: The target article by Henrich et al. describes some economic experiments carried out in fifteen small-scale societies. The results are broadly supportive of an approach to understanding social norms that is commonplace among game theorists. It is therefore perverse that the rhetorical part of the paper should be devoted largely to claiming that “economic man” is an experimental failure that needs to be replaced by an alternative paradigm. This brief commentary contests the paper’s caricature of economic theory, and offers a small sample of the enormous volume of experimental data that would need to be overturned before “economic man” could be junked.

Henrich et al.’s paper “‘Economic man’ in cross-cultural perspective” is a summary of work described at greater length in the book *Foundations of Human Sociality* (Henrich et al. 2004). Both works describe some economic experiments carried out among fifteen small-scale societies all round the world. The experimental results are broadly supportive of an approach to understanding social norms that is commonplace among game theorists (Binmore 2005, pp. 57–92; Binmore & Samuelson 1994). It is therefore perverse that the rhetorical part of both works should largely be devoted to claiming that “economic man” is an experimental failure that needs to be replaced by an alternative paradigm. This commentary is an attempt to set the record straight. A longer commentary appears as <http://else.econ.ucl.ac.uk/newweb/papers/economicman.pdf>.

Homo economicus. It is not true that “textbook predictions” based on *Homo economicus* incorporate a “selfishness axiom.” Orthodox economic theory only requires that people behave consistently. It is then shown that they will then necessarily behave *as though* maximizing something. Economists call this something *utility*, but they emphatically do not argue that people have little utility generators in their heads. Still less do they make it axiomatic that utility is the same as income. The mainstream view is that the extent to which human beings can be modeled as “income maximizers” is an empirical question.

Backward induction. It is not true that the backward induction argument that Henrich et al. use in analyzing the Ultimatum Game follows from the hypothesis that both players know that the other is an “income maximizer”. One can arguably deduce that the outcome of a game will necessarily be a Nash equilibrium from this hypothesis, but the Ultimatum Game has many Nash equilibria. In fact, any division whatsoever of the available money is a Nash equilibrium outcome.

Mainstream experimental economics. As far as I know, nobody defends income maximization as an explanatory hypothesis in experiments with inexperienced subjects of the type conducted by Henrich et al. However, there is a huge literature which shows that adequately rewarded laboratory subjects learn to play income-maximizing Nash equilibria in a wide variety of games – provided they have gained sufficient experience of the game and the way that other subjects play.

It is true that there are anomalous games in which this standard result does not seem to apply in any simple way. In referring to the experimental work on such unusual games, Henrich et al. are entitled to claim that: “Initial skepticism about such experimental evidence has waned as subsequent studies involving high stakes and ample opportunity for learning has repeatedly failed to modify these fundamental conclusions” (target article, sect. 1, para. 1). But even their own Public Goods Game does not fall into this category.

Public Goods Game. The Prisoners’ Dilemma is the most famous example of a Public Goods game. The essence of such games is that each player can privately make a contribution to a notional public good. The sum of contributions is then increased by a substantial amount and the result redistributed to all the players. In

such games, it is optimal for a selfish player to “free ride” by contributing nothing, thereby pocketing his share of the benefit provided by the contributions of the other players without making any contribution himself.

Henrich et al. tell us that students in such Public Goods games contribute a mean amount of between 40% and 60% of the total possible, but that this “fairly robust” conclusion is “sensitive to the costs of cooperation and repeated play” (sect. 2.2, para. 2). In fact, the standard result is exemplified by the first ten trials of an experiment of Fehr (the fifth co-author of the target article) and Gächter (Fehr & Gächter 2000a) illustrated in Figure 3.2 of Henrich et al. (2004). After playing repeatedly (against a new opponent each time), about 90% of subjects end up free riding. One can disrupt the march towards free riding in various ways, but when active intervention ceases, the march resumes. The huge number of experimental studies available in the early nineties was surveyed by John Ledyard (1995) and David Sally (1995), the former for Kagel and Roth’s (1995) authoritative *Handbook of Experimental Economics*. Camerer (co-author number four) endorses their conclusions in his recent *Behavioral Game Theory* (Camerer 2003, p. 46).

Social norms. I emphasize the standard results in Public Goods games because the orthodox view among mainstream economists and game theorists who take an interest in experimental results is not that the learning or trial-and-error adjustment that might take place during repeated play (against a new opponent each time) in the laboratory is a secondary phenomenon to which conclusions may or may not be sensitive. On the contrary, the fact that laboratory subjects commonly adapt their behavior to the game they are playing as they gain experience is entirely central to our position.

But what do subjects adapt their behavior from? Our view is that one must expect to see subjects begin by using whatever social norm is cued by the framing of the experiment in which they are asked to participate. And this seems to be broadly what happens. As Jean Ensminger (the tenth co-author of the target article) writes (in Henrich et al. 2004) when speculating on why the Orma contributed generously in her Public Goods Game:

When this game was first described to my research assistants, they immediately identified it as the “*harambee*” game, a Swahili word for the institution of village-level contributions for public goods projects such as building a school. I suggest that the Orma were more willing to trust their fellow villagers not to free ride in the Public Goods Game because they associated it with a learned and predictable institution. While the game had no punishment for free-riding associated with it, the analogous institution with which they are familiar does. A social norm had been established over the years with strict enforcement that mandates what to do in an exactly analogous situation. It is possible that this institution “cued” a particular behavior in this game. (Henrich et al. 2004, p. 376)

As Ensminger’s reference to punishment suggests, the likely reason that this social norm survives in everyday life is that it coordinates behavior on a Nash equilibrium of the *repeated* game of life that the Orma play among themselves – a view that would seem close to that proposed elsewhere by Boyd (co-author number two) (see Boyd & Richerson 1985).

Ultimatum Game. Why is the Ultimatum Game anomalous? An explanation that is consistent with mainstream thinking depends on the fact that the game has large numbers of Nash equilibria. If an adjustment process ever gets close to one of these Nash equilibria, it is likely to stay nearby for a long time – perhaps forever (Binmore et al. 1995). For this reason, the game is very unsuitable for testing whether experienced subjects behave as though they were maximizing their income. The Prisoners’ Dilemma has only one Nash equilibrium, and so it is very suitable for testing the income-maximizing hypothesis. It was at one time the chief standby of those who wish to discredit mainstream economics, but ceased to be popular for this purpose after it no longer became possible to deny that experienced subjects mostly play the game as though they were maximizing their income.

Conclusion. The fine anthropological work reported in Henrich et al. (2004; and target article) is at variance with the rhetoric with which it is introduced. Please do not throw away game theory and other approaches associated with “economic man.” The ideas that motivate the folk theorem of repeated game theory remain our best hope of understanding how societies hold together and adapt to new challenges.