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It’s mine, I tell you

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“I AM the most offensively possessive man on earth. I do something to things. Let me pick up an ashtray from a dime-store counter, pay for it and put it in my pocket—and it becomes a special kind of ashtray, unlike any on earth, because it's mine.” What was true of Wynand, one of the main characters in Ayn Rand's novel “The Fountainhead”, may be true of everyone. From basketball tickets to waterfowl-hunting rights to classic albums, once someone owns something, he places a higher value on it than he did when he acquired it—an observation first called “the endowment effect” about 28 years ago by Richard Thaler, who these days works at the University of Chicago.

The endowment effect was controversial for years. The idea that a squishy, irrational bit of human behaviour could affect the cold, clean and rational world of markets was a challenge to neoclassical economists. Their assumption had always been that individuals act to maximise their welfare (the defining characteristic of economic man, or *Homo economicus*). The value someone puts on something should not, therefore, depend on whether he actually owns it. But the endowment effect has been seen in hundreds of experiments, the most famous of which found that students were surprisingly reluctant to trade a coffee mug they had been given for a bar of chocolate, even though they did not prefer coffee mugs to chocolate when given a straight choice between the two.

Moreover, it is now possible to see the effect in the brain. In the June 12th edition of *Neuron*, Brian Knutson of Stanford University describes a brain-scanning study he carried out recently. The pattern and location of the activity he observed suggests the endowment effect works by enhancing the salience of possible loss. But that still does not explain why this sense of loss should be felt. The question is whether such behaviour is truly irrational, or just “differently” rational. That might be the case if, for instance, it was a hangover from the evolutionary past that worked then, but is no longer appropriate now.

Mug's game

The endowment effect has nothing to do with wealth (it is not as if chocolate bars and coffee mugs matter) or transaction costs (in most experiments these are zero). Not even emotional attachment, whatever that means, can really be called in as an explanation, since the effect is both instantaneous and sometimes felt even by those who buy and sell for a living. According to Pete Lunn, an economist at the Economic and Social Research Institute in Dublin, professional market traders are often reluctant to sell investments they already hold, even though they could trade them for assets they would prefer to invest in if starting from scratch.

Supposedly rational economists are affected, too. Dr Thaler, who recently had some expensive bottles of wine stolen, observes that he is “now confronted with precisely one of my own experiments: these are bottles I wasn't planning to sell and now I'm going to get a cheque from an insurance company and most of these bottles I will not buy. I'm a good enough economist to know there's a bit of an inconsistency there.”

The effect is not, however, universally observed. Whereas coffee mugs generate an endowment effect, tokens that can be exchanged for coffee mugs do not. And despite Dr Lunn's observations, other work suggests professional traders can, and do, overcome the effect. So what is going on?

Owen Jones, a professor of law and biology at Vanderbilt University, and Sarah Brosnan, a primatologist at Georgia State University, suspect the answer is that, in the evolutionary past, giving things up, even when an apparently fair exchange seemed to be on offer, was just too risky. These days, as they discuss in a paper just published in the *William and Mary Law Review*, there are contracts, rights and other ways of enforcing bargains. Animal societies have none of these mechanisms. As Adam Smith observed in the “Wealth of Nations”, “nobody ever saw a dog make a fair and deliberate exchange of one bone for another with another dog.”

To put flesh on their idea, Dr Jones and Dr Brosnan have been trying to overcome Smith's observation by training chimpanzees to trade. In 2006 Keith Chen of Yale University showed that capuchin monkeys could learn to do so, and also seemed to exhibit the endowment effect. Chimps, it turns out, can manage to truck too. In the chimp study, tubes of peanut butter and frozen juice bars were used. Both treats were designed to be difficult to eat quickly. This makes it possible for animals that would otherwise consume any food they were given at the first opportunity at least to consider the idea of an exchange.

When presented with a choice, 60% of the chimps preferred peanut butter to juice. However, when they were endowed with peanut butter, 80% of them chose to keep it instead of exchanging it for juice. It was as if the peanut butter became more valuable as soon as it was possessed. And an opposite endowment effect was observed when the chimps were given juice.

Observing the endowment effect in three primate species suggests it does, indeed, have deep evolutionary roots. Better still, before they started work Dr Jones and Dr Brosnan predicted that the strength of the effect would vary with the evolutionary salience of the item in question. Lo and behold, when they tried the same experiments using bone and rope toys, no endowment effect was seen. Food is vital. Toys are not.

If the endowment effect does indeed vary according to evolutionary salience, this may make sense of the disparate results of hundreds of studies on people. But it does raise the question of what is and is not evolutionarily salient. Food and mates clearly are. Tangible goods such as mugs, as opposed to abstract goods such as vouchers for mugs, probably are too. But intangible possessions, such as shareholdings, do generate some effect, so physical presence cannot be all there is to it.

Steffen Huck, an economist at University College, London, has an alternative hypothesis that is directly to do with trade. In societies with markets, customers can go elsewhere. But in a small, tribal society

there may be no alternative seller. In that case, those who were reluctant to trade might get better prices. It may thus make sense for an owner to be psychologically predisposed to hold out for a high price as soon as someone else expresses interest in one of his possessions—something Dr Huck's models predict would, indeed, be evolutionarily beneficial.

Keep on trucking

Because the endowment effect touches on so many areas, Dr Jones thinks it may be helpful for legislators to understand its evolutionary origins. That goods and rights such as pollution permits, radio spectrum and mobile-telephone licences do not inexorably flow towards the most efficient distribution worries the legal scholars charged with designing fair allocations. The effect also complicates the negotiation of contracts, as people demand more to give up standard provisions than they would have been willing to pay had they bargained anew.

Nor is the endowment effect alone in suggesting that *Homo economicus* is a rarer species than neoclassical taxonomists would like to believe. Other “irrational” phenomena include confirmation bias (searching for or interpreting information in a way that confirms one's preconceptions), the bandwagon effect (doing things because others do them) and framing problems (when the conclusion reached depends on the way the data are presented). All in all, the rational conclusion is that humans are irrational animals.