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Review of Robert Frank's Darwin Economy

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The Darwin Economy is written for a broad audience of those who would like to stimulate new thoughts or fortify old opinions about economic policy. As such, it might not be of interest to trained economists. Since you are reading this review in an economics journal, you may want to know whether you, as an economist, would find reading the book an efficient use of your time.

Let me respond with a question. Would you enjoy sharing a few beers with a charming and articulate colleague who is eager to offer an abundance of strongly-held and occasionally unorthodox opinions? Would you find this conversation entertaining in spite of, or perhaps because of the fact that you do not always find his logic or evidence compelling?... Would you still find this experience exhilarating if you were not able to talk back when you disagreed–and without the beer?

I write this review without the pleasure of Frank's company or a cozy pub. But, as a reviewer, I do get a chance to talk back. The book is full of interesting observations, many of which I agree with. But why talk about these? Instead, I will write in the tone of a friendly argument. Perhaps as a result, you will share my impression that the book is stimulating and worth at least a couple of hours of your attention.

The book's title and its cover illustration of two bull elk with locked antlers,

suggest a strong connection with evolutionary biology. Rolling out his crystal ball, Frank says,

> "Without trepidation, then, I offer the following prediction. One century hence, if a roster of professional economists is asked to identify the intellectual father of their discipline, a majority will name Charles Darwin." (p 16)

An optimistic reader might expect Frank to support this assertion with a rich banquet of illustrations of how evolutionary biology elucidates the economic behavior of man and beast. This is not what we find. Biological analogies are introduced occasionally, along with casual reference to "the interests of a species," but there is little connection to deep insights of evolutionary biology, as found in Hamilton [4], or to the abundant and fascinating modern literature [5] on the evolution of animal behavior.

Frank credits Darwin with the insight that "individual incentives often conflict sharply with those of larger groups, "[1] and that many inherited traits, like bull elks' antlers, serve the individual's interest but to the "detriment of the species." Frank tells us (p 21) that large antlers "make life more miserable for bull elk as a group. Large antlers compromise mobility in densely wooded areas, making bulls more likely to be killed and eaten by wolves ... At every stage of the arms race that molded them, the relative advantages (of bigger antlers) to individuals cancelled one another out and when the race finally stabilized, the species was saddled with a substantial handicap."

In his book, "The Descent of Man and Selection In Relation to Sex" [3], Darwin devoted a detailed and stimulating chapter to the evolutionary analysis

[1] This is hardly a definitive indicator of disciplinary paternity. Testers of intellectual DNA are likely to find at least as much genetic material from A.A. Cournot's "Researches on the Mathematical Principles of the Theory of Wealth" (1838) [1] which preceded Darwin's 'Origin of the Species" [2] by twenty years and which introduced economists not only to supply and demand curves, but also to socially inefficient Nash equilibria that arise in monopoly and oligopoly.

of the presence of horns and tusks in male mammals[2]. Darwin remarked that "With mammals the male appears to win the female much more through the law of battle than through the display of his charms." Darwin, like Frank, views the competition for females as an arms race in which individual males pay a high price in terms of metabolism and susceptibility to predation for the weapons that earn them sexual access.

Frank seems more prone than Darwin to facile use of the terms "detriment to the species" and "good of the species." Most economists are well aware that "the benefit of society" is an elusive, if not empty, concept. Similar problems arise when discussing the welfare of a species. Modern evolutionary biologists might be willing to apply the term "detriment to the species" to an increased probability of extinction, or perhaps to a reduction in average annual population. By these measures, large antlers that "make life more miserable for bull elk" and subject them to predation, would not necessarily be detrimental to the species. In fact, there is a plausible argument to the contrary. About half of newborn elk are male, but because elk are highly polygynous, only a small fraction of males ever become fathers. Most bull elk play no role in conception and none of them assist in child care. But all bull elk compete with the cows and calves for available grass and water. If smaller antlers reduced adult male mortality, the resulting increase in competition for resources would likely reduce the numbers and health of the reproductive population and increase the probability of species extinction.

Professor Frank does offer an evolutionary phylogeny for a prized hobby-horse from his stable; the proposition that humans and other animals are intensely concerned about their relative status. Frank argues that

> "Since reproductive success has always depended first and fore-

[2]Part 2. Sexual Selection - Chapter 17. Secondary Sexual Characters Of Mammals

> most of relative resource holdings, it would be astonishing if the evolved brain didn't care deeply about relative position. (p 25)"

I agree that there are good reasons to expect natural selection to favor genes that mandate concern for relative success as well as absolute material success. I also agree that the desire for status has been neglected by most of the economics profession. Frank has much that is interesting to say about the implications of status-seeking behavior for economic policy. I wish, however, that he had plumbed the evolutionary and economic foundations for such preferences more deeply.

The bull elk, who grace the book's cover, play no role in the care and feeding of their calves. During the autumn rutting season, dominant males form harems of up to twenty cow elk. After the rut, the bulls leave to form bachelor groups and play no role in the rearing of calves. In this environment, a cow has no evolutionary incentive to prefer a bull of her own to membership in a large harem and has a strong incentive to mate with an able fighter. Those cows who mate with bulls of greater heritable fighting ability are more likely to produce prolific sons. This force is less potent in species like our own, where males play a significant role in providing resources for their offspring. Mating with the richest or strongest man in the village may not be a good strategy if his resources must be shared with many other women and their children. While there would still be competition for mates, this competition would not be of the winner-take-all variety, and absolute quantities of resources are likely to be more important to reproductive success than relative position.

In Frank's view, a great deal of human consumption activity is motivated by an arms-race mentality where our demands are heavily motivated by a desire to match or surpass the consumption of our neighbors. Such goods, he calls "positional goods" and cites as examples, housing, cars, clothes, jewelry, and

elaborate coming-of-age parties. He also designates a class of "non-positional goods" that consumers desire for their own sake, without regard to the consumption of others. His list of non-positional goods include leisure, workplace safety and amenity, length of vacations, saving, and public goods. Frank argues that from the viewpoint of social efficiency we spend too much on positional goods and not enough on non-positional goods.

Frank advocates a progressive consumption tax because it would enhance efficiency by taxing positional goods more heavily than non-positional goods. To buy this argument, we would need to agree with Frank that goods that a consumption tax would miss, like leisure, working conditions, and savings are non-positional. This is not obvious. Chapter 3 of Thorstein Veblen's "Theory of the Leisure Class" [6] is devoted to examples of "conspicuous leisure" that Veblen regards as an important accompaniment to "conspicuous consumption." It is not clear that privately enjoyed workplace amenities are less positional than salary. The size and condition of an employee's working area are at least as obvious to her co-workers as the size of her paycheck. Frank devotes only a brief, and rather unconvincing, paragraph to the proposition that savings and wealth are less positional than immediate consumption.

Just as the notion of "the good of the species" is problematic, the welfare economics of preferences that involve comparison with the actions of one's neighbors is more subtle than may first appear. Suppose, for example, that neighbors A and B each consume two goods, x whose consumption is publicly observed and y whose consumption is not. Suppose that A gets an income windfall and buys more x. Shortly thereafter, we observe that B buys more x, although his income hasn't changed. Can we conclude that B has been made worse off by A's good fortune? We know that B now chooses a bundle that he rejected before A's windfall, which would be bad for him if he were indifferent about

A's consumption. But, in fact, he is not indifferent about A's consumption. It is not hard to construct "realistic" vignettes in which B would be pleased to see the increase in A's consumption of x and pleased to increase his own x in response. For example, A if paints his house, or improves the appearance of his garden, B might enjoy the neighborhood improvement and although he could still afford his old combination of x and y he would prefer to complement his neighbor's action by his own home improvements. Other examples come from athletic endeavors. Suppose that A and B frequently play tennis together and traditionally win about equally often. For some reason, A's game improves, and he begins to win more than half the time. This induces B to play harder or perhaps purchase costly tennis lessons so that once again they win about equally often. Are we to conclude that B is worse off and A is no better off than before the improvement of their games? Not necessarily. Both may be evolutionarily programmed by our hunter-gather past to enjoy the challenge of succeeding at a difficult task. After all, they do not play each other for prize money, they play for the pleasure of competing.

References

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[5] Lynne D. Houck and Lee C. Drickhamer. *Foundations of Animal Behavior*. University of Chicago Press, Chicago, Ill, 1996.

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