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Simon's selection theory: Why docility evolves to breed successful altruism

Thorbjørn Knudsen

Department of Marketing, University of Southern Denmark, Campusvej 55, DK-5230 Odense M, Denmark

Abstract

In light of the under-explored potential of Simon's theory of altruism, the purpose of the present article is to review his explanation of altruism and to point out some of its implications for behavioural economics and theories of economic organization. In the course of the argument, this article relates Simon's theory of altruism to Hamilton's theory of kinship selection and then proceeds to examine a critical assumption of Simon's model that social organizations know better than individuals. Within the parameters of Simon's own model, the paper suggests how this assumption can be justified. The paper concludes by noting that Simon offered a new and so far under-explored mechanism for the emergence of altruism in biological populations and suggests a controlled experiment to test Simon's explanation against Hamilton's. Finally, it is noteworthy that Simon's theory has immediate implications for the understanding of human nature that invites revision and development of behavioural economics and theories of economic organization.

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1. Introduction

Although altruism seems a ubiquitous feature of nature and society, it is hard to explain how it can be sustained when defined as providing a benefit for others at a

E-mail address: tok@sam.sdu.dk (T. Knudsen).

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cost to the provider. From the viewpoint of evolutionary theory, altruism carries the cost of a reduction in the altruist's fitness. [1] That is, the altruist will on average have less offspring than the selfish organism. Therefore, the population share of altruistic organisms will eventually vanish, and the selfish ones will prevail. If altruism is a hardwired trait, the genetic configuration that codes for it will cease to exist, and if it is a learned trait, unlearning will set in. The logic appears flawless, and yet altruism is thriving in nature and society. Why? Assuming altruism to be a hardwired trait, kinship selection was the convincing mechanism identified by Hamilton (1964). Close kin to a high degree share genes. It is therefore possible that the fitness reduction of altruism is less than the fitness increase weighted by the coefficient of relatedness. As relatedness increases, the probability of the sustained presence of altruism in a population also increases.

Hamilton's (1964) formulation was later extended to encompass clustering in geographical space as a general condition favouring the emergence of altruism (Bergstrom, 2002; Hamilton, 1975; Myerson, Pollock, & Swinkels, 1991). The effect of the tendency to cluster, termed assortment or viscosity, is that altruism may evolve if the population is genetically related or spatially clustered. Hamilton's rule, that the cost of altruism must be less than the benefit weighted by relatedness, is thought to be a general hurdle for altruism that can be surpassed only under rather specific circumstances (Axelrod, 1997; Bergstrom, 2002; Knudsen, 2002a; Myerson et al., 1991; Sella & Lachmann, 2000). Thus, an alternative explanation for the viability of altruism that differs from both kin-selection and geographical clustering is a repeated game in which agents may develop reciprocal altruism (Axelrod, 1997). If a repeated game ends with a probability less than one, altruism may survive, even if this would be impossible, were it known at which time step the game ended.

As indicated by the amount of effort allocated to develop convincing models that can explain the viability of altruism, it is an important issue in understanding observed biological, social and economic behaviour. It is therefore interesting that Simon in a stream of publications (Simon, 1983, 1990, 1991, 1993, 1997) offered a convincing explanation for the viability of altruism that differed from those mentioned above. It is here important to note that Simon's model is defined on the basis of an "even if" argument that makes it applicable to both economics and biology. Even if genes are the controlling sites of natural selection, Simon's model shows that the general capacity to learn at the socio-economic level may cause positive selection of altruism. As discussed below, the implication is that Simon's model deserves further attention both in economics and biology.

In light of the under-explored potential of Simon's theory of altruism, the purpose of the present article is to review his explanation of altruism and to point out some of its implications for behavioural economics and theories of economic organization. In

[1] Simon uses the term "altruism" in a technical sense that must be distinguished from its broader meaning in ordinary parlance as the unselfish concern for the welfare of others. Thus Simon defines altruism according to its use in evolutionary theory (genetics) as forgoing progeny to the benefit of others. For example, Simon (1990, p. 1665) defines altruism as "behavior that increases, on average, the reproductive fitness of others at the expense of the fitness of the altruist".