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Human knowledge, rules, and the spontaneous evolution of society in the social thought of Darwin, Hayek, and Boulding

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ABSTRACT

In the social sciences, the label Darwinian often means a biological explanation of social phenomena. Both Hayek and Boulding adopt a Lamarckian approach to social evolution. Hayek shows that coordination of groups larger than hunting and gathering bands requires a cultural evolution of learnt rules. Boulding uses the notion of noosphere of human knowledge, where learning transmits the noogenetic structure. Hayek's and Boulding's Lamarckian theories are compared with Darwin's theory of social evolution to explore how the latter may be extended to explain the links between human knowledge, rules, and evolution of society, outlining a Darwinian social/cultural approach.

1. Introduction

In the social sciences, the label Darwinian often means a biological explanation of social phenomena. Sociobiology, as developed by Wilson (1975), explains social phenomena genetically, while Alexander (1987) includes environmental as well as genetic factors to explain moral systems. Dawkins (1976) views social phenomena as survivor machines of the genes, which are the units of selection. Hence, sociobiology makes the evolution of society rest on the foundation of evolutionary biology pure and simple. Wilson (1998) argues that evolutionary biology will become the foundation of the social sciences. However, Dawkins's notion of meme, as cultural analogue to the gene in biology provides for co-evolution of biology and culture in a field called memetics.

Evolutionary psychology understands the human mind in terms of evolutionary biology. According to Maryanski and Turner (1992), humans are animals with innate predispositions that are the result of a long evolutionary history. Evolutionary psychology stresses that the human brain was shaped by natural selection during human evolutionary history (Cosmides et al., 1992). Accordingly, language is innate (Pinker, 1994), while the human mind evolved as a set of specialized mental

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modules through evolutionary adaptation (Pinker, 1997). Furthermore, humans execute adaptive psychological mechanisms and culture is the product of evolved psychological mechanisms (Tooby and Cosmides, 1992), while social contract algorithms (specific and functionally distinct computational units) govern human reasoning in social exchange (Cosmides and Tooby, 1992). Based on evolutionary psychology, Rubin's (2002) notion of Darwinian politics means that the theory of evolution and the evolutionary history of humans are relevant for understanding contemporary political behavior. Rubin (pp. 123–127, 133–134) claims that the underlying political taste for freedom, which is best fulfilled in modern western societies, is a biological heritage from the hunting and gathering bands of human prehistory. Hence, the view of evolutionary psychology implies a causality going from biology to culture.

However, Deacon (1997, pp. 349–350) provides a more complex view, arguing that rather than being innate, the symbolizing function of language has induced the brain's evolved capacity to sustain language in an interactive evolutionary process (i.e. co-evolution of language and the human brain):

> The evolutionary dynamic between social and biological processes was the architect of modern human brains, and it is the key to understanding the subsequent evolution of an array of unprecedented adaptations for language. This is an important shift in emphasis away from what might be called "monolithic innatism," that is, the view that the "instinct" that humans have for language is some unitary and modular function: a language acquisition device (LAD).

Interestingly, Boulding (1978, p. 19) argues that the 'evolutionary vision sees human history as a vast interacting network of species and relationships of many different things, and there is really no "leading factor" always in the forefront.' This leads us to the underlying question of this paper: how can Charles Darwin's evolutionary social thought be reconciled with the evolutionary social thought of two of the founders of evolutionary economics: Friedrich von Hayek and Kenneth Boulding? Because learning plays such a crucial role in social evolution in the evolutionary social thought of Hayek and Boulding, this paper considers these theories as Lamarckian since learning implies a Lamarckian transmission mechanism while Darwin's evolutionary social thought can be characterized as biology of interpersonal relations (as next section shows).

This paper compares Hayek's and Boulding's Lamarckian theories of social evolution with Darwin's theory of social evolution to explore how the latter may be extended to outline a Darwinian social/cultural approach that explain the links between human knowledge, rules, and social evolution. It brings together Darwin's brain-language nexus, Boulding's language-mind nexus, and Hayek's mind-culture nexus, as three combined processes in social evolution. This means co-evolution of biology and culture. In order to avoid treating history and cultural evolution as a black box, we must focus on the prehistorical co-evolution of biology and culture, and a dynamic approach, studying the evolutionary process from human prehistory through human history up to the present, rather than, like Rubin, focusing on biological evolution of humans and employing a comparative static approach, comparing human prehistory to the present (Marmefelt, 2005, p. 117).

Similarly, Seabright (2004, pp. 1–3) argues that the Great Experiment, launched 10,000 years ago of human task-sharing among strangers cannot be explained by evolutionary biology alone. The cultural capabilities of humanity are much younger than the biological changes on which they are based, which in turn can be traced back to the evolutionary pressures of hunters and gatherers on the African savanna (Seabright, p. 3). Seabright shows that culture, not biology, has caused what he considers to be the transition of humans 'From Murderous Apes to Honorary Friends' (p. 29). Humans possess an innate murderousness, reinforced by human intelligence (pp. 48–53), but cooperation evolved as the combined effect of calculation and reciprocity (p. 54), where calculation exercises trust and reciprocity inspires trust (p. 59). Successful social institutions 'entrench a culture of trust with a minimum of explicit enforcement' (p. 65).

Hence, biology is the foundation of cultural capabilities, while cultural evolution is a response to the innate murderousness biological evolution has caused, so that culture constrains biology. Co-evolution of biology and culture and a dynamic approach are essential. Section 2 identifies the chief differences between Hayek and Boulding, on the one hand, and Darwin, on the other hand. Section 3 analyzes the Lamarckian theories of social evolution, where human knowledge and learning are crucial, of evolutionary economists Hayek and Boulding. Section 4 analyzes Darwin's theory of social evolution, which provides the biological foundations of interpersonal relations. Section 5 synthesizes the theories of Darwin, Hayek, and Boulding, thus outlining a Darwinian approach to human knowledge, rules, and societal evolution by bringing in human knowledge into a Darwinian framework. Section 6 gives the conclusions.

2. Hayek and Boulding versus Darwin

This section presents the main differences between Hayek and Boulding, on the one hand, and Darwin, on the other hand. It argues that as learning plays a crucial role to Hayek and Boulding, their theories of social evolution involve a Lamarckian transmission mechanism and should be considered as Lamarckian, while Darwin provides the biology of interpersonal relations through Smith's concept of fellow-feeling.

Both Hayek (1979, pp. 153–155) and Boulding (1978, pp. 20–21) point out the common errors of sociobiology that Rubin (2002, p. 5) commits when he argues that the relevant time period is the Pleistocene, from 1.6 million years to 10,000 years ago, when humans evolved as biological species, while the Holocene (the period from when farming began up to the present) is too short to have caused significant evolutionary changes in behavior. This argument ignores that cultural evolution is a faster process than biological evolution and its dominating position among humans. Hayek (1979, p. 154) argues that 'there was certainly no justification for some biologists treating evolution as solely a genetic process, and completely