

A REVIEW OF ROBERT BOYD'S "A DIFFERENT KIND OF ANIMAL"

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A Different Kind of Animal: How Culture Transformed our Species

By Robert Boyd. 2018.

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If you are a student in anthropology, evolutionary psychology or human ethology, you might have already heard the terms “cultural evolution” or “group selection”. If you want to learn about what cultural evolution is as well as the potential criticism hovering over this thesis, the book is certainly for you, as there is no one better to hear from, than one of its modern pioneers.

Robert Boyd, Origins Professor in the School of Human Evolution and Social Change at Arizona State University, along with his scientific partner, Peter Richerson, has for many years advocated and provided framework for incorporating cultural transmission into the Darwinian theory of evolution as well as on the evolution of social behavior. In *A Different Kind of Animal: How Culture Transformed Our Species*, Boyd explains his thesis that human species has evolved the ability to adapt culturally, and this ability has made us a different kind of animal. He argues that human success is due to access to a pool of adaptive cultural knowledge. The book is composed of four sections: two essays by Robert Boyd, one commentary section by eminent scholars like H. Allen Orr, Kim Sterelny, Ruth Mace and Paul Seabright, and finally Boyd’s responses to the commentaries.

To explain his point, Boyd begins the book with an example from the gloomy fate of a few European explorers naïve and new to an unfamiliar habitat in which indigenous

population has flourish for ages, and argue the key to success in various habitat “is that people adapt culturally, gradually accumulating information crucial to survival” (p. 10). In the first chapter, Boyd tries to answer why humans are the only species that are exceptionally good at adapting to a wide range of environments, developing local knowledge and a wide variety of social arrangements. Obviously, he argues that the cumulative culture plays a crucial role in human adaptation and human’s unique capacity to imitate “produces the biggest fitness boost when learning is very difficult and environments change slowly” (p. 34), therefore the gradual accumulation of locally adaptive knowledge evolve at a much faster rate than genetic evolution.

Then, Boyd considers how population size affects cultural transmission and evolution, and in the second chapter argues how cultural adaptation can make the cooperation of large groups of unrelated people, a kind of behavior not seen in other mammals, possible. Boyd uses examples from both small-scale hunter-gatherer societies as well as modern human societies to argue that culturally transmitted moral beliefs support the existence of specialization, cooperative exchange and production of public goods among humans. Then he goes on to the problem of cooperation and the question why humans are very cooperative. He rejects humans’ big brains (being smart), kinship and reciprocal altruism as the sole reasons for existence of cooperation in humans among large numbers of unrelated people. He argues that in large population where individuals are not related, punishment or direct sanctions guarantee the cooperation among the members, and “cultural group selection,” has contributed in shaping the culturally transmitted norms that exist in human societies. Defending cultural group selection as a process explaining the evolution of cooperative behavior, he argues that “large-scale cooperation and small-scale cooperation in humans are regulated by shared, culturally evolved norms enforced by third-party monitoring and sanctioning” (p. 119).

The second essay is a defense on application of group selection to cultural evolution. Unlike the first essay that is easy to follow and suits for even laymen, the audience of the second essay are educated readers in the relevant fields of study as many concepts are taken as granted and are unexplained.

In the commentary section, H. Allen Orr, finds the evolution at cultural level interesting and suggests experiments should be taken to investigate Boyd’s approach. However, he criticizes Boyd’s argument about giving higher importance to high-fidelity imitation than brain size in human’s learning and emergence of specific behavioral patterns compared to other species. Moreover, he highlights the decades old similar theories that posit similar models, but are neglected and not cited in Boyd’s thesis. Kim Sterelny also criticizes Boyd’s thesis in three domains of the role of individual intelligence in social learning (inability to explain why people follow an old norm or rule of practice does not necessarily mean they have no idea what they are doing), interpreting the models Boyd provide for their simplicity, and the inefficiency of generalizing Boyd’s thesis to different social learning models. Next, Ruth Mace criticizes cultural group mechanism as is presented by Boyd and argues how the evidence Boyd presented for supporting his argument could be explained by evolutionary processes at the individual level. Then, Paul Seabright highlights the difficulty in monitoring cooperation norm violators as well as difficulty in enforcing norms and identifying/adpoting the proper norm per se, and conflict of interest in norm enforcement. He therefore concludes that collaboration with the fellow humans cannot picture all human social behaviors and

gives importance to individual's intelligence and abilities for survival in social environment. In the final section, Boyd briefly responds to the criticism and defends his thesis.

A Different Kind of Animal is a must read for those interested to learn about cultural evolution, by one of the pioneers of cultural group evolution. The commentary chapter by the eminent experts of the topic as well as Boyd's response to their criticism has made this book a very informative, interesting and also entertaining read.

ABOUT THE AUTHOR

Farid Pazhoohi is interested in human ethology, neuropsychology and human behavioral ecology.