

The Evolution of Human Co-operation

How do people living in small groups without money, markets, police, and rigid social classes develop norms of economic and social co-operation that are sustainable over time? This book addresses this fundamental question and explains the origin, structure, and spread of complex stateless societies. Using insights from game theory, ethnography, and archaeology, Stanish shows how ritual – broadly defined – is the key. Ritual practices encode elaborate rules of behavior and are ingenious mechanisms of organizing society in the absence of coercive states. As well as asking why and how people choose to co-operate, Stanish provides the theoretical framework to understand this collective action problem. He goes on to highlight the evolution of co-operation with ethnographic and archaeological data from around the world. Merging evolutionary game theory concepts with cultural evolutionary theory, this book will appeal to those seeking a transdisciplinary approach to one of the greatest problems in human evolution.

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The Evolution of Human Co-operation

*Ritual and Social Complexity in
Stateless Societies*

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This book is gratefully dedicated to Mr. and
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Preface

For well over 50,000 years, anatomically modern humans lived in small groups of hunter-gatherer-forager societies. This lifeway was the most successful adaptation in the history of our species. The biological evolution of language and the unique human capacity for symbolizing behavior allowed our species to dominate virtually all of the favorable continental habitats in the world by the early Holocene. At this critical juncture in human history, a few peoples in a few places built monuments on the landscape. These were, for lack of a better term, “special places” where nomadic and seminomadic groups congregated for periods of time. Sites such as Göbekli Tepe in Anatolia and Poverty Point in North America represent the archaeological signature of the emergence of “complex stateless societies.” These societies are defined as small groups with the capacity to create successful co-operative social organizations that can, among other things, construct and maintain the monumental structures in these special places. We can reasonably infer that if these groups had the capacity to organize large numbers of people to construct such monuments, they also had a complex social structure well beyond that of the small, nomadic band typical of the Late Pleistocene.

This book develops a theoretical approach to the origin, structure, and spread of these complex stateless societies using concepts from evolutionary game theory, archaeology, and related disciplines. It asks the reader to move away from the concept of “cultural evolution” in the traditional sense to one of the “evolution of co-operation.” Central to this shift is the recognition that rational actor theory, the basis of economic game theory and traditional cultural evolutionary theory, is inadequate to explain sustained co-operation among intelligent, adaptive agents, particularly people living in small groups without coercive social or political institutions. Rather, the evolution of co-operation must be understood as a type of collective action problem – getting people in your group to co-operate over time for a common set of goals even, if defecting from the group is in your immediate self-interest. This collective action problem in the historical sciences, in my view, has been most effectively dealt with using evolutionary game theory. The major problem that this book therefore seeks to resolve is this: how do people living in small groups without money, markets, policing

powers, bureaucracies, social classes, and other coercive mechanisms develop norms and rules of economic and social co-operation that are sustainable over time? This is, after all, precisely the context in which complex societies evolved in the Holocene.

I argue that such co-operation is achieved by “ritualizing” the economy. These groups constructed norms, rituals, and taboos to organize their economy. These conclusions are based on a rich set of ethnographic data on stateless societies around the globe and on observations of the archaeological record. Far from being quaint and exotic customs of “primitive peoples,” the elaborate rules of economic behavior, encoded in rich ritual practices, are ingenious means of organizing a society where political coercion backed by overt or subtle force is absent. In other words, in stateless societies, the collective action problem is dealt with by ritualizing certain behaviors and providing the rewards and punishments necessary to maintain co-operation. The degree to which economic relationships between members of the co-operative group were ritualized to support that co-operation is the key to success in the competitive environment of the Holocene.

This process can be understood using concepts from evolutionary game theory and allied disciplines. I propose the concept of “anthropological game theory” to differentiate it from “evolutionary” and rational actor-based or economic game theory. Anthropological game theory allows us to understand small-group behavior where social rationality – also known as “irrational, pro-social behavior” – as opposed to economic rationality, is the dominant principle of human social interaction.

Finally, the argument in this book is emphatically not an “economy of ritual.” I do not in any way suggest that people were motivated by nonmaterial or spiritual goals over material necessity, comfort, and/or social prestige. We are not passive, altruistic Rousseauian angels corrupted by private property and the institutions of an oppressive state. Quite the contrary; the ritualized economy is one that uses the capacity of inherently ego-directed individuals to create co-operative social arrangements and to formalize these through decentralized but highly effective ritual practice. Rational actor theory cannot deal with ritual and taboo as organizing principles very well, but what I offer as the anthropological game theory of small groups works exceptionally well to help us understand this process in ethnographic space and over archaeological time.

This model is both informed and tested by the archaeological record. Over time, we see a cultural transmission process in which the best strategies that promote group co-operation will be selected for, or imitated by others in the broad theoretical sense as developed by a number of scholars. I refer to this process as “strategy” selection, differentiating it from group or other kinds of multilevel selection. These successful strategies are then culturally transmitted through generations in societies without formal mechanisms of enforcement

until the emergence of state societies and the concomitant development of coercive social mechanisms.

I first describe the conceptual foundations for this theoretical framework. I then use examples from the ethnographic and historical record to illustrate how this ritualized economy actually works among real people. Finally, I examine the evolution of complex stateless societies in a number of archaeological case studies from four continents.

This book has been a long time in preparation. I have published many of the main ideas in several book chapters and articles (Griffin and Stanish 2007; Stanish 2004, 2009, 2013a, 2013b; Stanish and Coben 2013; Stanish and Haley 2005; Stanish et al. 2014). One reason this book has taken so long is that my arguments draw from a number of disparate academic disciplines, including anthropology, archaeology, cultural ecology, economics, economic history, evolutionary biology, evolutionary game theory, game theory, historical ecology, and human behavioral ecology. I have tried to master this vast literature as much as possible. However, it is certain that there will be errors of commission and omission. For these I take full responsibility.

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