



## Opinion

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# Experimentally Tested Theory: A Scientific Means For Inferring Social Structure

Pamela Emanuelson<sup>1\*</sup>, David Willer<sup>2\*</sup><sup>1</sup>North Dakota State University, USA<sup>2</sup>University of South Carolina, USA**\*Corresponding author:** Pamela Emanuelson, Department of Sociology, North Dakota State University, USA.**Received Date:** July 09, 2019**Published Date:** July 19, 2019

## Abstract

In this paper we suggest that models drawn from sociological theory, much of it experimentally tested, can be useful for inferring the social structures of prehistoric and historic chiefdoms as well as activity within and change across structure.

**Keywords:** Experiments; Theory; Social Structure

## Opinion

In this paper we suggest that models drawn from sociological theory, much of it experimentally tested, can be useful tools for inferring the social structures of prehistoric and historic chiefdoms and the social changes across the structures they take. In developing and presenting those models we recognize that there is no direct evidence for the social relations within which the people of prehistoric societies acted or for how those relations were composed into structures [1]. Nor can there be for social relations and structures are not composed of objects but of acts and, while objects degrade at various rates, acts can be observed only as they are occurring. As explained by Haas, archaeologists “can make no direct observations of people’s behavior; we cannot talk to them or ask them insightful questions; we cannot listen in on their conversations. Our informants are all dead, and we can only pick up what they left behind and observe when and where they left it” [2].

Whereas the social structures of prehistoric societies cannot now be observed, the large social structures of contemporary society cannot be directly observed. They cannot because a social structure is not a single thing, but a structured assemblage of events, only the parts of which are ever observable. To grasp that structure, observations of its parts must be assembled into a structured whole and that assembly can only be done through a theory of social structure. As Wright pointed out, “even if we could obtain the archaeological record needed, we would still lack the

theoretical structures essential to talking about the complex social, symbolic, and material transformations that seem to have been important in the origins of states” [3]. We hope, in this paper, to show that those theoretical structures are now at hand.

In fact, archaeologists face two problems, one unique in its difficulty and the other shared with all other social sciences. On the one hand, unlike all other social sciences, in the absence of written records, archaeology has no direct evidence whatsoever of the social relations and social structures it seeks to understand. Of course, the information on social relations and structures that is available to other social sciences is far from complete. Only a small portion of past events are ever recorded. And even today the powerful make it a point to limit what we can observe. That is to say, we know much about the poor and middle class, but very little about the elites of contemporary societies precisely because they have the power to exclude outside observers. Nevertheless, having no direct evidence at all pre-historic social acts, it would seem that archaeologists have a particularly difficult starting point for assembling an understanding of prehistoric social structures.

Why the concern with social structures? Why not be satisfied with the product of refined field methods, what Flannery Kent & Joyce Marcus [4] called the “high craftsmanship’ of field archaeologists finding practical patterning in the real world” [5]. In fact, Flannery and Marcus did not advise stopping at the practical

patterning given in the field but looked to social structures for prehistorical explanation. Referring to Kelly RC [6] and their own (2003) paper, they found the origin of war in the transition from unsegmented to segmented societies.

It is useful to look at the logic behind how war and social structure came to be connected. We see it as having four steps:

- I. The point of departure was not observation, but the concepts “unsegmented society” and “segmented society” as given by anthropological theory.
- II. The concepts “unsegmented society” and “segmented society” pointed the researchers [6,7] to the archaeological evidence identifying and differentiating prehistoric examples into the two types.
- III. Archaeological evidence then empirically linked the presence of war to segmented society and the absence of war to unsegmented society.
- IV. That empirical link was explained theoretically by the different organizational capabilities of the two social types – unsegmented societies cannot organize wars, whereas segmented societies can.

Much the same four—step process is found in Barfield’s explanation of the rise of Asian empires [8,9]. He also began with a) the segmented – unsegmented social structural formulation, b) identified Asian tribes as segmented in contrast to those of North Africa, c) found durable and highly stratified empires where segmented tribes had been found, and d) argued that the Asian status-lineage form of segmentation led to the parallel stratified form of Asian empires.

In fact, all social sciences understand social structures only through theories for those structures. What theories are used today? Economists theorize one structure, the ideal market conceptualized today much as it was by [10] late in the 19th century. Political scientists theorize administrative structures, but their understandings are little advanced from Weber’s formulations for bureaucracy now more than 100 years old [11]. And sociologists’ theories of class structures are little if any advanced from Marx Karl [12] who wrote more than a century and a half ago. Some theories used by archaeologists are newer, for example, those offered by, the first two of which also used the unsegmented – segmented differentiation to good purpose [13-15]. Still, compared to dynamic sciences such as physics, chemistry and biology, social science theory seems, if not static, then slow in its development. Perhaps more to the point, the number of theoretic models for social structure that can be deployed are few and scanty.

Our argument is not to substitute a new form of explanation for the four– step process just outlined, but rather to encourage inter-disciplinary cooperation and the use of more detailed social structural models that can be deployed in future explanations also having those four – steps. Sociological models for social structures built using a theory with explicit procedures for application have

better grounded properties because they have been experimentally investigated. These models offer something beyond that offered in previous prehistorical and historical explanations mentioned above. They offer the possibility of explaining social dynamics, which is to say, of explaining the transition from one social structure to another. In one such application, Emanuelson Pamela & David Willer [16] applied models developed from two theories, Status Characteristics Theory and Elementary theory, to explain the movement through three structural forms chiefdoms are known to take.

Nevertheless, it is reasonable to ask: can experiments recently conducted shed light on social structures many of which occurred far in the past? This much should be said. Without experimentally grounded optics, the expansion of the Universe would not have been inferred from the red shift of light from distant galaxies. And without lab-based research in genetics, the evolution of modern humans, its timing and origins, might still be a mystery. Perhaps there is also a place for experimentally grounded sociological theory in the explanation of the dynamics of ancient human societies [17-22].

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## Conflict of Interest

No conflict of interest.

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