



## Book Review

*The Rhythms of History: A Universal Theory of Civilizations* by Stephen Blaha.  
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Reviewed by Mark Hall

Macro-histories have recently come back into fashion. For those unfamiliar with them, macro-histories are comparative studies of cultures and civilizations through time and across the globe. They often attempt to explain how the modern world came into existence, and they also often utilize an evolutionary perspective. This topic has waxed and waned in popularity amongst anthropologists, archaeologists and historians over the decades, but reviews (and sales) of Jared Diamond's *Guns, Germs and Steel* (1997) and Fernández-Armesto's *Civilizations* (2000) in popular periodicals and newspapers suggests that macro-history is currently popular with the general public.

*The Rhythms of History* by Stephen Blaha is one of the latest contributions in this field. Drawing uncritically on Toynbee's *A Study of History* (1987a, 1987b), Blaha attempts to develop a quantitative theory of civilizations. Over the course of eighteen chapters and two appendices, he reviews Toynbee's theory of civilizations, develops a series of mathematical equations to model Toynbee's theory, and subsequently applies the equations to several civilizations. Not to be limited to this planet alone, Blaha even provides a chapter on

extraterrestrial civilizations.

A few words are in order concerning Toynbee's theory of civilizations. Toynbee saw civilizations developing in a rally-rout cycle of three and a half beats, with each cycle consisting of a growth, breakdown and disintegration phase (Toynbee 1987a:548-549). Blaha tries to model this theory with equations based on harmonic oscillators. Another facet is that Toynbee downplayed material factors in the development and decline of civilizations, and instead stressed religious and philosophical factors.

Despite Blaha's ready acceptance of Toynbee's theory, Toynbee is not without his critics.<sup>1</sup> Critics noted that Toynbee never bothered to define what constituted a civilization. Furthermore, even without a definition, Toynbee was explicit in noting that there were only two civilizations that developed in the Americas—the Inca and the Maya, and none developed in sub-Saharan Africa. Blaha follows Toynbee in this regard: he never defines what a civilization is, and sees only two civilizations in the Americas and none in sub-Saharan Africa.

E. H. Carr (1990) noted that the study of history is essentially the search for, and subse-

quent understanding of, causes of events that are considered to be important. With Carr in mind, a second criticism of Toynbee's theory would be that it is a very general theory that has limited explanatory power since it glosses over the causes for the rise and fall of *specific* civilizations.

If only *The Rhythms of History* suffered from Blaha's uncritical use of Toynbee—but unfortunately this book has several problems. While the book claims to be a quantitative theory of civilizations (see the jacket and Chapter 4), quantities such as the societal level (S) and the rate of change (C), are relative quantities and have no way of being measured. Granted, this is admitted at several points in the book (see for example in Chapters 4 and 8). Blaha, following Toynbee, sees the societal level corresponding to the overall feeling of the civilization's inhabitants, and not necessarily their material culture, wealth or population (pgs. 124-126).

Credulity is strained when examining the equations for the societal level and rate of change. Instead of finding variables like population size, energy use, socio-cultural development, or technological developments,<sup>2</sup> one finds that the societal level and rate of change are based on calendrical time, constants, and nebulously defined forces (F). The constants in some cases are derived from the number of years between events that are seen to be important by either Toynbee or Blaha, or they are defined in an ad-hoc fashion (see for example pages 82-88).

Examining the numerous plots of societal level versus calendrical time, leads one to wonder what proof the author has to support any of his results. For example, in the plot of Japanese civilization (pg. 89), Blaha sees it beginning in 58 BC during the Yayoi period. The plot shows that the highest societal level reached *at any point* in Japanese civilization occurred during the Yayoi period in AD 76. The Yayoi culture was a non-urban, ranked agricultural society that left no written records.

The only contemporary written accounts of the Yayoi culture are brief passages in the Chinese histories *Han Shu* and *Wei Chih*. My curiosity is piqued as to how the societal level and rate of cultural change can be determined for a society that left no written record when the material culture is being ignored. Even if the material remains are taken into account, I am still baffled as to how the Yayoi culture achieved a societal level higher than Japanese civilization during the Kamakura period (AD 1185-1333) or Meiji era (AD 1868-1912). The high societal level reached during the reign of the legendary emperor Nintoku is also problematic; once again this is a time period from which there are practically no contemporary written accounts.

Questions can also be raised on the dating of some events. In both his equations and the plot for Japanese civilization, Blaha uses the date AD 1048 for the start of the medieval period and a new rally-rout cycle. While 1048 may be a suitable date, Blaha ignores mentioning that historians are still debating when the *shōen* system, and subsequently medieval society, was started in Japan. Some historians place the development of the *shōen* system in the early eleventh century, while others place it later in the twelfth century.

Examination of other plots points to similar problems for other civilizations. For the Minoan civilization (see Chapter 10), archaeologists have uncovered numerous texts written in Linear A—a language that has not been successfully deciphered. So, once again, if the material remains are not reflecting the societal level, and the written records cannot be read, what is actually being plotted? Furthermore, while the eruption of Santorini did affect Minoan civilization, archaeological evidence suggests the decline of many Late Minoan sites was underway before the eruption, and after the eruption, more centers than just Knossos, were re-built (Driessen and MacDonald 1997). Moving on to Hellenic and Western civilization (pg. 100), the Mycenaeans are noticeably absent; the societal levels for the Roman Empire are well

below those of the short-lived Hellenistic kingdoms; and the plague in the 14<sup>th</sup> century AD seems to have no effect on the societal level or the rate of change. Interestingly, we also find out that Pepin the Short became King of the Franks in AD 717 and not in AD 751 as most history books have it. While this may seem like a trivial mistake, Blaha uses this date (AD 717) in his calculations and considers it to be the date when the medieval period and a second rally-rout cycle begin. Also, no explanation is offered as to why Pepin's ascension to the throne is more important than the Battle of Tours, or Charlemagne's ascension to the throne. These are just some of the problems and errors that caught my attention; experts in the archaeology and history of other cultures covered in this book can likely find more.

Given the scope of the topic, the paucity of the bibliography is also disturbing. Only seventeen references are listed in the bibliography, and the majority of them were published before 1970. While not being dismissive of earlier works, the fields of archaeology, anthropology, and history have all gone through massive paradigm shifts in the intervening years. For the prehistoric and early historic civilizations covered in this book, new discoveries since 1970 have also altered our understanding of them. The bibliography also has a noticeable absence of books and articles on the use of mathematical models and simulation studies in the social sciences. With the advent of personal computers, this is an area of research that has grown immensely. In my opinion, the sparseness of the bibliography demonstrates a lack of primary research and understanding of the complexity of the topic under study.

At best, *The Rhythms of History* is an example of *how not* to use mathematical models in historical research. The equations and graphs look impressive at first, but close examination of them reveals a variety of errors. While Blaha claims that the theory correlates well historical events (p. 51), I would have to

disagree with him. His societal levels for prehistoric societies are arbitrary at best; he assigns incorrect dates to events; and attributes significance to events that are debatable. If you are interested in macro-history, read the books by Diamond, Fernández-Armesto, or even Toynbee.

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### Notes

1. Not germane to this review, but Toynbee has also been criticized for his Christian bias and disparaging comments on Judaism.
2. These are just a few of the many variables that have been used by others studying the development of complex societies.

### Bibliography

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