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Andrew Targowski, *Information Technology and Societal Development*

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Book Reviews

Andrew Targowski, *Information Technology and Societal Development.* Information Science Reference, 2008.

Information Technology and Societal Development is a massive work - a book consisting of 440 pages, each 8.5 inches by 11 inches - which covers many different topics. I blanched when I first picked up this book, knowing that I had to read and review it.

It now seems that Targowski was not presenting a particular theory of civilization as much as he was surveying information technology from the standpoint of its impact on civilization and human societies. Civilization is not approached from the perspective of world history, which presents information in the form of a story or a series of stories, so much as how a computer technician would organize information - in files and records needing to be filled, in diagrams and flow charts, etc., showing the relationship between categories or sequential links in a process.

Such an entity as civilization is broken down into many separate categories whose content can be compared across civilizational experience in different places and times. The three main categories, or aspects, as identified in the chapter titled "Civilization Grand Model", would be: human entity, culture, and infrastructure. Under those headings, we have subcategories. Under "culture", for instance, are "strategizing culture", "diffusing culture", "enlightening culture", and "entertaining culture". "Strategizing culture" includes topics relating to religion, politics, society, and the economy. The other three subcategories would each have their own set of topics. The cover identifies Targowski's book as an "Information Science Reference" work, implying comprehensive treatment of the subject.

The first chapter surveys some of the many theories of civilization offered in the past, including those by members of ISCSC, before moving into what the author calls "a dynamic model of an autonomous civilization." Targowski writes that "a civilization is autonomous because it has a guiding system which through a structure of feedbacks keeps a civilization in functional balance." There is, for each, a set of "world view values." The civilizing process itself consists of, besides the "guiding system," a "communication system," "logistic system," "knowledge system," "existence system," and "power system." Societies whose guiding systems are weak tend to go into decline.

This theory starts to get complicated when civilizations are evaluated quantitatively by a "cybernetic, generic model" developed by Marian Mazur, a Polish scientist, in 1966. Its point is expressed as follows: "Each autonomous civilization acts in a given resourceful environment that supplies to it external mechanical power, which we will call civilization power. A civilization cannot take in more power than it can process or more power than there are needs for total power. In other words, internal power of civilization cannot be greater than the civilization power and total power ... (or the) ... civilization may be destroyed." There is a table which divides regions of the world

into seven categories based on their respective energy consumption, expressed in terms of per-capita consumption of coal in 1984.

The theory also looks at how a society's resources are being utilized. What is called "safeguarding power" is the sum of "working power" and "idle power." Working power is persons employed in productive enterprises such as those which furnish food, housing, and clothes. Idle power is resources devoted to "rest, recreation, leisure, healthcare, education, and entertainment." Entertainment, in turn, is measured in "the number of cinema seats per 1,000 people" in Western Europe, America, Africa, and other places. The implication is that too many people spending too much time pursuing leisure and entertainment makes a society weak.

This idea provides a segue into the second chapter, "Civilization Life Cycle," which is about the rise and fall of civilizations. Here again various scholars have their own theories. Toynbee's, for instance, holds that civilizations begin with a successful response to a challenge. At the other end of the cycle, Spengler's "decline" of civilizations has to do with moving from a creative phase ("culture") into the ossified phase of empire ("civilization"). Since the phase of birth and growth to a position of strength is considered a more desirable situation than the phase of a society's "decline and fall," scholarship of this kind can easily turn moralistic. We would not want to be those fun-loving types who succumb to "la dolce vita" or are excessively focused on entertaining themselves while hardier persons take charge of our world.

This issue has a particular resonance with me since my book, *Five Epochs of Civilization*, contends that world civilization, especially in America, is currently focused on popular culture and entertainment. Lest I be accused to cheerleading for decadence, let me point out that, according to my scheme of history, the current epoch began in the aftermath of World War I. That traumatic experience was followed by the "the jazz age", when new technologies of sound recording and motion pictures created the lighter type of experience that people craved. It was, in a sense, an "escape" from the bloody, unbearable situation that angry ideologies and other serious purposes had created.

The alternative to a humorless ideologue such as Lenin is, therefore, not an Adolf Hitler, having different ideas but otherwise being in the same cultural mold, but someone outside the realm of serious politics, who wants simply to have fun. In '60s terminology, it's the difference between Karl Marx and Groucho Marx. We in America preferred Groucho. More decadent in mode of appeal, he was also ultimately less destructive.

As a point of criticism, I would take issue with mathematical formulae which Targowski brings to bear on this subject. For instance, on page 52, he refers to a "co-efficient of power supply" - r - which "identifies the relation of working power to secure power". "To calculate r", Targowski writes, "one must measure secure power by calculating a sum of idle power and working power, where the former can be measured by the number of workers per capita employed in the entertainment

industry and working power can be measured by the number of employed per capita in the civilization's economy (producing useful goods and services)."

The number of persons employed in the entertainment industry is, however, negligible when compared with the number of those employed in other nonproductive enterprises such as war, public administration, health care, criminal justice, financial services, and education although their per-capita influence on the culture is magnified by broadcasting technology. My larger point is that mathematical formulae which attach numbers to relationships of various sorts assume that there is something to measure. Human culture does not easily lend itself to this kind of treatment. In computer jargon, such information may be a case of GIGO - garbage in, garbage out.

That criticism out of the way, I would also say that Targowski's approach has an advantage over many other discussions of civilization. Some civilizational scholars, including Toynbee and Spengler, had a compelling view of past societies but only a dim realization of what was happening in their time or might happen in the future. Andrew Targowski, on the other hand, stands firmly in the present, with an eye to what comes next. Presently, many of society's creative efforts involve the use of computers. As someone who worked to create Poland's information superhighway (the Infostrada) in the 1970s, Targowski is himself an expert in this area. Therefore, he is well qualified to offer a view of past and present efforts to apply computer technology to society in its different aspects.

Many chapters in "Information Technology and Societal Development", especially in the second half of the book, review current developments from the standpoint of the information revolution that is underway. The book gets into issues of globalization and regional trading blocs. It looks at the emergence of an "electronic global village." We see how computer technology is improving the efficiency of goods production and distribution and allowing office work to be handled off shore. This technology is facilitating advances in genetic and other medical technologies. Distance-learning is revolutionizing the process of higher education. Computer software coordinates the flow of commerce, models new products, keeps track of inventory, and eliminates the physical exchange of money. In short, it is the heart of an emerging new civilization - what my book calls "Civilization V" - that is supplanting the entertainment-based culture as humanity moves into the future.

The last two chapters of Targowski's book consider history's big picture. Here the focus is upon humanity's possible extinction as population and industrial growth collide with the earth's finite resources. We can consider this the ultimate "decline and fall" experience. Targowski is concerned with humanity's ability to adjust to the new situation by developing a capacity for wisdom. Wisdom is, indeed, a dimension of civilized society in a healthy state, and information technology can be developed with that objective in mind.

The final chapter shows how information is built into the very structure of the universe. It is built into the genetic code that supports life. Targowski's book is

correct in supposing that a discussion of information and its technologies implies a much larger subject.

William McGaughey

Bintliff, John, ed., *A Companion to Archaeology*. Oxford: Blackwell Publishing, 2004.

The word archaeology conjures up images of people in pith helmets digging into the sandy earth of the desert or monumental buildings rising above jungle foliage. But archaeology is much more than that. It has a wide range of components and is interdisciplinary, as shown in this book which covers topics as diverse as art, ecology, gender, social theory, technology, landscape, museum studies, and politics. Archaeology is the study of past human life as derived from the remains/relics of early human cultures. The true domain of archaeology is the dynamic relationship between the material and sociality (135). It is a way to understand the past and its development, hence its connection to civilization (discussed further later in the review).

This book is a compilation of essays on various aspects of archaeology. It contains 27 chapters, each by a different author. It is a massive work of 544 pages providing both theoretical and practical insights that make it indeed a companion to the study of archaeology. It is a type of reference work that contains insights, inquiries, discussions and opinions on the varied topics. At the time of publication, John Bintliff, the main editor of this volume, was the Chair of Classical Archaeology in the Faculty of Archaeology at Leiden University. Advisory editors were Timothy Earl of Northwestern University and Christopher S. Peebles of Indiana University. Of the 27 contributors, 25 are connected to a university, one is a researcher and the other is self-employed in development anthropology; they are located throughout the world, including in the United Kingdom, the United States, Europe and Australia. Some chapters are mostly descriptive, while others are more theoretical, but all grapple with issues, some controversial, that over time have become integral to the discipline of archaeology.

The book is divided into four sections with chapters in each related by theme. Before describing each of these, it is useful to review the stages of academic archaeology as a discipline. It began and continued for some time as an activity concentrating on the actions of surveying, excavating, taking apart and putting back together, etc. In the 1960s, the new archaeology emphasized *thinking* about how all these things ought to be done. This eventually led to a postmodern archaeology, where we think about how we think about everything – the reflective mode (398).

Archaeology is not just an activity or interpretation, but it is a cultural production. "Archaeology is a process in which archaeologists, like many others, take up and make something of what is left of the past" (503).