INTRODUCTION

The purpose of this study is to define the role of civilization’s critical powers in the civilization life cycle. The role of information-communication processes is particularly crucial in this quest. The terms “rise” and “fall” of civilization reflect this chronic issue in comparative civilization studies.

Spengler, in his book *The Decline of the West* (1918), argued that all cultures are subject to the same cycle of growth and decay in accordance with predetermined “historical destiny.”

Toynbee in his *Study of History* (1934), compared civilizations to organisms and perceived their existence in a life cycle of four stages: genesis, growth, breakdown, and disintegration. A mechanism of “challenge-response” facing civilizations influences their abilities at self-determination and self-direction. However, according to him, all civilizations that grow eventually reach a peak, from which they begin to decline. It seems that Toynbee’s civilization life cycle is too short, since his “breakdown of growth” phase is in fact a point in time and the “disintegration” phase is too pessimistic in its title, only perceiving the “universal state,” often under a form of “empire,” as an ancient regime which only wants to maintain the status quo and is doomed to fail.

But history shows that some civilizations may last a long time in relatively good shape without being in imminent danger of disintegration.

Sorokin argued in *Social and Cultural Dynamics* (1937) that three cultural mentalities, ideational (spiritual needs and goals), sensate (“wine, women, and song”), and idealistic (a balance of needs and ends) are the central organizing principles of a civilization’s life cycle, and that they succeed each other always in the same order according to super-rhythms of history. According to Sorokin, Western civilization has for the last 500 years been in the sensate stage, reaching now its limit, and will soon pass to the next idealistic stage (which, according to this author, could be the universal civilization).

A discussion about a civilization’s life cycle among contemporary researchers is still very interesting. Quigley (1961), in *The Evolution of Civilizations*, offered seven stages of a civilization’s change: mixture, gestation, expansion, age of conflict, universal empire, decay, and invasion. Each stage is divided by Quigley into further sub-stages and characterization is provided for the levels of intellectual life, religious outlook, social grouping, economic control, economic organization, political, and military. Quigley perceived his famous book as a study not of history but of the analytical tools assisting the understanding...
Melko, in his book *The Nature of Civilizations* (1969), provides a model of a civilization life cycle’s stages including crystallization (C), transition (T), complete disintegration (D), and ossification (freezing at a crystallized stage) (O). He also introduced a concept of civilization phases, including primitive (P), feudal (F), state (S), and imperial (I) culture. Based on these categorizations, Melko develops different “trees” of a civilization’s paths, similar to formulas applied in organic chemistry. He emphasizes the strong role of a transition stage, which can lead to different stages, not necessarily always to the same one.

Sanderson (1995) writes that “civilizations, like symphonies, retain characteristic patterns notwithstanding fluxes of formation, disintegration, and reconstitution.” This statement is approved by a discussion of 56 researchers, recorded in the book *The Boundaries of Civilizations in Space and Time* (Melko & Scott, 1987). Their main discussion was organized around the origins and terminations of civilization in 32 short papers. The discussants agreed that civilizations rise and fall but they were lost in defining generic stages and main factors causing these stages.

Snyder (1999) proposes the most striking solution how to categorize the historic cycle of culture-systems (civilizations). He distinguishes three eras: First era (3,000 B.C.-1,600 B.C.), Transition, Second era (1,200 B.C.-200 A.D.), and Transition and Third era (600 A.D.-2000 A.D.). As a parallel time division, he recognizes seven historic cycles: Proto-Formative cycle, Formative cycle, Classical cycle, Renewal cycle, Secularization cycle, Frontier cycle and Transitional cycle, each lasting 300-400 years. He divided each cycle into four distinct stages of 75 to 100 years in length: reform stage, post-revolutionary stage, consolidation stage, and disintegration stage. This correlates with the traditional Chinese theory of the dynastic cycle, or the rise and fall of dynasties. This framework, according to Snyder, is based on his empirical study of Western European and old world culture-systems. He perceives the disintegration stage as not a negative change but one necessary for the next formative stage. He defines a culture-system or a civilization as existing if it has at least three core cycles: Classical, Renewal, and Secularization. He analyzes the culture short cycle (300-400 years) within the world long cycles, such as the Classical cycle, Renewal cycle, Secularization cycle, and the Next cycle. This is a very important association, but is limited by the author to the political sub-system (dimension) only.

Blaha (2002) quantifies Toynbee’s cycle (growth, breakdown, disintegration, and social challenge) in an elegant mathematical model with three main variables: the societal level (S), the rate of change (C), the acceleration of the civilization (its growth rate socially) (A), force (F), the “mass” of the civilization (m), and time (T). However, there is no way to measure these variables excepting (T). The force is measured “using simple everyday thinking” (Blaha, 2002, p. 47). The social level in his model reflects the overall feelings of the civilization’s inhabitants, not necessarily their population size, energy use, material resources, production of goods, technological advancement, and so forth. Stephen Blaha, as a noted contributor to the elementary particle theory of physics, perceives history as a continuum composed of wave oscillations with their peaks and valleys. It is interesting to note that he found that the interval of time between the breakdown of a civilization (the point at which growth stops) and the beginning of the universal state (at the end of the time of troubles) is approximately T=400 years. A similar interval time has been found by Snyder (1999) and this author, who calls it a cycle of human curiosity (Chapter VIII). The model assumes that the interval time between a civilization’s consecutive waves’ peaks is approximately T=267 years and Blaha calls this a general