

## **DARK AGES IN WORLD SYSTEM HISTORY**

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### **Summary**

The nature of Dark Ages over world history from 2400 B.C. to A.D. 900 is discussed with reference to ecological, socioeconomic and political conditions. It is stated that Dark Ages should not only be seen as periods of socioeconomic decline, but as well, periods of ecological degradation punctuated with climate changes, volcanic eruptions and tectonic shifts. Dark Ages therefore should be considered as periods in world history that the system is in crisis, and this crisis is precipitated by human communities' degradative relationship with the environment. Dark Ages are also periods of ecological restoration leading also to social system transformation.

### **1. Introduction**

The basis for the reproduction of material life over world history has been the wide-scale utilization of the natural environment. The recurring outcome of this process seems to be ecological degradation. Nonetheless, world history also suggests periods of ecological recovery, and the penetration of new areas to sustain further world system evolution. Viewed in the long term, ecological degradation and recovery appear to recur in phases.

Social (world) system crisis means that the continued evolution of the world system faces obstacles, and that structural changes are needed for system reproduction to continue. These crisis phases are key periods for our understanding of the dynamics of the evolution of the world.

There have been at least two occurrences of phases of socioeconomic and political crises known as Dark Ages. It is commonly understood that Dark Ages are times when human evolutionary transformations have been stymied, and indicators of growth reflect reversals. Dark Ages are also periods of environmental stress, and given reduced human activities, phases of ecological restoration as well. Because Dark Ages are recurring (though not necessarily cyclical) phenomenon, they can reveal the dynamics of system reproduction. These are periods of opportunity for ecological restoration, societal learning, and political power shifts.

## **2. Nature of Dark Ages**

We need to abstract the several processes that depict a Dark Age in order to have a clearer understanding of the various factors that precipitate system crisis and transformation. Such an abstraction starts by delineating the connections between the natural system and the social system.

Barriers to the reproduction of the world system are formed when human actions change the ecology. The degradative aspects of human activity are conditioned by social organizational factors (urbanization, accumulation, wars, technological innovations, and population). Natural disturbances such as earthquakes and volcanic eruptions also condition the reproduction and evolution of the world system.

Dark Ages are rare. Between 3000 BC and AD 1000 there have been indications of only two such phases: 2200 to 1700 BC and 1200 to 700 BC (considered as one phase in terms of the crisis of the Bronze Age), and AD 300/400 to 800/900. Several scholars have discussed conditions during Dark Ages, highlighting economic, political and social disorder. Historical records and archaeological evidence indicate population losses, a flattening of the social hierarchy, declines in living standards and devolution of sociopolitical organization. Dark Ages show developmental reversals, the decline or loss of certain material skills, deurbanization and migration, decay in the cultural aspects of life, and trading contractions.

Crisis conditions extend to peripheral parts of the world system as a consequence of political and economic relations with the core countries. However, the impacts of Dark Ages do not extend necessarily and evenly across geo-spatial boundaries. They depend on regional interactions and the level of intensity of social and natural system connections. The state of crisis and/or transition appears to have its greatest impact on core regions of the world system. This is related to the fact that it is in the core where the social and natural system relations are at their highest levels. The connections the core has with the periphery via economic and political processes assure that at least some (if not all) crisis conditions are felt there.

Besides these devastating ecological outcomes, climate changes are also associated with Dark Ages. Climate changes and natural calamities generate challenges to social system reproduction. Higher than normal temperatures can generate salinization problems for agricultural cultivation, especially in areas where irrigation is extensively used, and hence lower harvest yields. The aridity that commonly occurs with higher temperatures

has often generated problems for pastoral herds and lead to nomadic migrations, thus causing further pressures on core centers.

Dark Ages also provide opportunities for the resolution of contradictions that inhibit the reproduction of the world system, leading to processes of system reorganization and transition. Ecological limits become also the limits of the socioeconomic processes of the world system, and the interplay between ecological limits and the dynamics of the social system define the historical tendencies of the human enterprise.

To this extent, Dark Ages or system crises also offer opportunities for two parties: the natural system and the periphery. For the natural system, Dark Ages should be appreciated as periods for the restoration of the ecological balance that has been disrupted by human exploitation. The downscaling of socioeconomic processes provides the opportunity for Nature to recover. For the periphery, Dark Ages enable some areas to re-articulate themselves within the hierarchical matrix of the zonal production processes of the world system. This opportunity is only open during system crisis periods, and has been exploited by some through the course of world history.

### **2.1. Duration of Dark Ages**

Dark Ages depict very specific moments in world history when system reproduction is in a state of crisis and/or transition. Their resolutions require an extended period of time, historically at least 500 to 900 years. Such an expanse allows the ecological balance to be restored and productive capacities to continue. Especially with resource depletion, the need arises for innovations in social organization and technology. If it is not possible for the ecological environment/balance and trade networks to be restored, new source areas have to be located and/or substitutes must be adopted. Technological innovations might also occur. These interactions underscore the different time duration needed for our understanding of the interaction of the natural environment (measured along ecological time) with political and economic activities (that are gauged along social time).

In certain circumstances, resolution of a system crisis might not necessarily lead to a system transition. Crises may be resolved because the ecological balance has been restored and past patterns may resume. If, however, these conditions are not in place, a new set of organizing principles will be engendered. In such a context, qualitative changes ensue and a system transition occurs. In this regard, perhaps what have been identified as long economic cycles or *conjonctures* might not reveal the long-term processes that drive the world system. Instead, we suspect that these long ecological phases might prove to be *the* system transition moments. What this means is that world history is not a flattened history accounting for networks of trading links and economic cycles of expansion and contraction with little or no distinguishing differences between periods, but one with ruptures through time leading to system reorganization and social evolutionary changes.

Hence, Dark Ages are important moments in world history for they provide opportunities for the ecological balance to be restored, political and economic opportunities for some peripheral groups to advance up the zonal power matrix, and for reconfiguration of the hierarchical division of political economic. The rarity of such occurrences in the last five thousand years suggests the resiliency of the ecological landscape to human assault, and

underscores the different time duration for our understanding of the interaction between Culture and the natural environment.

### **3. Culture/Nature Relations and Ecological Crisis: A Brief Overview (2200 BC to AD 900)**

Following the Neolithic Revolution, the Urban Revolution as a world historical process framed the course of human history. One of the earliest signs of urbanization appeared in the riverine valleys of southern Mesopotamia, Egypt, and northwestern India over five thousand years ago, and continued the transformation of the landscape by human communities that started with the advent of agriculture. The process of urbanization encompassed trade linkages and accumulation, cultural exchanges, and a specialized and differentiated division of labor. This social architecture heightened the hierarchical distribution of rewards within and between regions. Coupled with population increases, the process of urbanization framed the level of resources required.

Viewed from the perspective of the human community, underlying this world historical process was the expansion of production, trade, cultural transformation and the growth of cities. Innovations in metallurgy, and in the fabrication of commodities, increased the exploitation of natural resources. In the Mesopotamian valleys, ziggurats, canals, and the granaries that depicted economic growth were erected. There was extensive trading across the Arabian and Red Seas through to Egypt in the west and the Harappan Civilization in the East. In these latter two centers, the levels of urbanization and human specialization (division of labor) were of the same scale.

Out of this transformation came the further development of a set of urbanized enclaves that specialized in resource extraction, trade exchanges, and commodity production in a systemic context extending initially from West Asia and the eastern Mediterranean to Northwestern India. Further expansion from the second millennium onwards brought Europe, Central Asia, and China into this network.

Viewed from the perspective of Nature, such world historical processes conducted a continuous and degradative transformation of the landscape. Trees were removed for agriculture, and to meet the energy, military and material needs. The valleys were excavated for canals to provide irrigation and transportation. Such wide-scale human activities led to soil erosion. Rivers were dammed. Socioeconomic activities were transforming the landscape.

A *systemic* crisis or Dark Age began around 2200 BC, impacting initially northwestern India, the Gulf, Mesopotamia, Egypt, and West Asia. Following this, new power centers emerged in the Near East, northern Mesopotamia, and the eastern Mediterranean. This systemic crisis continued till 700 BC, depending on the region, and impacted the main areas of West Asia, Egypt, the eastern Mediterranean and central Europe (from 800 BC onwards). These periods of crisis not only were characterized by socioeconomic distress, regime transitions, and center/hinterland conflicts but were also riddled with population losses, deurbanization, resource depletion, environmental degradation and climatological changes. Negative ecological trends (such as deforestation) were observed from 2200 BC onwards. Temperature increases and

aridity pulsed from 2205 BC with warm periods and dryness alternating with cool conditions and moistness. Such ecological and climatological circumstances impacted on some parts of the system, and reverberated throughout the system as the Bronze Age proceeded.

Recovery returned around 700BC with social systems expanding and growing in complexity. Expansion came first in the form of colonization by the Greeks. Between 775 and 675 BC such expansion was for agricultural purposes, where the lands of Greece, which were degraded after centuries of intensive cultivation, could no longer meet the needs of the population. Poor peasants became tenant farmers (*hectemores*), and then swelled the cities. With the degraded environment in Greece, expansion of the system came with migration to other arenas such as Italy, Sicily, southern France, and West Asia. Growth in this case came from a colonization process that was extensive in nature, as a consequence of the ecological crisis of the Dark Age that has just ended. Following the success of the agricultural colonization strategies, a second round of outward expansion from 675 to 600 BC focused on commercial activities. With this phase, trade routes were fixed and strengthened. Other growth poles of the system were Egypt, Persia and Phoenicia. No single polity ever gained control of the Mediterranean.

The rise of Rome and the demise of Greece did not interrupt the degradation of the environment. Forests were removed in northern Africa and almost everywhere Roman rule was established. Mines were dug in Spain, with cities, roads, and production facilities established throughout the Empire. Crisis emerged again 700 years later, around AD 300/400 with patterns reminiscent of the Bronze Age decline. It was another systemic crisis, the first for the Iron Age.

From what we have delineated above there are structural trends and tendencies that are ecological, socioeconomic and political that distinguish Dark Age periods from other phases. We find indicators of climate changes and ecological crises such as deforestation, soil erosion, and endangered species, correlating with distressed socioeconomic and political conditions such as declining population, trade and economic disruptions, de-urbanization, and changes of political regimes. Let us examine these changes.

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### **Biographical Sketch**

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