

# Resource Depletion, Despotism and the End of Empires, Part I

by David Porreca

I am temporarily suspending my series of contributions on Hermes Trismegistus to address the question of the parallels between the fall of the Roman Empire and our current economic and political climate.

In a series of 52 televised lectures produced for WGBH Boston in 1989, Professor Eugen Weber discusses the history of Western civilization. The lecture entitled *The Fall of Rome* contains the following statement:

It has always been a problem for a society faced by a serious challenge to decide just what measures it can take and how far it can go in opposing and meeting that challenge. If you argue that you can only preserve your way of life by adopting certain means which negate that way of life; that you can only preserve democracy or free speech by limiting them, for example; or preserve a high standard of living by taxing and restricting it; or preserve liberty by regimentation; or moral order by inquisition, then you run the risk of sacrificing exactly the things you say you are fighting for. You run the risk of sacrificing precisely those things that you use to justify the sacrifices in the first place. And you risk becoming so like your enemy that the differences matter very little. It is a quotation worth pondering both as it applies to the circumstances of the third, fourth and fifth centuries as well as its implications for our modern, post-9/11 political climate.

The Roman Empire of the third century was faced with multiple, mutually-reinforcing challenges: from external invasions to large-scale internal dissension; from economic collapse to a failing sense of civic pride; from declining artistic output to a breakdown in the continuity of the political system; from a marked increase in adherence to non-traditional religious movements to a decline in traditional forms of agriculture; from an exodus from urban centres to a general decline in population. Each of these factors contributed to the eventual downfall of the largest empire of its time, an empire which has left its imprint on the collective consciousness of Western civilization ever since. These factors, *mutatis mutandis*, have parallels in our current era.

All complex societies require inputs of energy in order to function and maintain themselves. Before the advent of the mechanization of the industrial revolution, the energy available to societies was limited to what human or animal muscle power could provide.<sup>1</sup> The specialization of labour which is characteristic of complex societies implies that some individuals perform tasks necessary for society to perpetuate itself while living off of what others grow through their own effort. Contemporary Western society is specialized to such an extent that only a very small proportion of the population - perhaps 10% - is involved in the primary work of feeding the rest of us. By contrast, a large majority of the Roman population, estimated at perhaps 75%-85%, were involved in primary agricultural production.<sup>2</sup> The single factor which has allowed us to achieve this staggering level of complexity is the artificial energy subsidy which is provided to us by the use of fossil fuels. These are essential in the manufacture of farm equipment and its operation; they are the raw material used in the production of fertilizers, pesticides and

herbicides; they are needed for the transportation of the raw agricultural produce, its transformation into processed edible goods, and the subsequent transportation of those to grocery stores everywhere. For each calorie of food we consume in the West today, ten calories of fossil fuel energy have been expended to provide us with it. In fact, both the world's population and society's complexity have grown exponentially in the past century and a half in direct proportion to the availability of fossil fuels, first in the large-scale exploitation of coal, then in the discovery of oil, and more recently in the use of natural gas. Fossil fuels are a non-renewable resource which occur naturally in large but limited quantities. Any potential disruption in their supply should be of the utmost concern to all inhabitants of our planet, especially those of us who live in the more complex and specialized territories. These concerns will be addressed in subsequent parts of this series. The Roman Empire was the most complex, specialized and urbanized society to have developed prior to the Renaissance, and by some measures even before the nineteenth century. In the absence of fossil fuel energy, the Romans needed a means to subsidize and maintain their complex society. This was achieved for centuries through the conquest and/or annexation of adjacent territories, along with the attendant seizure of goods and slaves which these actions imply. From the time of Hadrian (r. 117-138), the official expansionist policy of the Empire was halted in favour of a consolidation of the frontiers. This policy was adopted in part because there were no longer any territories left adjacent to the Empire which could be conquered profitably: the Sahara desert lay to the South, the Atlantic Ocean to the West, wilderness inhabited by "primitive" barbarians to the North and the well-defended Parthian empire to the East. The lack of new inflows of wealth which could be used to support the non-productive segments of the Roman imperial social structure (e.g., the imperial bureaucracy, the military and the idle upper classes) created a precarious situation: the system could maintain itself only so long as no major challenges arose to reduce the number or efficiency of the agricultural labourers who formed the backbone of the entire system. In essence, the Romans had depleted the resource which had provided their Empire with the artificial subsidy it needed to maintain itself. The first major challenge to afflict the Empire was the severe plague which struck during the reign of Marcus Aurelius (r. 161-180), disrupting the precarious balance which had prevailed until then. The Romans' responses to this and subsequent challenges, and the parallels between these and our current political climate will be examined in detail in the next issue of Labyrinth.

*1:* Water mills were used by the Romans, but their use was limited geographically by the availability of appropriate watercourses. Windmills were developed later, during the Middle Ages.

*2:* Note that this figure still allows for a significant level of specialization, well above that of a society functioning at a level of basic subsistence.