Though our world is complicated, it is not arbitrary. On the contrary, it is inherently subject to specific laws of cause and effect. Although such laws have been properly identified for some disciplines - chemistry, for example, and classical physics - there are fields for which basic principles remain to be worked out. One such field, lacking any satisfactory framework or structure, is the story of civilized man.

In attempting to understand any subject, the steps are always the same, the identification of simple causes which seem to account for the complications observed in the world around us. The explanations adopted have not always been perfect or even approximately correct, however, as when lightning bolts were attributed to Zeus's anger instead of to a difference in the electrical potential between clouds and earth. But, right or wrong, scientific or magical-religious, the intention is to identify hidden causes that account for visible effects.¹

Today, alternative explanations are judged by their respective abilities to predict and to provide broad unifying insights into the nature of diverse phenomena. Of the various explanations for lightning, for example, the electrical theory has been preferred. It alone predicts that under given atmospheric conditions lightning bolts systematically occur when a particular difference in electrical potential has been surpassed; it alone teaches something meaningful about electric fish; it alone permits the design and construction of spark-discharge devices. The electrical theory never actually disproves the existence of Zeus - science does not work that way - but inappropriate explanations eventually become irrelevant.

Over the last century, the cause-and-effect logic of Darwinism has gradually taken over the fields of botany and zoology. Before this development, the more interesting specimens of plants and animals were often kept in "curiosity cabinets", willy-nilly accumulations of "natural marvels" and "freaks of nature" where labels, when present, were rarely explanatory. Disorganization and confusion prevailed. Visitor and curator alike had to accept "natural" and "freak" as the only explanations available for many specimens. Gradually, these odd collections of emu eggs and quagga hides, fossil acorns and giant clams, have given way to logically organized exhibits which illustrate unifying principles such as natural selection, sexual selection, and adaptation.*

* In the United States and elsewhere debate continues between scientists and those attached to biblical explanations. Some of the latter have become extremely deft at confounding scientific arguments. Yet the problem is often incorrectly framed. The issue is not whether the neo-Darwinian synthesis is in some respects imperfect; the issue is whether biblical texts address questions of natural history, for example, whether they can falsify some particular hypothesis concerning slight systematic differences in beak shapes from one group of finches to another.
The state of the field of human history these days is comparable to that which prevailed in botany and zoology before the explanatory insights of Darwin and Wallace and their followers. Although some historical phenomena can be neatly explained on a case-by-case basis, underlying principles that cover the whole field are lacking. In consequence, many of the most interesting items from the historical past can only be grouped as in a cabinet of curiosities, each with its own uninformative label, no essential unity perceived. Examples of these are the cave paintings at Lascaux, the brilliant cultural blossoming of Sumer and 5th-century Greece, and the seemingly unique traditions surrounding Jerusalem and Troy. Also there are the curiously similar but poorly understood intentions of obsessed leaders who pursued the goal of Universal Empire - Alexander, Shi Huang Di, Napoleon, Hitler - each with his own seemingly idiosyncratic motivations.

The Emperor Shi Huang Di had a diversity of evocative titles. He was the Supreme Ruler of the Imperial Pole Star, Possessor of the Bears, First Sovereign, and Smith. Yet such information throws little direct light on why this ruler, who was supposed to have been primarily concerned with unifying China, should have allowed himself the distraction of constructing a great army of life-sized earthenware soldiers to accompany his burial, nor do such archaic snippets have any clear bearing on why the Nazis insisted on the annihilation of the Jews to the detriment of the German military effort. As things stand, it almost seems as though each war, each empire, each archaeological site, requires its own particular explanation. Worse, some historical phenomena seem to have no credible explanation at all, and certainly none that is testable: there is no clear explanation, for example, why the founding of Rome, of London, or of France's first royal dynasty (the Merovingians) have all been persistently attributed to refugees from Troy.

The writings of Hegel, Spengler, Toynbee, and the Pan-Babylonists (who held that a supposed Babylonian discovery of the precessional inconstancy of the heavens was the source of many myths and civilizing inventions) have all provided true historical insights, as have the works of psychohistorians and Social Darwinists. The views of various individuals who have seen cycles and conspiracies behind historical events also have some merit. Positive contributions were even provided by Erich von Däniken's fantasies of chariot-borne visitors from outer space, Zecharia Sitchin's silly scenario of Apemen and Extraterrestrials, and Immanuel Velikovsky's physically impossible near-collisions between the Earth and other planets: they all correctly discerned that the domain Above must be invoked in order to account for the one or more great changes or discontinuities indicated by the early history of mankind.

Each of these various approaches has its own particular validity but, even if taken all together, the end result is only partial. Something fundamental still escapes understanding. As already mentioned, this is acknowledged by some professional historians, as in the course of an essay on Adolf Hitler when R.G.L. Waite observed:

* Should we fail in our efforts to understand Klara Hitler's son, it will be neither the first nor the last time that answers to historical questions have escaped us. It is probably a little subversive to admit it, but historians can never give final and definitive answers to any of the more interesting questions asked of history.\(^4\)

\(^*\) Darwinian principles rarely provide useful insights into the history of civilization. In biological evolution, changes are transmitted from parents to offspring at the time of conception, and then only unintentionally and not necessarily for the best. Cultural evolution is a far more rapid process in which changes may spread from any individual or people to any other at any time. Purposeful feedback and the elaboration or nullification of earlier messages are possible and mistakes can be rectified.
A MATTER OF DEFINITIONS

Darwinian principles apply to all forms of life, including those long extinct; there are no exceptions. Ideally, then, a proper set of historical principles should apply to all forms of civilization, present and past. In the case of evolution, however, there was not much doubt concerning what was meant by "life". (If a definition were to be insisted upon, it could be: all that which shares genetic material.) For civilization and history, however, the relevant definitions have proved more elusive.

Civilization is a unique and specifically human phenomenon, a level of organization or an interconnecting network whose properties extend to all normal adult humans and whose principles set us aside from all other creatures. At some stage in the past, civilization would have even set us apart from "near-men". There would have been a boundary. "True men" would have possessed elements of civilization that "near-men" did not.*

Various definitions of "history" have been attempted in the past, none of them universally acceptable. FOR THE PURPOSES OF THIS WORK, civilization is defined as all effects caused by the sharing of complex thoughts among members of our biological species. It follows that the development of civilization, which is to say history, is all that which has been impelled by such shared thoughts.

1) One was the specific content of the complex thoughts that were first shared. These "initial conditions", as already indicated and as examined throughout this study, concerned death and how to circumvent it.  
2) The second factor consists of the great miscellany of external constraints and intrusions which arise from outside civilization itself. Subjects such as genetics, earthquakes, and natural cycles of various kinds always impinge on the story of civilization, and even infuse it. But these items do not actually belong to the curriculum of civilization itself for they affect "near-men" and all other creatures as well as true men. They play historical roles only because civilization (as just defined) is "an open system", constantly interchanging matter, energy and information with its surroundings - for example, through agriculture, climate and disease.

Generally, the systematic study of history should be limited to its own characteristic, "post-biological", level of complexity, the level of shared thoughts. We must therefore try to distinguish between two fundamentally different types of past events: 1) those which by their nature belong to the coherent sequence of historical causes and effects derived from the sharing of ideas (and are therefore potentially subject to systematic historical analysis) and, 2) random external events which, like the storm encountered by the Spanish Armada or the rinderpest which decimated the Masai cattle in the late 19th century, just happen to intrude on the historical record (and are therefore outside the coherent causal pattern of history).

In practice, matters are rarely clearcut because of the many phenomena, some of them quite subtle, that straddle our biological and cultural heritages. A short list would include sex and love, reactions to the perception of physical danger and the defense of territory, torture, the preparation of food, the use of alcohol and drugs, the roles of dreams and other altered states of consciousness, as well as diverse psychological factors. Some of these are based on a

* As used in this study, "near-man" designates our nearest non-human relatives. Such creatures necessarily existed but are now extinct. Since their defining characteristics are unknown, readers are within reason free to imagine them as they wish.
demonstrable biological component; for others, the existence of a biological component may be surmised.

As far as practical, matters with a suspected biological origin (Antony's interest in Cleopatra, for example) have been excluded from the discussions that follow. Instead, wherever possible, emphasis has been placed on what seem to be relatively "pure" cultural subjects: mythology, astronomy and astrology, and the founding of cities, for instance, as well as more diffuse matters such as the role of gold, hereditary kingship, or the sanctity attributed to certain geographical spots. In general, factors are excluded if they would seem to have affected animalkind as well as mankind, in particular, if they might have affected that animal here designated as "near-man".

The ability to paint, catch a ball, or belong to a musical group may be valued by the opposite sex and thereby be encouraged even without any evident sharing of ideas. Yet animals do not engage in such activities for, at the outset when they were invented, these activities required that ideas be shared. In later times they were commonly co-opted by the workings of sexual selection and their importance enhanced.

The approach adopted here makes no theoretical distinction between conventional historical subjects - such as the events leading to the fall of the Egyptian Old Kingdom or those leading to the American Revolution - and the less orthodox aspects of our heritage such as the elusive arts of the alchemists or the persistence of faith in astrology. If, in fact, some of the more curious historical developments seem to attract the greater emphasis, it is because their inherent strangeness is symptomatic of an origin in circumstances that, while still historically influential, are no longer rationally admitted.
REFERENCES AND NOTES:


3. E. Jäckel records that in 1942 during the advance on Stalingrad, there had been a tenacious struggle for priority access to rolling stock between the logistics office of the Wehrmacht and the SS's *Reichssicherheitshauptamt*, which was responsible for the Final Solution. The matter was evidently never resolved for the two organizations were informed "that both were of equal importance for the war effort" (*Hitler's World View: A blueprint for power*, Harvard (1995) pp. 61-62). In another instance cited by Yehuda Bauer, Jewish slave workers were murdered before completing a military road from Lvov into the Crimea.


5. Debate continues on the status of viruses.

6. Complex systems may be extremely sensitive to the conditions that prevailed at their outset.