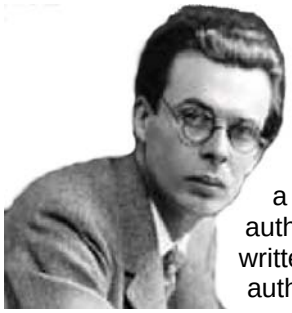
The Inter-War Years (1918 ~ 1939)
The Advance of Technology Part II

Background

Wars usually contribute to technological innovations in society. World War I itself brought on improvements to the airplane, to ship design, to the automobile, to the telephone and to telegraph. Medicine also was benefited by these advances. In addition to this, the great demand for weapons and supplies by war impelled the method of production-line manufacturing, in which enormous plants manufactured huge amounts of goods in a short time. War also demanded that a greater number of women than ever before take part in the industrial segment of economy. The implacable process of industrialization went on at an ever growing speed in the period between the wars. The mechanization of farming methods required that less and less people work the land; the population which was no longer needed in the fields migrated to the cities and went to work in the factories until practically the entire population of Britain was working in an intricate industrial society. Nowadays less than 5% of the British population actually works on the land. The periodicity and seasons of nature are, for most people, just seen in books, on television or on short tours to the countryside.

The modern critic of the development of civilization
Aldous Huxley (1894 ~ 1963)



Aldous Leonard Huxley was born on July 26, 1894, into a family that included some of the most distinguished members of the English intellectual elite. Aldous' father was the son of Thomas Henry Huxley, a famous biologist who helped develop the theory of evolution. His mother was the sister of novelist Mrs. Humphrey Ward, niece of poet Matthew Arnold; and granddaughter of the famous educator Thomas Arnold.

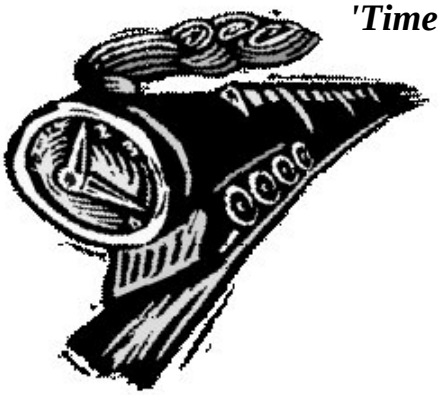
Undoubtedly, Huxley's heritage and upbringing had an effect on his work. Gerald Heard, a longtime friend, said that Huxley's ancestry "brought down on him a weight of intellectual authority and a momentum of moral obligations." Throughout his famous novel *Brave New World,* written in only 4 months in 1932, you can see evidence of an ambivalent attitude toward such authority assumed by a ruling class.

Even as a small child Huxley was considered different, showing an alertness, an intelligence his brother called a superiority. He was respected and loved -- not hated -- for these abilities. When he was 16 and a student at the prestigious Eton school of medicine, an eye illness made him nearly blind. He recovered enough vision to go on to Oxford University and graduate with honors, but not enough to fight in World War I, or to do the scientific work he had dreamed of. Scientific ideas however remained with him and were expressed in his work.

Huxley remained nearly blind all his life. He died on November 22, 1963, the same day that President John F. Kennedy was assassinated. He was cremated, and his ashes were buried in his parents' grave in England.

In his essay *Time and the Machine* (written in 1937) Huxley comments on this one feature of modern society.

'Time and the Machine'



Time as we know it, is a very recent invention. The modern time-sense is hardly older than the United States. It is a by-product of industrialism - a sort of psychological analogue of synthetic perfumes and aniline dyes.

Time is our tyrant. We are chronically aware of the moving minute-hand, even of the moving second hand. We have to be. There are trains to be caught, clocks to be punched, tasks to be done in specified periods, records to be broken

by fractions of a second, machines that set the pace and have to be kept up with. Our consciousness of the smallest units of time is now acute. To us, for example, the moment 8:17 a.m. means something - something very important, if it happens to be the starting time of our daily train. To our ancestors, such an odd eccentric instant was without significance - did not even exist. In inventing the locomotive, Watt and Stephenson were part inventors of time.

Another time-emphasizing entity is the factory and its dependent, the office. Factories exist for the purpose of getting certain quantities of goods made in a certain time. The old artisan worked as it suited him, with the result that consumers generally had to wait for the goods they had ordered from him. The factory is a device for making workmen hurry. The machine revolves so often each minute; so many movements have to be made, so many pieces produced each hour. Result: the factory worker (and the same is true of the office worker) is compelled to know time in its smallest fractions. In the handwork age there was no such compulsion to be aware of minutes and seconds.

Our awareness of time has reached such a pitch of intensity that we suffer acutely whenever our travels take us into some corner of the world where people are not interested in minutes and seconds. The unpunctuality of the Orient, for example, is appalling to those who come freshly from a land of fixed meal-times and regular train services. For a modern American or Englishman, waiting is psychological torture. An Indian accepts the blank hours with resignation, even with satisfaction. He has not lost the fine art of doing nothing. Our notion of time as a collection of minutes, each of which must be filled with some business or amusement, is wholly alien to the Oriental just as it was wholly alien to the Greek. For the man who lives in a preindustrial world, time moves as a slow and easy pace; he does not care about each minute; for the good reason that he has not been made conscious of the existence of minutes.

This brings us to a seeming paradox. Acutely aware of the smallest constituent particles of time - of time, as measured by clock-work and train arrivals and the revolutions of machines - industrialized man has to a great extent lost the old awareness of time in its larger divisions. The time of which we have knowledge is artificial, machine-made time. Of natural, cosmic time, as it is measured out by sun and moon, we are for the most part almost wholly unconscious. Preindustrial people know time in its daily, monthly, and seasonal rhythms. They are aware of sunrise, noon, and sunset; of the full moon and the new; of equinox and solstice; of spring and summer, autumn and winter. All the old religions have insisted on this daily and seasonal rhythm. Preindustrial man was never allowed to forget the majestic movement of cosmic time.

Industrialism and urbanism have changed all this. One can live and work in a town without being aware of the daily march of the sun across the sky; without ever seeing the moon and stars. Broadway and Piccadilly are our Milky Way; our constellations are outlined in neon tubes. Even changes of season affect the townsman very little. He is the inhabitant of an artificial universe that is, to a great extent, walled off from the world of nature. Outside the walls, time is cosmic and moves with the motion of sun and stars. Within, it is an affair of revolving wheels and is measured in seconds and minutes - at its longest, in eight-hour days and six-day weeks. We have a new consciousness; but it has been purchased at the expense of the old consciousness.

DISCUSSION:

1. Why does Huxley say that most of us are "*chronically aware of the moving minute-hand*"?
2. What dilemmas do we go through when we leave our Westernized Industrial society? Why does this happen?
3. What is the paradox Huxley refers to when he says: "*This brings us to a seeming paradox*"?
4. State the examples Huxley mentions to prove the 'paradox' is true.
5. What other paradoxical statements besides “Time as we know it is a very recent invention” are there in this extract and what is their function?
6. How does “*Time and the Machine*” reflect the times and society in which Huxley wrote the essay?