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THE PRICE

It is fashionable nowadays to take a critical view of all our present institutions. Many, particularly of the young, think that a perfect solution to problems is possible. But they seldom wonder what price we must pay for the Utopian world they demand.

There certainly will be a price. History shows that one of the few certain things in this world is the fact that we get nothing for nothing.

This has been true for a long time. Take the age of Pericles in Athens. This brief half century gave mankind the Parthenon, the statues of Phidias, the unequalled Greek tragedies, comedies and lyric poems, and the wisdom of Socrates, Plato and Aristotle. Without these accomplishments all of the 2400 years that followed would have been poorer.

But the Athenians of this great half century had to pay for our gains. They paid by the slavery of tens of thousands who did all of the hard physical work. They paid by the still unhappier slave labor in the silver mines of Laurium. Silver from these mines made possible the fleet that defeated the Persians at Salamis and prevented Athens from becoming a minor part of the ancient Mesopotamian civilization. And the slave-produced silver allowed thousands of free Athenians to spend much of their time in the Agora, listening to the words of the great philosophers and dramatists and often trying a little talking and writing themselves. Without the throngs of listeners and of unsuccessful thinkers and artists Athens might never have been glorious. Those who make lasting contributions to culture are always an exceedingly small minority. The successful

few can work effectively only in an intellectual climate that appreciates their efforts. Those who bring about this favorable climate must have time to study the work of the eminent and to try to emulate their success, even if most of their creations are insignificant.

The Athenians also paid for their great age by the taxes that Pericles levied to support the artists and craftsmen and thinkers. I like to think that Plutarch's account of the way Pericles paid for the public works inspired Franklin Roosevelt's PWA 2380 years later. Perhaps if Roosevelt's boondoggling had been on a scale comparable with that of Pericles, the 1930's might have gone down in history as the Glory that was America instead of as the Great Depression.

A still more costly payment the Athenians made for their glory was the overweening pride that led to the Peloponnesian wars. These long wars left all of Greece so weakened that for thousands of years she fell under the successive dominion of the Roman, the Byzantine, and the Turkish empires.

For all of us that followed the Glory that was Greece made life more worth living. But for the Athenians of that age and for their slaves it must have seemed a costly gain. If they had known, would they have thought it worth while?

What lesson should we learn from the Athens of Pericles? If, as many of our younger generation demand, we support in even moderate comfort all of those who want to be artists or writers or thinkers, will the freedom from the need to rustle for a living lead to another Golden Age? Certainly there must be many who try for every one who is eminent in any line of effort. But who will say how many and which ones of

those who want to be thinkers and writers and artists shall be supported by their more practically minded brothers? If too many are allowed to live with no thought of production, won't hunger for all be inevitable in a crowded world? Will we be willing to pay the price of taking care of many intellectual or artistic failures for the sake of one who makes a great contribution to future cultures?

There are lots of other examples of the price paid for the gains that have made life richer for so many of us. The Grandeur that was Rome was nearly as great a calamity for most of those who brought it about and their descendents as the Glory that was Greece. The accomplishments of three or four centuries of Romans in government, engineering, sculpture, poetry and oratory were accompanied by a slavery that took away from the masters the will to work or even to resist. After a while the slaves rose up and overthrew the State. We have reaped the benefit of all the progress in civilization that the Romans made. But the Romans paid for it by a thousand years of subservience to those they called Barbarians.

The art of the Renaissance, the noble ideas of the Enlightenment in France and the Low Countries, and the literature of Elizabethan England depended on the patronage of a few nobles who made up for their devotion to beauty by a lust for power that brought on countless wars and revolutions. The finest periods of artistic, literary and philosophic excellence in Europe were times of violence and cruelty that make us shudder. The elite of Shakespeare's day enjoyed equally the noblest plays and poetry and the public executions at which political prisoners were hanged, cut down while still alive, drawn and quartered. The history of the 15th to 17th

centuries in Europe, and of earlier ages in India and China, makes us wonder if the inspiring works of art and thought and literature were worth the callous barbarity and the abject poverty of the great majority in the centuries before the Technological Revolution.

Another striking example of human action that has been on the whole good, but that has been paid for by the suffering of many, has been the overrunning of "backward" areas by those whose progress in civilization, as well as in the art of war, has reached a higher level.

This process is as old as recorded history. Population pressure was often the immediate cause. In ancient Mesopotamia, the "cradle of civilization", successive waves of warlike invaders conquered and often made slaves of the developing peoples that had become more peaceful. It was tough on the defeated, but often a step forward in civilization resulted. Perhaps the best example was the conquest and taking into captivity in Babylon of the nomadic, more primitive Israelite tribes. Though they suffered the unhappiness of slavery for a century or two, the Jews learned from their oppressors how to write and to figure. They recorded the legends that became their bible, and learned how to succeed in trade and industry. Without the Captivity that they deplore, the Jewish people might never have kept their identity through the succeeding centuries and become in many ways leaders of the far more numerous communities in which they have lived.

England is another example. One after another the Romans, the Celts, the Angles and Saxons, the Norwegians and the Normans conquered the rugged tribes on this little island. A lot of the tribesmen were killed, and more became slaves or serfs. But after a while they

assimilated their successive masters, took from them much of the best qualities they brought, and made of their subjection one of the greatest civilizations the world has seen, - assuming that our variety of civilization is worth while.

The more recent colonization of the Americas, Asia and Africa by the better armed Europeans was accompanied by unbelievable disregard for the rights of the aborigines. It is too early to assess the final results. Aside from raw materials and trade the principal thing the early Europeans took over from the primitive African tribes was the custom of slavery - slavery of inferior peoples for economic gain rather than, as in earlier centuries, a penalty for defeat in war. This slavery in Europe and America was far less harsh than that which had been practised for centuries in Africa and the Near East. But it was inhuman. It was given up after a couple of hundred years but we are still paying for it, and no one knows when the paying will end.

For all their scorn for the backward peoples they conquered, the Western "Imperialists" brought to the primitive parts of the world a respect for order and a prosperity and health that made life far easier for at least many of the former peoples. Were not the 200 years of English rule in India better than the chaos of war between local arbitrary rulers, and then the domination by Moslem conquerors that preceded the Colonial Era? Not for the princes and the more intelligent classes that were made to feel their inferiority. But the ordinary peasant was probably happier under the British lordship. And in the long run the centuries of subservience may be atoned for by a far happier regime.

A more recent example of colonialism that is looked on as inexcusably harsh was the conquest of Haile Selassie's Ethiopia by Mussolini's legions 35 years ago. We forget that even in the 1930's

Ethiopia was the center of the trade in slaves taken from the primitive African tribes and sold to the rulers of the Near Eastern kingdoms, - a trade in which the slave owners killed or maimed their human property at will. The Italian conquerors of Mussolini's day were ruthless to the upper class Ethiopians.

But the occupation was not all bad. Mussolini wanted to make Ethiopia part of an overcrowded Italian empire. He encouraged emigration from Italy. And he needed a healthy and increasingly intelligent native population for his labor force. On the whole, the Italians treated the common people well. They ended slavery, and built roads and schools and hospitals and irrigation projects. When I visited Ethiopia in 1945, just after the Italians were driven out by English troops, the record of Italian occupation was still evident. While they had to be as inconspicuous as possible, most of the skilled workmen were Italians. The better buildings and the water supply in Addis Ababa, and most other evidence of what we call civilization, dated from the Italian occupation. Asmara, in Eritrea, given to Ethiopia by the United Nations in 1952, was an attractive Italian city. Recent visitors to Ethiopia, though they deplore the Italian occupation, admit that most of what we call good things in this backward country date from this short era. Would the common people have been better off if the Italians had succeeded in making Ethiopia part of their country? Who knows?

We really can't be sure about the balance between good and bad in the Colonial era until the "backward" nations have learned to live in the complex, technological age that those who conquered and exploited them left as their legacy of progress. Asia and Africa certainly can't

go back to the primitive societies whose numbers were limited by hunger and disease and infant mortality. Such a regression would mean that many millions would die. We deplore the subserivence the colonial age brought to the occupied lands. But in the long run won't the world be a better place because of the increased productivity, health and order the colonizers brought? Here again only time will tell - if our conquest of the atom and other means of destruction give us the time.

The gains made possible in past ages by slavery or despotic regimes, or even by the Colonial era that is just ended, are accepted with little question. We forget that misery and slavery paid for much of them. The benefits are closer to our time. Those who paid the price are long dead and forgotten.

Our present worry comes from the realization that in the future unquestioned good results of the technological age must be paid for by us and by our descendents. We are just beginning to realize that every boon has its price. We must weigh the happy against the unhappy aspects of what we do before we are irrevocably committed.

The almost frantic worship of ecology in the past year or two has called attention to payments we must make for physical progress. Insecticides, and in particular DDT, are perhaps the best examples. Before the discovery of these insecticides anopheles mosquitoes spread malaria through much of the world. The early attempts at malaria control through drainage of swamps were too slow and costly to be effective in India and other poor and overcrowded regions. Millions became sick or died of this debilitating disease, and nations fell because of it. Then the pesticides killed off the mosquitoes in India and other areas, and

malaria was no longer the scourge it had been for centuries. Those who would have died before DDT came into cheap and common use stayed alive and contributed to world overcrowding.

It is only recently that we are learning that we must pay for our freedom from malaria. Some of the DDT that killed the insect pests seeped into the natural drainage and accumulated in lakes and slow-moving rivers and even the ocean. Fish were poisoned. Sometimes animals that ate the fish were sickened. And - horrible thought - the DDT in the fish pelicans ate cut down the lime in the shells of their eggs so seriously that in some areas nearly all of the eggs break before hatching. Some conservationists think this noble bird is threatened with extinction. They say that if enough DDT gets into our water supply humans also may become extinct.

Some concerned ecologists think the use of insecticides like DDT should be absolutely forbidden. But this might allow the spreading of insect pests that would ruin essential food crops. It might lead to new outbreaks of malaria and other mosquito carried pestilences. The harm that may come from sudden banning of DDT is illustrated by a news item on Ceylon in a recent issue of TIME magazine. Before the time of DDT 2½ million Ceylonese suffered from malaria. The use of DDT brought down the number of malaria sufferers to 200. Then DDT was banned and the incidence of malaria is again up to 2½ millions.

Some day we are confident that the scientists who are working frantically on the problem may develop pesticides that will not persist in water systems and in the animals that live in the streams and lakes and even the ocean. Until these discoveries are made we must choose

between certain rapid death through insectborne diseases and possible slow death due to direct and indirect DDT poisoning. We can't wipe out the pests without paying the price.

Pollution of air and water by other operations of our technological age presents problems that may be even more serious. The internal combustion engine has made possible cheap transportation. Without this transportation our way of life could not go on. In a crowded world men must go long distances to work and play. They must carry food and materials even further. Only the automobile and the Diesel-run buses and trucks and trains and ships make this cheap and rapid transportation possible. An ingenious statistician has figured that if we went back to horse-drawn vehicles, all great centers of population would be buried under several feet of manure every year. And it would take more than our total land space to raise food for the horses.

The effect of the fumes from automobiles and trucks is not quite as dramatic as that of discharges from the horses that might replace them. But it may be, in the long run, just as devastating. Smog due largely to combustion has killed thousands in Belgium and in England. It may kill millions.

Is it worth it? And what is the alternative? Science has not yet come up with an answer in spite of tens of millions of dollars spent in research.

Electric power is another vital element of the Industrial age for which we must pay through the nose - unless our noses stop functioning because of air pollution. Save for hydroelectric power, the economic sources of which will soon be all in use, electricity comes from combustion of coal, oil or gas - unless we accept the atomic power that may be even

more deadly. And combustion produces incredible amounts of carbon dioxide and nitrogen compounds, as well as sulphur dioxide that comes from impurities in the fuel. We are sure that these air pollutants will have harmful effects, but we don't know just how harmful. At best they will lead to more diseases of lungs and throats, killing the weaker sufferers. At the worst the added heavy gases in the atmosphere may trap the sun's rays so that there will be more evaporation from seas and lakes and vegetation. The excess of moisture in the air may result in so much added snowfall that a sudden glacial period may kill all living things in thousands of square miles.

This seems fantastic but it happened in Siberia ten thousand years ago, - a geologic moment. There the sudden snow and intense cold caught and buried a mammoth in snow and ice so quickly that when the body was exposed by placer mining operations there were still half digested twigs and grass in its stomach. The frost had come so suddenly that the mammoth flesh was frozen. It was eaten at a Geologic conference in Moscow 10,000 years later. Friends of mine who were at the banquet say the mammoth was pretty high, but no worse than the pheasants the English aristocracy prepare for cooking by hanging them until they drop. This 10,000 year old glacial catastrophe may, some think, have been caused by the trigger action of smoke from ancient forest fires on the atmosphere. A similar quick and long lasting freeze may come next year, some pessimists say. Or it may come a thousand years from now.

There probably won't be such a dramatic penalty for our comfortable mechanized living in our time. But it is at least conceivable. We may have to pay that price for the light and power and all the gadgets

that let us live so comfortably without slaves and usually without servants, - except for house wives.

The damage done by technology is so evident that those who want a perfect world would do away with all pollution at once. They do not consider the results of a precipitate action. They pass laws that, if observed, would hurt all of us. An example is the recent Arizona law that forbids the emission of more than a minute amount of sulphur in smelter gases. This law has already forced some copper smelters to curtail or to shut down when weather conditions are unfavorable. The legislators did not realize that two tons of sulphur dioxide are made for every ton of copper produced. And if we have copper, on which the production and use of electricity depend, we must get rid of the sulphur somehow. The richer gases are now made into sulphuric acid. But the market for acid is limited and great quantities of this corrosive chemical cannot be stored economically. (Smelters are spending many million dollars in trying to find a way of getting rid of the excess sulphur in a stable form that can be stored safely even if it cannot be used.) But thus far no method has been found that will eliminate damage from sulphur in smelter gases without eliminating the copper on which our electrical age depends.

Those who have unlimited faith in technology are sure that science can find a way to supply the copper and power we need without polluting the air and water. This may be true, but we have failed so far. We have no idea when workable methods may be developed. The best alternative may be atomic power. But it may be many years before we are sure that no fatal radioactivity comes from the waste products of these plants. We

cannot count on them to supply our electricity.

Unless an answer to the problem of sulphur pollution is found soon, we will have to choose between curtailed use of electricity on the one hand, and sore eyes and throats and bare fields and mountains on the other. And we don't know how acute the copper shortage may be or how sore the eyes and throats or how bare the hills. We must make the decision without knowing what price we must pay for the electrified equipment that makes life simple.

There is no end to the list of benefits we gain from the technological age, or to the prices we or our descendents must pay for them. We can't weigh the good and the bad any more than a slave in the time of Pericles could judge whether or not his forced labor was worth his little share in bringing about the Glory of Greece.

Many of our idealistic young won't face the decision. They say we can live happily as our great-grandfathers lived, with none of the technological amenities that make life easy for so many of us. They don't realize the high price we would pay for the simple life. Loss of the comforts of electrified homes would be a small part of the price. Lack of fast and easy transportation would be far worse. Foods could not be carried from areas of abundance to those of scarcity and fertilizers would be available only in a few fortunate regions. Small local farms could supply only a minor part of the needed food. With no cheap and rapid transportation many of us would die due to diseases of malnutrition. Those remaining would live on a level little higher than that of Mexican peasants or African tribesmen.

Even if we reduce our use of automobiles and power and the

pollution they bring, increasing population and growth of technology in the crowded countries would soon nullify any gain.

Will we tolerate the price of freedom from the side effects of technology? No one knows the answer. The only thing we can be sure of is that unless we are far-sighted we are in for trouble. Too much concern for the environment will bring hunger and disease and hopeless poverty. Too little concern may bring pollution of air and water that may decimate the population.

The only hope lies in wisdom to exercise just the right amount of control. Theoretically the cleverness that made our technological society should be able to solve the problem. But can it be done quickly, and in a Democracy? Probably not. Only an all wise and all powerful dictator could devise and impose the delicate balance that is essential. And all wise and all powerful dictators don't last long in this sad world.

So I'm afraid we must jog along as we have in the past, without much long range foresight. We can hope without much faith that concern for the environment of our grandchildren may stimulate research and costly action that will prevent the worst effects of uncontrolled technology. And we can hope with still less faith that the idealism of our young may lead them to avenues of thought and artistic creation that will bring about a finer civilization. Sad to say, whatever progress we make we will have to pay for. But perhaps if we are wise, the price will not be too high.

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IBJ:B
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April 15, 1971

Mr. Henry K.Evers
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Dear Henry:

Here are four copies of my talk on "The Price". I am glad I saw you on the street this morning, for I had completely forgotten that I had promised to send you some of the copies.

With best wishes,

Yours sincerely,

Ira

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