

Civilization

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the great Mongolian migrations—the migrations of the nomadic Huns and Alans; as a result of their pressure first the Visigoths, then the Vandals, Sueves and Ostrogoths—and finally Attila and the Huns themselves burst through the frontiers and thrust their way into the civilised world. These were real barbarians, most of them entirely uncultivated, all of them ignorant and many of them out for nothing but blood and booty—wild beasts and destroyed, to use the words of Milton. These barbarians gradually forced their way into the army and into the administrative services of the R.E. and while they themselves were sufficiently influenced by the customs and institutions of civilisation, to become the ancestors of the modern world, by their numbers and their ignorance and superstition they finally swamped and submerged the culture of the ancient world. But please remember that that process took some six hundred years or more to complete. [In fact, full effect only in 9th and 10th C. A.D.]

Nowadays we have no similar danger to face. There are no barbarians left, in the ancient sense of the word, certainly not enough to threaten Western civilisation—and even if there were enough, they would be powerless to threaten it without a thorough understanding of its resources.

Thirdly, our civilisation depends enormously on the comforts of applied science. We may flatter ourselves that we have made great intellectual advances since Roman days and the result is that our civilisation is very much more concrete than theirs. Roman civilisation was a legal and political civilisation based on primary production and comparatively simple conditions of life. Ours is in many respects a mechanical civilisation, based on discovery and accumulated knowledge. I see no reason why that knowledge should suffer any really serious setback.

For one thing our means of production, primary as well as secondary, are infinitely greater than theirs were, even in proportion to our enormously increased populations. We need fear actual starvation no more than we need fear barbarian enemies. That is at any rate true at present when in spite of all our troubles the markets of the world are suffering from a glut of primary produce.

For another thing the very fact that so many of us, directly or indirectly, depend for our livelihood or our welfare on highly scientific professions, making the continuation of what we may call the civilised point of view inevitable. Again, we have cast off a great deal of the ignorance and superstition which swamped the older culture. Education is becoming universal; we can nearly all read and write—and that was very far from being the case in the Roman world. Meagre as the results of education sometimes appear at close quarters, barren and depressing as it may sometimes seem in terms of matriculation examinations and so forth, seen in its proper perspective its influence is enormous, hard to exaggerate, hard even to estimate.

Largely as a result of this education of the masses and the rationalism that must slowly grow with it, we are comparatively free from that superstition and that ecclesiastical and monarchical tyranny which is so striking a feature of the Christian era.

Furthermore, the discoveries and inventions of modern civilisation in themselves appear to guarantee its preservation. Remember that the printing press was unknown to the Romans. All their records were written by hand, and therefore few in number—it was comparatively easy to lose or destroy them. Ours appear to be imperishable. We have the art of printing, typewriters, duplicators, photography, and so on, so that human knowledge is recorded and docketed and card indexed, to an extent which makes its loss unthinkable.

Communications, too, by land, sea, air and ether are now so good that knowledge is easily accessible to anyone who takes the trouble to seek it out. In short, I would say that the seeds of civilisation are so widely broadcast that no human agency can ever destroy it.

It is true that our powers of destruction have also increased, but they themselves are the fruit of science and useless without the scientific or civilised

perity, repudiated their debts, and made a fresh start in life as fraudulent and undischarged bankrupts. No country is likely to experience more devastating troubles.

But has civilisation gone by the board in Russia? No, it appears not. Some even hold Russia up to us as a pattern of progress and enlightenment. I think they go a little far, but she is certainly competing with some vigour and success in the markets of the civilised world.

The fact is that human beings have, and have always had, very much the same ideals and ideas of expediency; we differ in that respect only in comparatively unimportant details from the Greeks and the Romans or even from the most primitive forms of tribal life; and men, although like all animals they are slow to originate, have long memories, and are good at using the instruments that experience has given them and to which they have grown accustomed.

So it is one feature of our civilisation that we now possess so much accumulated experience of political organisation and political institutions that the maintenance of order or the restoration of it is within limits, comparatively easy and natural to us.

Actually, then, when people like Mr. Wells say that civilisation is going to collapse, I beg to submit that they are "talking through their hats." They are using words, as we are so prone to do, without really thinking what they mean.

Probably by "civilisation" they mean something quite different—their national credit, the financial system, the institutions to which they are accustomed, even perhaps their private investments. These are serious matters, and it would be idle to deny that the world is faced with many grave dangers and difficulties and problems which seem desperate at the moment. They may make things very unpleasant for a few years, perhaps for a generation, or even two generations, but they will pass. These crises have appeared many times before in history, though their scale has been smaller.

Prices always go up during a war, and production is stimulated. The following period of deflation is always uncomfortable. We are going now through much the same experiences of panic and distress as our great grandfathers went through 100 years ago, after the French Revolution and the Napoleonic wars. Things looked desperate enough in England in the "hungry forties," but they were followed by years of the greatest prosperity the country has ever known. So may it be again.

Debts have been repudiated before and financial systems have crashed, but the world has still gone on. Apart from Russia, Germany's financial system, for instance, has been completely ruined once already since the war, but Germany is nevertheless not uncivilised.

Really and truly our problems today are mainly problems of adjustment, and we have sufficient reason and adaptability to overcome them in time.

It may be good for us to be scared, but on the whole I think we should deplore alarmist and inaccurate statements like the one under discussion. In the perspective of history our present troubles will doubtless be interesting to our posterity, but they will not be recorded as the end of a civilisation.

I will therefore take the liberty of comparing Mr. H. G. Wells with the jackal in one of Kipling's stories:—

"In August was the jackal born, the rains came in September, now such a dreadful flood as this, said he, I can't remember."

Of course in what I have been saying I am only talking according to the light of reason, and I do not wish to hurt the feelings of any religious sect who believe that the end of the world is at hand; they, like the early Christians, doubtless look forward to a higher state of civilisation—for the faithful, at any rate, after that event.

I understand that in 1912 a meteorite fell, fortunately, in Siberia, large enough to obliterate London and environs, and for all I know one big enough to destroy humanity may come our way. That would doubtless "knock the stuffing" out of civilisation, but, short of an act of God, and I use the word in a narrower sense than the insurance companies, I think we may go to bed happy in the sense that civilisation is quite reasonably safe from destruction; that the Britons will not go back again to woad and coracles; nor the Irish retire permanently to their bogs, nor the Americans hang the scalps of their enemies at their girdles.

Curbing the Pentode

EMPHASIS has often been laid on the fact that a pentode cannot be regarded as being interchangeable with a triode output valve unless the appropriate circuit alterations are made. The result of an indiscriminate change is almost always poor quality manifesting itself by a shrill over-emphasis of the higher notes, and, as often as not, there is little apparent increase in sensitivity unless proper precautions are taken.

The problem of matching, which is all important if the full benefits of making a change are to be obtained, has been dealt with from time to time, and the essentials may be repeated for the benefit of those readers who have brought forward specific questions. Briefly, the scheme most usually advocated is to use a tapped output choke, and to join the loudspeaker (in series with a large-feed condenser) between the most suitable tapping of the choke and earth. The tendency toward over-emphasis of high notes is curbed satisfactorily by shunting the choke with a correcting device consisting of a condenser of about 0.01 mfd. in series with a variable resistance of some 25,000 ohms, which gives some latitude for adjustment.

Certain highly specialised pentode valves may need different values of correcting components.

Protecting Valves in Short-Wave Sets

THE new type 30 valves, used in short-wave sets, require a filament battery voltage of 2.2, and this should not be exceeded, or the life of the valve will be greatly shortened. A d.c. voltmeter should be connected permanently across the filament of the valves. One meter may be used for all valves, as they can be connected in parallel and served with a single rheostat.



CLARE DILLON

Soprano, who will be heard in solos and duets from 4YA on Sunday, July 10.

—Zenith photo.

mind to direct them. The destroyer must himself be civilised, and therefore in a position to bequeath his knowledge to his successors. Surely the war itself has shown how impossible it is to destroy even one nation, much less a world-wide civilisation. Even if the worst came to the worst and Mr. Wells's atomic bomb matured, I think this would still remain true. War and poison gas and aeroplanes, revolution and widespread disorder might check our civilisation or modify it, but never, I think, destroy it. In many respects our civilisation has been actually advanced rather than retarded by the war of 1914-18, dearly though we have had to pay for it.

The case of Russia, I think, will illustrate my argument. In 1917 the Government of that country had completely broken down; everything, it appears, was in a state of disorganisation and chaos. Then followed a revolution as bloody and unpleasant as any revolution is likely to be. It was accompanied, moreover, by a series of civil wars. Apart from massacre and physical brutality the Bolsheviks discarded their commercial honour and their international morality. They confiscated pro-