

Back-lash. (For ARTFORUM)

We make tools, they beat back at us, and this constitutes the structure of civilisation. For instance: We make levers by simulating the capacity of our arms to lift in an inanimate object, the levers beat back, and we now move our arms as if they were levers. Or: We breed sheep by simulating the capacity of our breasts to secrete milk in an animate object, the sheep beat back, and we now behave as if we were sheep and need "spiritual" shepherds like bishops and pastors. We simulate our own simulations. This back-lash is growing in violence at present: youngsters dance as if they were robots, bank tellers behave like automata, scientists think like computers, and artists act like plotters. This structure of civilisation permits the following description of the history of civilisation:

In paleolithic times people hunted with tools like stone knives and jackals. The knives were simulations of teeth, the jackals simulations of running legs, and people behaved like knives and jackals. This sort of behavior is called "magic". In neolithic times people worked with tools like plows and oxen. The plows were simulations of toes, the oxen simulations of muscles, and people behaved like plows and oxen. This sort of behavior is called "myth". In Bronze age people used tools like swords and horses. The swords were simulations of knives, the horses were simulations of oxen, and people behaved like swords and horses. This sort of behavior is called "heroic". In Iron age people people used tools like bars and wires. The bars were simulations of bones, the wires were simulations of nerves, and people behaved like bones and nerves. This sort of behavior is called "scientific". Instead of trying to analyze what is meant by magic, and myth, and heroism, and scientific organisation, we should analyze the backlash our tools exerce upon us. If we did so, we might program the future. When building future tools, we might program the backlash they will emerge upon us.

History has been a blind process so far, because nobody considered the effect of tools upon humans. Stone knives were not made for the purpose of having people perform magic dance, nor were wires made for the purpose of having people disprove the theories of Newton. In fact: it is difficult to foresee how a tool will beat back upon its user. Take an example: Plows required people to build permanent houses, this led to the rise of villages, this again to political life, and this resulted in political parties. But who might have foreseen that plows will beat back on people in the form of political parties? However, such a futurisation has become a possibility at present. Because tool making is changing.

The first change in tool making occurred during the Industrial revolution. No longer were tools made empirically and according to traditional models, but on the basis of scientific research. This explains why animals (animated tools) became obsolete: there were then no scientific theories to permit the industrial production of jackals or oxen. Animate tools are cleverer than inanimate ones (an oxen is more intelligent than is a plow), but they are mortal. This is why our behavior became ever more mechanical and less intelligent with the Industrial revolution: we simulate machines and no longer jackals. But this is now about to change: we now have scientific theories in biology, and more intelligent tools are in the making.

We are beginning to build levers equipped with simulations of our nervous system (with artificial intelligences), and soon we shall be building artificial jacksals and oxen by using genetic manipulations. This will be the second Industrial revolution, and it will render obsolete inanimate machines, just like the first one rendered obsolete the horses. Those tools will beat back at us, and we shall behave less mechanically and more intelligently in the future. We shall be simulating our simulated intelligences. But this is not what is so revolutionary about the second Industrial revolution. It will permit us to program the back-lash of tools upon us, and to include that program in the design of future tools. History will become a deliberate process.

Tools are objects designed to "work", meaning to pluck out parts of the world, change their shapes, and put them where we ourselves are (at our disposal). This is what the word "production" means, namely to lead parts of the world (pro-ducere) from where they are to where they should be. This action of tools is called their "economic function". During most of history tools were designed in view of their economic function. Lately, it became obvious that the tools, when plucking out parts from the world, thereby change the whole world. This aspect of tools is called their "ecologic function". Lately, ecological considerations have been taken into account during tool designing. Now it is becoming painfully obvious that the tools beat back upon us. This aspect of tools may be called their "anthropological function". It will become possible and necessary to design tools taking into account their anthropological function.

This will imply a profound change of attitude in the face of civilisation. Let this be illustrated by an example: In neolithic times it became necessary to build houses to shelter harvests. Those "public buildings" were constructed on the heaps of trash which accumulated near the village, in order to protect the harvest from inundations. A guardian was appointed to keep watch over the store-house. This guardian collected the harvest, and he distributed it in winter. He developed into a Big Man, and later into a priest, a king, and into God himself up there in Heaven. The heap of trash developed into a tower, into the Kremlin and the White House. Moreover, from where the guardian sat he could foresee the course of the river, and thus program canal building. This was the beginning of geometry, and of Modern science. The shelter for harvests was a tool originally designed for economic reasons. Its anthropological function (the way it beat back upon its users) was political, religious and scientific. Nothing of this had been programmed in the design of the shelter, which is why history has been a blind process so far. We are being challenged now to design future shelters with a view to the political, religious and scientific back-lash they will exercise upon us.

When designing the intelligent tools of the future, we will have to know how we want them to beat back upon us. And this implies that we will have to know how we want to change in the future. It is a commonplace to say that we change the world in order to change ourselves, but now this commonplace is becoming a technical problem. The design of the shape of humanity is the challenge.

This is a formidable challenge. It supposes that we not only know how we want to be in the future, but also that we agree among ourselves about it. So far, there seem to be very few signs which would permit such an optimistic attitude toward humanity's ability to take its own destiny upon itself and design it. But it cannot be avoided. If we continue to design our tools from economical and ecological considerations alone, and if we continue to disregard anthropological considerations, there can be no doubt that civilisation will smother us, that the tools will beat back at us and transform us into an amorphous jelly. Because, as the tools become ever more intelligent, they tend to become ever more powerful than we ourselves are. The only way to keep the tools in rein is to design them for their anthropological function. We have to know how we want to be, and we have to agree among ourselves about it, or else it will be the end of human civilisation. Either history will become a deliberate process, or there will be no history in the future.

This is a radical statement. But the situation we are in is a radically new one. Our tools are beating back at us in a way we can no longer tolerate, if we want to survive as human beings. Not only those tools designed to destroy humans (like nuclear weapons), but even those tools which were designed to serve humans (like computers). To say this, however, is to be optimistic about the future. People have always stood up to challenges, if they were strong enough to menace their existence. They might just do it again, and thus, for the first time in history, shape their own destiny by designing a civilisation which will beat back at them in the form of a more meaningful human existence.