

MAN IN THE AGE OF TECHNOLOGY

1.

53

Technology is commonly perceived as a »tool« at man's disposal but, in fact, technology today has become the true »subject« of history, in relation to which man is a mere »functionary« of its apparatus. Within this realm, man has to perform the prescribed and described actions that account for his »field of action«, while his *personality* is held back in favour of his *functionality*.

Given that technology has become the subject of history and man its humble servant, it follows that humanism is dead and those humanistic categories that have until now been relied on to read history are no longer suited to interpreting the time revealed by the age of technology.

In a way, technology can be considered the *essence of man* insofar as man is a living being devoid of instinct. The traditional definition of man as a »thinking animal« is basically inappropriate, since man lacks precisely the basic animal characteristic of instinct.

Instinct is a fixed response to a stimulus. If an herbivorous animal is shown a piece of meat, it will not perceive it as food, whilst if it is presented with a bundle of hay, it will gobble it up immediately. Man is not equipped with these fixed responses to stimuli, which we call »instincts«.

Freud himself who, in his early works, speaks of *Instinkt* later abandons this term in favour of *Trieb*, which is usually translated as »drive«, a generic push towards something. Even the »sexual instinct« is barely instinctive, so much so that when confronted with a sexual stimulus we are either apt to let ourselves go to any type of perversion – something to which animals do not seem to be

prone– or, conversely, focus on a non-sexual object, such as a work of art, a poem, a musical piece, etc. This is what Freud refers to as »sublimation« of the sexual drive.

We should not, therefore, perceive man as an animal with instincts but, rather, as a living being who, precisely because he is not ruled by instincts, can survive only by becoming »immediately technological«. In light of the above, we can mark the beginning of humanity as the moment at which an anthropoid used a stick to pick a fruit. It is this technical component that allows man to make up for his lack of instinct and, as such, it also represents his realm of freedom.

Freedom is not a gift of God. Man is free because he is biologically lacking and because he is not ruled by instincts. Freedom is his biological indetermination. We are free precisely because we are not ruled by instincts, as opposed to animals, which know exactly what to do from the day they are born till the day they die.

The theory according to which man is not endowed with instinct was at first put forward by Plato in *Protagoras*. In this work, Zeus is said to have asked Epimetheus (*epi-metis*, afterthought, therefore unwary, unprepared) to endow all living beings with certain characteristics, namely instincts. When it was man's turn, Epimetheus had used up all his resources, since he had been too generous with those who had come first. At this point, Zeus, who took pity on human fate, asked Epimetheus' brother, Prometheus (*pro-metis*, forethought) to give man his own gift, i.e. foreknowledge, foresight.

Thomas Hobbes, too, maintains that animals eat when hungry whereas man is *famelicus famis futurae*, namely, hungry for the hunger yet to come. Man does not need to be hungry in order to search for food because he foresees that even though full, the time will come when he will need food again. This is man's virtue: his foresight.

Hence, from the very beginning, man was born a technological being. We could say – more articulately – that the day when anthropoids performed their first technological gesture marked the birth of him whom we call »man«.

2.

The issue of technology was a subject of debate in ancient Greece even before the birth of philosophy, an example being the tragedy *Prometheus Bound* by Aeschylus. One should not think of Greek tragedies as theatre performances staged uniquely with the intent of making the audience either laugh or cry. The Greek people are the most serious people in the world. Whenever

issues arose within the city, these were performed in the theatre, that is to say, within a sacred dimension. In fact, all Greek words beginning with *thiea*, as in *theos* (god, hence, *Zeus*), »*theorema*« (theorem), »*theatro*« (theatre) contain a reference to the sacred.

In the above mentioned tragedy by Aeschylus, Prometheus, a friend of mankind, brings the gift of fire, which man can use to melt metals and produce tools. Prometheus gives man both the ability to estimate and foresee, as well as basic technological skills. At this point, however, Zeus fears that man, because of his technological knowledge, may become more powerful than the gods themselves. The conflict between religion and science is already obvious at this point. In fact, science and technology give access to what previously man had to beg from the gods. As a result, Zeus punishes Prometheus: he ties him to a rock with an eagle gnawing at his liver which, however, regenerates perpetually so as to guarantee endless suffering.

Myths should be viewed with the utmost attention, since they are not simple tales, fairy stories or a result of mere imagination. Myths contain science and knowledge. By way of example, the regeneration of the liver shows the high medical knowledge of the physicians belonging to the School of Kos (a small, Greek island near the coast of what today is Turkey). These physicians had already pointed at what is the fundamental characteristic of the liver, namely its ability to regenerate continuously. In fact, liver cells regenerate every 3 to 4 weeks. This myth is thus based on scientific knowledge.

Let us go back to the tale by Aeschylus. At a certain point, the Chorus questions Prometheus about which of the two is more powerful: technology or nature. In order to understand this question correctly, one needs fully to embrace the thinking of the ancient Greeks. This implies breaking free of the Christian notion of nature which is inherent in us all, believers and non-believers.

In the Judeo-Christian culture, nature is the product of God's will and thus, as is true for all things created by will, nature presents a set of characteristics which, however, could have been different. Furthermore, nature created by God's will is then given to man so that he can both draw a livelihood from it and exercise his power over it. In *Genesis*, in fact, God entrusts Adam with dominion over the animals of the earth, the fish in the water and the birds in the sky. Nature is thus conceived as a product of God's will passed down to man.

This notion is inconceivable in the world of ancient Greece, since, in the eyes of the Greeks, nature is an unswerving entity ruled by an all powerful category: necessity (*anánke*). The laws of nature cannot undergo any change.

»This universe which no God and no man created – maintains Heraclitus – has always been, is and always will be unchangeable.« (fr. 30)

Hence, it is not the product of will, which can either be such or otherwise, and even less something that man can rule over. To quote Plato: »Petty man, do not think that this universe has been created for you. Rather, you will be just if you comply to the universal harmony.« (*Laws*, 903 c)

Therefore, whoever envisages the ancient Greeks – and Plato in particular – as the forerunners of the Christian culture has not understood either the Greeks or Christianity. An abyss lies between these two worlds.

In the Greek world, men must contemplate nature and try to capture its constant entities. It is on these constant entities that the order of their cities and the order of their souls will be founded. Nature, thus, represents the reference point for the polity and for the good governance of the soul, an area which today belongs to the realm of psychology.

In the Judeo- Christian culture, in which nature is given to man for him to rule, there is no contradiction between nature and technology, while in the Greek world, this contradiction is felt very strongly for, assuming that nature is unchangeable, what happens if it is modified by technology? Prometheus gives a deadpan reply to the Chorus: »*Téchne d'anánkes asthenestéra makró*,« technology is far weaker than necessity, which forces nature to remain unchangeable and its laws constant.

In *Antigone*, Sophocles narrates how a plough furrows the soil, but then the soil folds back into place again after its passage. Similarly, a ship sails the sea, but the waves in no time level it out, creating a dreamy calm. Hence, nature does not trespass the law of necessity, and technology never violates the law which governs nature. However, Prometheus's reply is correct only because at that time technology was hardly developed.

3.

Let us now skip 2000 years, from the age of Aeschylus to the 17th century, a time in which fields were still being tilled in exactly the same way as in the age of the ancient Greeks. Hence, from a technological perspective, nothing much had changed. True, Roman architecture and hydraulic engineering had made their impact, but it was natural slopes and natural energy resources that continued to be exploited. Similarly, in the field of medicine, drugs did not treat an illness but rather backed the natural course of recovery. In short, nature came first.

In 1600, however, something entirely new appeared: *modern science*. The names to refer to are Francis Bacon, Descartes and Galileo Galilei. According

to them, man should no longer follow the ancient Greeks, who limited themselves to contemplating nature in order to perceive its laws. A reverse process is needed, they maintain. Man should put forward hypotheses concerning nature, nature should undergo experiment and if it confirms the experiment, then *man's* hypotheses will be adopted as laws of nature. This is the scientific method, the basis of so-called modern science.

Two centuries later, Kant refers to that event as the »Copernican revolution«. Prior to Copernicus, the earth was believed to be at the centre of the universe. With Copernicus, however, the sun-earth relation is inverted: the sun becomes the centre of the universe, with the earth revolving around it. Kant also quotes two Italian names: Galileo Galilei and Evangelista Torricelli who, according to the philosopher of Königsberg, did not behave towards nature like two dutiful schoolboys, taking for granted whatever the teacher says, but rather like judges who make a defendant answer their questions. Nature has become the defendant, who answers man's questions and, if it confirms the hypotheses advanced by man, then these are adopted as »laws of nature«.

We need to be crystal clear on the following point: *science is the essence of humanism*. Humanism is not the literature surrounding man, it is not Lorenzo Valla's treatise *De dignitate hominis*, it is not art praising man. The essence of humanism is science because, as Descartes put it so well, it is through the scientific method that man becomes *dominator et possessor mundi*, master and ruler of the world. Man has found the method to interpret nature and organize it as he sees fit. In the light of the above, the distinction between human sciences and natural sciences appears rather naïve, inasmuch as it is modern science itself which grants man his superiority over nature.

At this stage, we need to clarify two points. When we speak of *science*, we should not envisage something »pure« in contrast to which *technology* is simply an application, either good or bad, depending on its use. Such a perception is based on the false conviction that technology is nothing more than the *application* of science, while in point of fact it represents its *essence*. This is not to say that no scientific research is possible without technology, but rather that science does not look at the world in order to contemplate it, but rather in order to manipulate and transform it. The scientific approach contains an inherent technical intention, which channels it in the direction of manipulability. Somehow, it is as if a poet and a carpenter were to go into the woods together. They would not see the same thing when looking at a tree: the carpenter would see furniture.

Let us consider now the second prejudice. True, there is a certain degree of inherent conflict between science and religion – between Zeus and Prometheus, the myths we mentioned earlier. However, it is relative conflict, much less important than the profound identity existing between science and theology.

Science is an off-shoot of medieval theology. In spite of the fact that science declares itself afinalistic and proceeds on its way as if God did not exist, science is seeped with theological metaphors. Theology divided time into past, present and future and established that the past was evil (namely, original sin), the present redeeming (redemption through Christ followed by the good deeds of man) and the future salvation. Hence, past, present and future are not three homogeneous entities. This triad – this way of conceiving time – is the same as in science. In fact, science states that the past is evil since it represents ignorance, the present is research and the future is progress. Science has a theological mindset and it is therefore fair to say that the work of a scientist sits on a deeply theological foundation.

58 Francis Bacon can well be called witness to this in his work *Novum Organum* in which he very clearly states »science contributes to the redemption of man.« (*Novum Organum* § 52). Why so? Because, Bacon tells us, with the help of science man can reacquire the supernatural gift which Adam possessed before the original sin and, above all, because he can alleviate the suffering caused by the original sin. Suffering – as we all well remember – means *pain* (»in pain shall you bring forth children«) and *work* (»in toil shall you eat«). Science, or rather, »techno-science«, contributes to redemption by reducing the hardship of labour and the cruelty of pain. This, precisely, is the theological realm into which science was born.

What followed – this is still in 1600 – was a description and the envisioning of technological cities in readable works such as Francis Bacon's *The New Atlantis*, Thomas More's *Utopia* and Tommaso Campanella's *The City of the Sun*. Naturally, these were acts of imagination, since technology had not yet developed its application. Yes, fields were still being tilled as in ancient Greece.

4.

Two hundred years on, Hegel made two statements which were to prove crucial for the structuring of the technological age. In his *Science of Logic*, Hegel maintains that wealth will not in the future be determined by »goods«, but by »tools« insofar as »goods« are subject to consumption, while »tools« can produce new »goods«.

This seems obvious enough to us because we grew up in an industrial world followed by a technological one but, at the time, it was not at all as obvious. Suffice it to remember that only forty years earlier, Adam Smith, the founder of political economics with his renowned work *An Inquiry into the Nature and Causes of the Wealth of Nations*, had declared that goods were the yardstick by which wealth was to be measured. Hegel, however, maintains that this will no longer be true and that wealth will be determined by tools and machines, by what produces and not by what is consumed.

Hegel's second decisive statement was the following: *quantitative* growth does not imply growth in terms of quantity only, it also implies a radical change in terms of *quality*. Hegel uses a very simple example to illustrate this: if a man plucks a hair from his head, he is a man with hair; if he plucks two hairs from his head, he is still a man with hair; if he plucks all his hair, he is bald. Hence, there is a change in terms of quality caused by the simple increase, in terms of quantity, of a gesture.

Marx uses Hegel's theorem to apply it to the field of economics. We are all accustomed to think of money as of a means to achieve given aims, i.e., to satisfy needs and produce goods. However, Marx argues, if money grows in terms of quantity to a point at which it becomes the *universal condition* required to meet whichever need or produce whichever goods, then, at that point, money ceases to be a *means* and becomes the main *end*. In order to achieve this end, it is necessary to decide whether to meet the needs and, to, what extent produce the goods. Thus, money is no longer a *means* but an *end*, and what used to be an end becomes a tool needed to achieve that end (money), which is still considered by most to be only a means.

Marx's argument can easily be applied to technology, too. Assuming that technology is the *universal condition* by which to achieve any given aim, it ceases to be a *means* and becomes the first and foremost end to achieve in order to be able to pursue all other aims.

About fifteen years ago, the Soviet Union collapsed. Very often this collapse is ascribed, somewhat naïvely, to »humanistic« reasons, such as the people's material living conditions or the lack of civil and political freedom. However, humanistic reasons are never the origin of historical collapses.

In the early 60s, the Soviet Union could avail itself of a technical device equally powerful as that of its rival, the American capitalistic world. At that time, whilst the Americans had yet to launch their satellite into space, the Soviet Union had already done so with Sputnik. The hypothesis of a collapse of the Soviet Union was out of question. Conversely, in the 80s, American tech-

nological equipment had developed to such an extent that it was beyond the reach of the Soviet Union, the proof being Michael Gorbachev pleading with Ronald Reagan not to set up a nuclear weapons' shield, since there was nothing with which the Soviets could counter it. At that point the Soviet Union was bound to collapse. As Emanuele Severino reminds us in his book *Il declino del capitalismo* (*The Decline of Capitalism*)¹, assuming that the aim, i.e. communism, can be achieved only through technology, should this fail, communism would lose ground.

Similarly, if technology becomes the *universal condition* by which to achieve any aim whatsoever, it (technology) ceases to be a »means« and becomes the foremost »end«, pursued by all since, without this end, it is impossible to achieve those ends that are perceived as the real ones, for example, global communism or global capitalism. All this has enormous anthropological consequences. For the sake of brevity, I shall confine myself to two areas only: politics and ethics.

60

5.

Basically, *politics* was invented by Plato and is, therefore, comparatively recent. Before politics there was tyranny. In Giacomo Marramao's *Dopo il leviatano*², the author maintains that politics can nowadays be compared to an ousted ruler, good only for ceremonial functions and for galvanizing and rallying emotions, identities and a sense of belonging. It is no longer the arena within which decisions are taken. This is due to the fact that politics depends on economics as far as decisions go and economics, when taking decisions in terms of investments, depends on availability and technical resources.

To argue that the only way to avoid Chinese competition is to improve our technology, hence investing in research, means to acknowledge the superiority of technology over economics, which in turn is based on the superiority of economics over politics. Thus, politics becomes the *representation* of decisions but no longer the *place* where decisions are taken. There is a danger in this for, as Plato reminds us, technology knows *how* to do things but not *whether* they have to be done and *why* they have to be done. This prompts the need, according to Plato, for that »art of government« (*basiliké techné*) represented by a politics fit to endow technology with the aims of its procedures. Nowadays, the

¹ Emanuele Severino, *Il declino del capitalismo*, Rizzoli, Milano 1993.

² Giacomo Marramao, *Dopo il leviatano*, Bollati Boringhieri, Milano 2000.

relationship between technology and politics, with the latter supervising the former, has completely reversed.

There is more. Technology has also overturned the *structure of power* which, in the pre-technological world, was represented by a triangle of some sort. At the top were the decision makers – the sovereign's will, the law, power – at the bottom obedience/transgression, lawfulness/unlawfulness, citizens/subjects.

Technology no longer allows such a depiction of power. Technology grants power to whoever works within a system. Hence, as an example, it takes only 10 radar controllers to bring down the entire air traffic system, whilst a traditional strike would have to attract at least 80 – 90% of the workers of a given category to be considered successful.

We are thus confronted with a new power, inasmuch as technology calls for its sub-apparatuses to be coordinated in order to make things function smoothly, in a perfectly coordinated manner. It is sufficient for one small link in the chain to stop working for the whole system to come to a halt. This is how technology grants power to all who work within an apparatus, a power that the Americans have termed *no making power*.

To call for decision prone politicians, as was the fashion in Italy in Bettino Craxi's time and to some extent still is today, in the age of technology, is the least effective thing to do, precisely because, if a small interruption is by itself sufficient to bring the whole system to its knees, a politician needs to be an expert *broker* rather than a decision maker. Decisions are not compatible with the functionality of technology.

Furthermore, technology could determine the *end of democracy* (the conditional form is there because we are all enamoured of democracy, but the truth is, one could also argue its *de facto* demise). Technology, in fact, forces us to take a stand on issues on which we are no experts. Suffice it to recall the latest referendum on artificial insemination, or the nuclear power debate, or the GMO issue. In all the above cases, it is possible to give a qualified opinion provided one is either a doctor, a nuclear physicist, a molecular biologist or a genetic scientist, respectively. People who lack this specific expertise will take their stand based on »irrational« foundations, such as an ideological identification with a political party, a fascination for whoever appears more persuasive on TV shows, a fondness for a particular politician.

Plato would have defined this system, which nowadays can be referred to as »telecracy«, in terms of *rhetoric* or *Sophistys*. What was rhetoric in Plato's time? Of the 35 dialogues that the Athenian philosopher left us, at least ten argue against rhetoricians and Sophists, that is to say, against those who gain

public approval not by means of rational reasoning, not by explaining how things really are, not by meting out skills, not by arguing their thesis, but rather, on emotional grounds, on the sophistication of parallelisms, on appealing to authority, on exercising emotional persuasion.

Plato argued that these had to be expelled from the city, since a democratic system could not be established so long as such mystifiers of language and consensus existed. When we argue that telecracy could wipe out democracy, we are again raising Plato's issue concerning rhetoric and democracy. Today, we are in exactly the same situation, insofar as technology forces us to tackle issues that require far greater skill than we actually possess.

Let us examine now some considerations referring to *ethics*. Technology often confronts us with issues requiring »moral« decisions. But what sort of morality can possibly relate to technological and scientific events? The West has known basically three types of morality: *Christian morality*, with such an imposing history that the entire European judicial system has been built on it. It is a morality of *intention*, that is to say, in passing a judgment about a person, what matters is his/her *intention*. If a man deliberately *intended* to kill, then he is guilty, if he killed by mistake, that is, without *intending* to, it is a crime committed without malice aforethought, if it is the case of a previously planned crime, it is a wilful crime and, finally, if it is the case of a previously, but not sufficiently well planned crime, it is manslaughter, etc. In each single case the concept of intention is inherent, there is a reference to soul searching seen as a necessary means to enable us to judge how good and moral given behaviour is.

In this age of technology, an ethics of intention is not particularly needed. When confronted with a technological event whose outcome is potentially devastating, there is little use in knowing the intentions of those who caused it. In the case of the atomic bomb, what matters is its destructive potential, rather than the reason why Enrico Fermi and his friends decided to work on the project in the first place.

Next, there is a *secular morality* which, for the sake of brevity, one could summarise quoting Kant's very appropriate proposition: »man is an end, not a means«. This, too, is a morality of intention, although Kant does not base it on any theological reference, but solely on rational instruments. It is for this very reason that we can speak of *secular morality*. It is a morality that has never stood any chance of being implemented inasmuch as a man's existence, in our culture, especially, is justified in terms of his being functional, someone who produces something. Let us consider the case of an immigrant: the fact that he exists and that he might even have basic needs, does not *per se* justify his pres-

ence in our country. It does, however, if linked to a productive role. His presence is justified by his role as a producer of goods. In this respect, Marx gave proof of extraordinarily clear foresight with regard to the human condition in the age of technology. The inaccuracy of his forecast consisted in giving a lower estimate than what turned out to be the actual fact.

However, even if man were to be considered an end and not a means, the efficacy of this type of morality would still be limited. What does it mean that man is to be treated as an *end*? It means that everything else can be treated as a *means*. However, in this line of argument, is air a means or an end to be safeguarded in this age of technology? Is water a means or, in its turn, yet another end to be safeguarded? What about animals, plants, are they means or ends to be protected?

Neither of these two moralities, secular and Christian, has ever taken responsibility for the being of nature since, at the time, it was not necessary to do so. The population was low and nature was lush in comparison. The world population has today grown disproportionately, so much so as to put nature at risk. Confronted with the need to protect nature, we lack the ethical means to do so. Although legal measures exist, the perception that the act of polluting is a moral crime has not yet seeped into our moral conscience. Let us consider rape, for example. It is perceived as an immoral act by everyone, but not so pollution, hence secular morality is not up to the technological process.

In 1910, Max Weber advanced a moral theory which was picked up again in the 80s by a disciple of Heidegger, Hans Jonas: *responsibility ethics* (*Verantwortungsethik*). Max Weber says: we should not focus on the *intentions* of human actions but, rather, on their *consequences*. He goes on to add: »as long as the results are predictable«. Well then, it so happens that an inner trait of technology is to produce unpredictable results; the reason being that a scientist's mindset is not *finalistic* but *procedural*, i.e., a certain scientist might be doing research on a given molecule for 20 years and another scientist might be working on a different one altogether for 15 years. If something anthropologically useful comes out of the combination of these two pieces of research, then a useful return of some sort is obtained.

»Anthropologically useful« really means above all »economically useful«. Were it not so, the African plight of malaria and AIDS would have been overcome long ago. Instead, this has not happened because the »anthropological return« is not a scientist's all-important goal. His research work does not include usefulness, aim and purpose.

Maximum self-empowerment is techno-science's sole aim, proof being the unstoppable funding of nuclear power research. The nuclear powers can today destroy our planet 10,000 times over and yet this does not deter them from research aimed at perfecting the atomic bomb. The situation is utterly absurd; but it is precisely this aspect which reveals to us the characteristic of the technological and scientific apparatus, whose sole aim is its self-empowerment.

Moreover, there is no power controlling science because there is no power whose knowledge equals that of the scientific realm. Specialization has reached such high levels that special magazines for physicists are published in the US to explain to physicist A what physicist B is working on in a sufficiently simplified language to allow the two to understand each other. Considering such high levels of specialisation, who could possibly control this sphere?

The time for a technological takeover has not come yet, however. Economics still controls science insofar as it invests solely in research with a prompt economic return. Very soon, though, techno-science will break free, thanks to the fact that it is the highest form of rationality ever achieved by man.

64 Before the birth of technology, economics was the highest form of rationality, a supremacy passed on to technology owing to the fact that economics still suffers from a human passion: the *passion for money*, which is an irrational element from the point of view of perfect functionality and maximalisation of the means–end ratio. Hence, we can say that economics, spoilt by passion, a human passion, is a humanistic science, after all, although it still controls a non-humanistic skill called technology.

6.

The Second World War can well be said to mark the beginning of the age of technology. This is not because a technological society did not exist prior to that. Indeed, the full weight of technology had already been felt during the Industrial Revolution and was further enhanced by armed conflicts. However, it was during World War Two that technology developed to such an extent as to determine an *anthropological mutation*. The mindset forged in those years was to become the dominant model for all of us who live in the technological age.

The German philosopher, Günther Anders, who fled to the USA to escape Nazi persecution, is adamant on this point. Having found employment in a Ford car factory, he declared: My teacher, Martin Heidegger, taught me that man is »a shepherd of Being«. But it seems to me that here, instead, I am »a shepherd of machines« which display an ability, precision and intelligence ut-

terly superior to man, so much so as to make me feel a »Promethean shame« with regard to the process of mechanics.

Anders, a persecuted Jew, claims that Nazism forced a radical change on man's mindset; something which, according to him, is »more tragic than the slaughter of 6 million Jews.« What did he have in mind? Anders was referring to the transition from acting to simply doing: we *act* when we perform actions aimed at a given end, whilst we *do* when we carry out our task proficiently, regardless of its final aim which we do not know or, in the event that we do, for which we are not responsible.

During the Nüremberg trials, as well as during the Eichmann trial, whenever the generals were questioned regarding responsibility for their actions, they invariably answered: »I was simply following orders.« In the technological society such a reply could be perceived as perfectly correct. It is for this reason that Günther Anders goes so far as to claim that Nazism was a »provincial theatre« in which to experiment on the making of the age of technology. By means of this experiment, man has made the transition from *acting* to *doing*, from bearing responsibility for the final aims of acting to the mere undertaking of an either well or badly performed task: mere doing.

In her 170 interviews with Franz Stangl, commandant of the Treblinka death camp, Gitta Sereny asks one thing only: how could he have eliminated 5000 people a day and, above all, what were his feelings at the time? Franz Stangl does not appear to understand the question, repeating over and over again: »At 11:00 am 3000 people would arrive, they had to be eliminated by 3:00 pm, since another shipment of 2000 people was due to arrive and had to be eliminated by the following day. This procedure had been established by Wirth. It worked. Because it worked, it was irreversible. Carrying it out was my job.«

Günther Anders also wrote a 60-page-long letter to the American pilot who dropped the atomic bomb on Hiroshima. Anders' intent was to try and understand where he got the strength and motivation to do what he did: drop an atomic bomb on people he did not know and had never met, well aware of the consequences of his action. The pilot never replied to the letter, but some time later, in the course of an interview for a magazine, when asked what his possible answer could have been, he said: »*Nothing, it was my job.*« In other words, he considered himself a good pilot because he knew exactly how and when to press the button. All that was required of him was a *technical skill*. That was his »job« and he was responsible for nothing else.

The term »work« which carries such positive connotations, is very dangerous in this age of technology, because it limits responsibility to the faithful

execution of orders, hence the responsibility is *related to one's superior* and not at all to the *consequences of one's actions*.

If we were to visit a landmine factory, what should we call the people working there: »criminals« or »workers«? Eventually, we have to make up our mind, we must call them something. Perhaps, it would be more appropriate to refer to them as »workers«, for we can rest assured that, were they offered double the salary, they would be happy to go and work for a food company. Yet again, we are faced with a remarkable unconcern for the final aim of a »job«.

When, twenty years ago, an Italian bank was involved in an arms dealing scandal with Saddam Hussein, were the bank employees guilty? Obviously not. What about the employees and stockholders of a US telephone company which – as was later revealed – contributed to the coup in Chile, were they all guilty? Also in this case the answer is no.

Are we to be held responsible for the final aims of those industries we finance when investing in the stock exchange? No, because technology pushes us into focusing solely on that restricted area that lies between our investment and the subsequent profit. That is where our responsibility ends. Indeed, this denotes the transition from *action* to simple *doing*. This is the age of technology, as the president of the United States himself reminds us each time he declares we will remain in Iraq until the job is done, as if it were simply a task with no final responsibilities attached, thus giving proof of complete lack of responsibility in terms of what is actually occurring on the ground.

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7.

Martin Heidegger, perhaps on account of his partiality towards the Nazi ideology, having witnessed the »provincial theatre« mentioned by Günther Anders, was early in understanding the age of technology. He wrote the following: »What is really disquieting is not the fact that the world will be completely taken over by technology. Far more disquieting is the fact that man is not ready for this radical change. Far more disquieting is the fact that man is as yet unable to use his meditative thinking in order to cope properly with what is emerging from our age.«³

As it is, the only thinking available to man is what Heidegger refers to as »calculating (*Denken als Rechnen*)«, fit solely to make sums, respond to profit and gain, operate only in that small space that separates the means from the ends so as to be as cost-effective as possible. Beauty also fits into this mould,

³ Martin Heidegger, *Gelassenheit*, Neske Verlag, Pfullingen 1959, p. 25.

for this, indeed, is what happens to a work of art when it is put on the market, the market being a realm of estimates and calculations. It appears that art has no value per se, unless it is »mercantile« and thus, »computable«. Hence, we no longer know what makes something »beautiful«, »good«, »right«, »virtuous«, »holy«, »true«.

There is still some free thinking out there, but it is merely a pastime, a Sunday afternoon diversion. It has no real impact on what is going on in the world, a world where profit and the maximalisation of the means-ends relation are pivotal.

Technology brings a radical change to the way we structure our thought because, despite the fact that machines are manmade, they imply an objectification of human intelligence that is far greater than the capacity of an individual. A computer's memory is definitely bigger than ours. Although it is a »stupid« memory, by making use of it, it turns our thought from »problem solving« as it has always been, into a »single track« one, following the 1/0 grid which makes us give »yes/no« answers or a »don't know« at most.

It is no coincidence that human thought evolved precisely when it got beyond this stage. Primitive thought was based on the binominal concept of light and dark, day and night, earth and sky. At the beginning of mankind, there were only two parameters. Then man began to think in a more problematic and complex way. Nowadays, this way of thinking is imploding into one-track logic again, the same as is found in TV quiz shows – which, incidentally, influence even the news – in final exams and even in university entry tests.

The argument according to which technology is either good or bad, depending on its use, is also groundless, because what changes us is the fact that we use technology, regardless of whether we put it to a good or bad end. The very fact of using it changes us. Chatting on-line means undergoing a change in the way we relate to our friends, because there is a difference between having a conversation on-line and having it face to face. If our children watch TV for four or more hours a day, their way of thinking and feeling is bound to change, regardless of whether it is a good or a bad TV programme. Long exposure is sufficient.

Our emotions also undergo a remarkable change. Our psyche responds to its surroundings (*Um-welt*), those into which we were born and in which we cultivate our relationships. The media, instead, expose us to the troubles of the entire world (*Welt*). How are we supposed to cope? If my brother dies, I weep, if my neighbour dies, I express my sympathy to his family, if I am told that eight children die every second from starvation in the world, well, I am afraid

this information is mere statistics in my eyes: I no longer respond because I am faced with events that go beyond my capacity of emotional perception. What is »too big« leaves me cold. In order to avoid contact with my helplessness, I repress the information. Hence, we cannot even cope emotionally with the event that is technology.

Yet again, we are faced with the fact that technology is no longer a means at man's disposal but, rather, the *environment* within which man also undergoes change. Hence, technology can mark that absolutely new and maybe irreversible stage in history in which the question ceases to be: »What can man do with technology?«, but rather: »What can technology do to man?«.

Translated by Nada Pretnar