

The Power of Stupidity



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Chapter 19 The Stupidity of Technologies

There is no human culture – or civilization – without technology. . From the remote origins of our species, “man is the toolmaker” (*homo faber.*) Knowing how to make, design and improve tools marks the difference between humanity and any other living organisms. Archaeologists continue to discover that “stone age” technologies were more refined than we used to think.

This hasn’t been, and isn’t, an evenly evolving process. There are phases of acceleration and times of decadence. Discoveries and technical solutions that were developed two thousand years ago were forgotten for many centuries, until new scientific approaches re-opened the path of knowledge. ¹

We are becoming skeptical about the notion that we are in a stage of great progress. However, to some extent, it’s true. Scientific exploration is advancing beyond anything that we could imagine a hundred or even fifty years ago. Technology is developing in so many ways that it’s difficult to understand which solutions fit where, when and how. But the turbulence of change is sometimes bewildering, always confusing.

¹ It isn’t “exactly” true that there were computers in ancient Greece, but it’s a fact that in the “hellenistic” culture there were remarkable scientific developments, and technical devices, some of which were only recently re-discovered – such as the *Antikythera Mechanism*. See *The Archimedes Computer* gandalf.it/offline/archim.htm

It's hard to tell what is a real improvement and what isn't. We are making useful progress in several areas, but lagging dangerously behind in some of the most important. We are making inconsiderate changes in things that would be better if we had left them as they were. "Progress" has never been coherent or homogeneous. It's important to understand that it's even more confused where we are now.

It would be easy to say that, as humanity is often stupid, so are its machines, to the same extent and in the same way. But it isn't so, because machines aren't people. They have a different role and work in a different way.

Alan Turing, who had an important role in the development of electronic computers, used to say that «*if a machine is supposed to be infallible, it cannot also be intelligent.*» The role of a machine is to perform, in a very precise manner, a strictly defined task. By doing so, it can't be intelligent – or stupid.

However we are afflicted, with increasing frequency, by all sorts of problems and mishaps due to the clumsy stupidity of technologies. The more functions are added, aggregated and complicated, the greater is the probability of malfunction or mishandling. The more they pretend to be "intelligent", the less we can trust their "infallibility" – or their reliability in performing a simple task without turning into a frustrating puzzle.

Complex machines are, more and more, part of our daily experience. It's hard to imagine a world in which there aren't motorcars and airplanes, home and office appliances, networks and computers – or where we can't communicate instantly with people, wherever they (or we) are. The basic functions of these technologies are generally sound and reliable. But they become fragile with fake "innovations" and clumsy "updates."

This doesn't happen only with the equipment that we are directly using. We are only vaguely aware of how our life is conditioned by the technologies that are used in the systems that run the world we live in.

A discussion on the messy stupidity of technologies, and its multiple effects, could fill thousands of pages. There are some interesting books on this subject.² The people who design and manage technologies aren't more (or less) stupid than the rest of humankind. But the reasons – and the consequences – of technical stupidity have some very specific peculiarities.

Technology multiplies stupidity. And so do some human behaviors – but in a different way. For instance the power syndrome actively enhances and complicates stupidity (as we saw in chapter 10 *The Stupidity of Power*) and this happens also with other ways of being and thinking that we have been discussing so far.³

² It is explained quite clearly in *The Inmates Are Running the Asylum* (1999) by Alan Cooper and *The Software Conspiracy* (2000) by Mark Minasi. Also in *Slaves of the Machine* (1998) by Gregory Rawlins and *In the beginning was the command line* (1999) by Neal Stephenson (see chapter 13 – and gandalf.it/netmark/comline.htm) There is a brightly sarcastic description of this disease in *The Hitch-Hiker's Guide to the Galaxy* by Douglas Adams about *The Sirius Cybernetics Corporation* – online www.sput.nl/~rob/sirius.html

³ See also chapter 18 *The Vicious Circle of Stupidity* – and 12, 13, 14, 15, 16, 17. More on behaviors and attitudes that increase stupidity will be explained in following chapters.

Technology (unlike human behavior) is a neutral multiplier. An automatic mechanism that can reproduce nonsense in millions or billions of copies. An elaboration system that can start with some small human error and spread it into countless complexities, so that it becomes irretrievable – and the resulting mess leads to a “potentially infinite” expansion of stupidity, with effects that can range from disturbing to catastrophic.

One of many things that I wrote on this subject was an article published in March 1999. *Machines aren't "bad", but they are very stupid* (gandalf.it/offline/stup.htm).

This is how it started. «*Since the beginning of modern industrial technology, two centuries ago, literature (not only science fiction) has been painting all sorts of catastrophic scenarios. Machines, they imagine, will take over and reduce us in slavery. Also other attitudes appear to reflect an irrational fear of technical development. But the problems we are facing are quite different.*»

I added that «*we haven't seen, and it's unlikely that we shall ever see, "intelligent" self-replicating machines running the world and reducing human beings to cattle. The problem is that machines are essentially stupid – and more and more complicated. Often complexity makes them less reliable, maintenance and repairs are more difficult. One doesn't need to be using a computer to run every day into a mess caused by a poorly conceived, or badly applied, technology.*»

Are the machines to be blamed? Sometimes it seems so. But the cause of problems is always human error – or trickery. Machines carry out repetitive pre-defined tasks. When they don't do it properly the blame is on whoever designs them badly, manufactures them poorly, uses them in the wrong way or sells them promising things that they can't do.

What has changed in ten years? Nothing, except the fact that it's getting worse. Only occasionally some truth has been surfacing, as in the case of the automotive industry, as well as other manufacturing, where rushing ahead with inadequately tested technologies (especially electronics) caused some serious problems, and the way they are designed and applied needs to be radically reviewed. (See *The Stupidity of Technologies* – gandalf.it/offline/stutech.htm – May 2004.)

An unusually bright headline in an Italian newspaper, *La Repubblica*, on April 14, 2004, called it “the long night of electronics.” For too many years we have been kept in that uncomfortable darkness – with more nightmares that we want or deserve. Time goes by, but we still don't seem, so far, to be waking up as actively as we should.

In well run industrial applications the prevailing trend is to proceed with efficiency objectives – and, when automatic production equipment doesn't live up to quality standards, good factory managers know how to step back to more reliable resources – while they continue to experiment with potentially better innovation. But, when it comes to information and communication technology, most companies find themselves stepping out of their areas of competence – and into a messy, confusing proliferation of available tools.

It's a proven fact that large investments in ICT technologies without precise objectives and a clear idea of process lead to an enormous waste of money – in addition to technical failures, all sorts of organizational problems and loss of quality.

Of course it's possible to make and use reliable devices, computers and networks. In most cases the navigation systems of airplanes, electronic equipment in surgery, and other applications that put human lives directly at risk, have good levels of efficiency (and adequate backup.) But there are many large systems that don't work as well as they should.

Even in elaborate scientific and technical pursuits, such as space exploration, there have been several surprising accidents due to poorly conceived or applied technologies.

A “clever bomb” is a very stupid machine. It uses its sophisticated navigation systems to reach a specific destination and then activates a device. It has no idea that by doing so it will self-destruct and blow to bits lots of things – including a number of human beings. It's up to who conceived it, as well as those who use it, to make sure that it achieves the largest possible result with the least possible “collateral damage.”

In the daily use of electronics the consequences are much less dramatic, but they cause every day all sorts of problems that could be easily avoided if technologies were designed, applied and used to fit the needs of people and organizations.

We are strangely accustomed to this disease. We accept far too easily the ridiculous idea that the inefficiencies of computer and network technologies are unavoidable – or that, when things don't work, the blame is on the user.

An industrial robot works better than a human being when it performs with precision a repetitive task. But, when complex procedures are to be managed, technologies are much less reliable.

Most people today, unless they are totally incompetent in this field, no longer speak of computers as “electronic brains.” But there is still a fairly widespread delusion that we can delegate thinking to machines. Or that, by nobody knows which esoteric influence, they can do some sort of thinking of their own. ⁴ It's important to understand and remember that machines are mindless. We should never expect them to be able to perform without human supervision.

The reason why so many devices work poorly, and tend to get worse, isn't a mischievous perversity of machines or of the abstruse codes that run them. It's the human stupidity of those who design, sell and apply clumsy and inefficient devices.

It isn't just nearsighted, but positively stupid, to develop technologies to fit the whims of programmers (or gee-whiz marketers) rather than the needs of all other people. And things get worse with the widespread habit of treating people as idiots, and forcing them into obedience, instead of encouraging (and helping) them to adjust technologies and procedures to fit their personal requirements, attitudes and behaviors.

⁴ I must admit that, like several people I know, sometimes I get angry at a machine (especially a computer) when it isn't doing what I expect it to do or, even worse, it does things that I don't want. Of course I know that it isn't listening to my outburst. But, in addition to “letting off some steam”, it helps me to focus on the problem and to be as obstinate as it takes to find a viable solution.

A machine works well, most of the time, when it's designed in the simplest possible way for a very specific purpose. Even a machine that does a variety of different things, such as a personal computer, would work much better if functions were kept separate and independent, with shared resources only when they are necessary – or really useful and convenient.

Many problems and irritating mishaps would be avoided if each person could install only those functions that he or she really needs – instead of being forced to operate in a clutter of unwanted, and often unknown, devices that interfere with each other and cause a lot of unnecessary trouble.

It happens also that a technology, per se, works, but the way it's used leads to mistakes, inefficiencies and bad habits (a widespread and obnoxious problem is *The Powerpoint Disease* – gandalf.it/offline/pwp.htm – but there are several other ways of being “carried away” with a technical resource and losing sight of why it's being used.)

Another enhancement of the power of stupidity is the absurd notion that everything is growing “exponentially.”

There is a misconception originating from information technologies. It isn't actually true that “something” in data processing “doubles every two years.”⁵ But anyhow, regardless of what happens inside computers, no such concept can apply to the times and cycles of human evolution – or to all sorts of events that can be slower, or faster, depending on a variety of circumstances that it's stupid, and dangerous, to “generalize” in any imaginary standard. This myth didn't only cause all sorts of problems and failures in the use of technologies. It also contributed to the general haste syndrome that we discussed in chapter 16.

A silly notion, that now seems to be forgotten, was largely accepted at the end of the twentieth century. It said that with “new technologies” there was a new definition of time: “a year lasts three months.” There have never been any facts to prove that ridiculous theory. But it was preached as “absolute truth” in conventions, seminars, management manuals, training sessions and universities. The results were grotesquely funny, but quite distressing for many who invested in hasty ventures.

Especially in communication systems, complications and inefficiencies are going from bad to worse.

A telephone is a very useful tool, but turning it into a multi-function machine has made it unreliable and difficult to use, while by being “too easily” accessible people and organizations build up defenses and interferences that make them practically unreachable.

The clutter and malfunctioning of automated “answering services” is the subject of many jokes, but it isn't funny when it stands in the way of finding answers or getting things done.

⁵ That was originally known, in 1965, as “Moore's Law” «*the number of transistors that can be placed on an integrated circuit is increasing exponentially, doubling approximately every year.*» When, in following years, it was found that it wasn't happening, the “speed” was “downgraded” to eighteen months, and later to two years. But, even so, it's meaningless. Quite simply, there is no such “law.” And, more importantly, the concept can not be extended, as some still do, to all sorts of unrelated developments. This is explained in gandalf.it/stupid/moore.htm

The technologies that were conceived forty years ago to run the internet, and twenty years ago for the world wide web, were basically efficient, reliable, open and transparent. They still are, and they still work.

But on those sound foundations too much stuff has been added. Clumsily conceived and hastily built cathedrals, fragile and often unsafe, that suffer from the same diseases as the most widespread operating system for personal computers, with all its cumbersome applications.

I haven't written, and I am not going to write, a separate book on this subject. But there are several comments on the use of communication technologies in three books that I published in Italian – and in many articles, some of which are online also in English. There is a list, with links, in gandalf.it/techno/ The solution of all these messy problems is based on two simple concepts.

The most effective and reliable technology is the least elaborate, and the most thoroughly tested, that fits the purpose (and therefore it's the most intelligent – as we shall see in chapter 20.) And, basically, technologies must be designed to fit human needs, not to force people into unnatural, and often nonsensical, obedience to automatic devices.

To demolish the proliferation of useless clutter, irritating complications and unacceptable inefficiencies, we don't need a bulldozer or a weed killer. The best medicine is a strong dose of practically applied common sense. And a firm determination to put the machines in the service of people, not vice versa.

A description of the book
is online – stupidity.it