

On typography.

This paper will consider the present transition from the Gutenberg culture toward an electro-magnetical one from the point of view of typing. It will suggest that the gesture of typing articulates a specific way of thinking, a specific mentality which we are about to abandon. And it will try to glance into the future to see what sort of mentality may be expected to supplant the one expressed in typing. Thus it is not so much the technique of typing, it is ^{the} world view which underlies typing that shall be put in question.

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The printing press was not really an invention. Almost all the techniques which it employs were wellknown long before the 15th century: the press was used to manufacture olive oil, negative forms were cast in metal for hundreds of years, the manufacture of paper had been invented centuries before, and ink was in use ever since the Egyptians. What the printing press really meant was the discovery that the letters of the alphabet are not characters, but types. This was a discovery which was to change the very structure of Western civilisation. What we call Modern Age was born. Namely that Age which manipulates types in order to understand and to dominate the world. The Age of Science.

The inventors of the alphabet were not conscious of what they had invented. They took the letters to be signs for sounds which are characteristic for a specific spoken language. Thus they believed that every language required an alphabet of its own: in the Middle Ages four such alphabets were in use, the Greek, the Arabic, the Hebrew and the Latin ones. Of course: medieval writers knew that alphabets may be adapted to languages which they were not originally meant to render visible. They used the Latin alphabet to write down "vulgar" languages, and the Arabic one to write down Iranian languages, (to quote a few examples). Still: they felt that there was something illegitimate in this abuse of letters. The "sacred" character of the letters suffered from this vulgarisation. Gutenberg, by handling the letters as if they were three-dimensional objects, (as if they were "realities" and not symbols), showed the relative independence of letters from the sounds of a specific spoken language. He showed that the letters do not represent sounds, but that they typify them. That it is possible, within limits, to use any alphabet for any spoken language. For instance to use the Latin alphabet to write down Mandarin or Suahili, within limits. The printing press showed that alphabetic writing is not a gesture which captures the sounds of a specific language, but that it is a gesture which abstracts the specificity of that language, in order to discover what is typical about it. That writing is a gesture of abstraction and typification. Gutenberg discovered what the inventors of the alphabet had unconsciously invented: abstract and typifying thinking.

But he did even more than that: he showed the limits of this thinking. Although he did not yet use the Latin letters to print Suahili books, only German ones, he still had to adapt his types to the specificity of the sounds of his language. There is, for instance, no Latin letter to represent the German sound

"sh", so one had to be invented. (By the way, "sch" is not a very happy invention. The problem involved here is this: although types are abstractions from the concrete world, and although they lead a sort of independent life of their own, they must be adapted to the concrete world ever so often. What Gutenberg showed was that types must be manipulated, if they are to capture what is typical in the concrete world. By doing this, he demonstrated that there are two distinct kinds of manipulation. The one is a handling of concrete objects, and it is called "work", the other is a handling of types, (of symbols), and it is called "information production". In fact, the printing press was a practical demonstration of what writing is: not a gesture of work, but one of information production. That he who writes does not aim at changing the world by handling objects, but by handling symbols. And that he handles the symbols in such a way that they may grasp the objects. This demonstration, slow to become fully conscious, had profound consequences.

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For classical and medieval philosophy and theology the types, (the forms that underlie the characteristic phenomena and are hidden by them), were eternal, unchangeable "ideas" which can only be passively contemplated. They hover in the heavens, and all man can do is to "theoretically" contemplate them. The praxis of handling types as if they were objects, the praxis of the printing press, gave birth to a new attitude toward "theory", and the very word changed its meaning. It no longer meant contemplation of forms, and it came to mean deliberate manipulation of forms. The types, the ideas, were no longer taken to be eternal and unchangeable, but on the contrary to be plastic, and requiring constant adaptation to the concrete world. Thus a dialectics was established between theory and observation, during which observation changes theory and theory changes observation. And the praxis of the printing press demonstrated that types can be applied to objects, pressed against them. Thus a dialectics was established between theory and application, (technique), during which techniques change theories, and theories change techniques in a processus called "progress". In short: the praxis of the printing press brought about that sort of mentality from which modern science and technology were born.

To illustrate the difficulty in achieving that mentality, consider the following: Medieval scholastic philosophy thought that the logical problem posed by comparisons touches upon the very root of human existence. What do I do if I compare a chair to a table? Do I discover that both are pieces of furniture, and is this "furniturity" the essence of both chair and table? Or is there no such thing as "furniturity", and did I invent the word "furniture" for the sake of convenience in order to compare two completely unique, and therefore in reality uncomparable objects like a chair and a table? Each of those two alternative answers will have me lead a different life, if I choose to follow them.

If "furniturity" is indeed the essence of both chairs and table, and if to compare between the two is indeed to discover that essence, then two methods are available to pierce appearances and advance toward what is hidden by them. The first method consists in making comparisons of ever higher order. Having discov-

ered "furniturity" by comparing chair to table, I can discover "objectivity" by comparing a piece of furniture to a piece of metal, and so forth, until I come up against the highest of all the essences, namely God Himself. The second method consists of extracting the essence from the appearance. Thus I can advance from base metal like lead and mercury toward their essence, which is gold, from there toward the stone of wisdom, the fount of eternal youth, and so forth, until I come up against the "fifth essence", the quintessence hidden behind all appearances, namely God Himself. Thus, if I choose the first answer to the problem of comparisons, I can see God and save my soul through philosophy and theology, through alchemy, and through similar disciplined endeavors. This is the way of life chosen by the "realists", by those who believe that essences, "universals", types, are realities, ("universalia sunt realia").

If however "furniture" is nothing but a name which I invent for convenience' sake, then I must accept the world I was thrown into at birth as a context of unique, uncomparable appearances which hide nothing and therefore have no meaning. My effort to compare one appearance to another is nothing but an attempt to give a meaning to an absurd world, and it is doomed to failure. Philosophy, theology, alchemy, and all similar disciplined endeavors will ^{result} only in my getting ever more involved within this net of meaningless appearances, in this valley of tears, in this devil's dragnet. The only way to escape from it is by pure faith, "sola fide". By turning my back to the world of appearances, and by turning toward God, in the hope that He will save me. This is the way of life chosen by the "nominalists", by those who believe that "universals", types, are mere names, ("universalia sunt nomina").

The new, modern mentality which was brought about by the praxis of the printing press has in effect ended this medieval quarrel about what the types are, by proposing a third alternative answer. Types are neither realities nor are they mere conventions, this new mentality suggests, but they are useful abstractions from concrete phenomena, which permit to understand the phenomena and to change them. And they can be manipulated to permit ever better understanding and ever more efficient operations. Thus the invention of typography, (which was not really an invention but a discovery), contributed powerfully to the difficult transition from medieval mentality to the modern mentality of scientific and technical approach to the concrete world.

Now this abstract and typifying way of thinking, which manifests itself whenever we read printed matter or use a typewriter, is no longer adequate to the emerging cultural situation. Which is the fundamental reason for the substitution of typing by new methods of information production and information distribution, (like digitalized computer images). To understand why the modern mentality is becoming obsolete, it is useful to consider the premiss it stand on.

The Greek term "typos" means "trace": the imprint of a bird's foot on a beach is a "typos". He who observes that imprint, may conclude what sort of bird had caused it: it is "typical" of that bird. The Greek term "graphein" means "to

engrave, to imprint", and it means "to write" only later. In effect, it means to do deliberately, what the bird on the beach does spontaneously: leave traces which permit an observer to conclude what caused them, (to "decipher" them). Thus the term "typography" is a pleonasm: it means "to trace traces". (Which is the reason why Gutenberg, by inventing typography, did nothing more than discover what is implicit in the invention of writing.) Now the mentality which was brought about by typography, and which expresses itself in typing, is grounded in the belief that the traces which the objective world leaves in the subject may be manipulated, and then projected back upon the world in an effort to change the world. In other words: that it is possible to describe the world, and then use those descriptions to change the world. This belief proved to be a very powerful one in the course of Modern age, and in fact the changes brought about in the world by science and technology have changed human existence beyond recognition. But at present, this belief has become open to two sorts of objections. The one says that what we write down, (the types we engrave), are not really traces left by the world, but traces of the way our own thinking functions. (That we do not discover the so-called "laws of nature", but that we project the rules of our way of thinking into the world, and then re-discover them and call them "laws of nature"). The other objection says that the changes scientific and technical progress has brought about, (for instance Auschwitz, the thermo-nuclear weapons, or pollution of our surroundings), are not a proof of the correctness of our belief, but of its folly. The two objections, (the epistemological and the ethical one), taken together, are about to undermine the modern belief in the premiss that underlies typing: that it is possible to typify, and then use the types to change the world for the better. They are about to undermine the belief in progress.

There is a curious "nominalistic" flavor to those two objections, (to use this medieval term). The epistemological objection seems to say that the types are pure conventions after all, ("flatus vocis"), and that they show this when typifying, "modelling" thought is applied to the phenomena of the sub-atomic level. And the ethical objection seems to say that disciplined, scientific, "value-free" research, (and the technology based on it), will involve us ever more deeply in the devil's dragnet. In fact, this "nominalistic" climate, which experiences the world as an absurd context, is with us at least ever since Kafka. But there is this difference between the medieval and our own situation: we no longer have that faith which inspired for instance St. Francis. We cannot go back to nominalism.

But we can go forward. If indeed typifying is not the manipulation of traces left in us by the objective world, but if it is the manipulation of our own thought structure, and if indeed the world is an absurd, meaningless context, then is it not possible to project deliberately a meaning, (various meanings), upon the world by manipulating types, (symbols)? If we no longer believe that it is possible to discover something "behind" the world, (because there is nothing there to be discovered), can we not project something "upon" the world? Of course,

such a new mentality, which no longer tries to discover but attempts to project, would have to abandon the distinction between truth and fiction. Having lost faith in science, and having lost faith in "God" long before that, it will have no use for the concept of "truth" in the traditional meanings of that term. Still although a distinction between truth and fiction would no longer apply, this does not necessarily mean that any fiction is as good as any other. New criteria for projections of meanings upon a meaningless world would have to be elaborated. Nietzsche's sentence "art is better than truth" does not necessarily imply that we have to expect the abandon of all criticism.

Now we can make an effort to intuit this new mentality which is emerging from the present crisis of typographical thinking. Because this new mentality is already about to manifest itself through various channels, of which the synthetic images produced with computers are good examples. Those images are computations of meaningless particles, (electrons), and their purpose is to produce meanings. They are "Sinngewebungen", (givers of meaning), in a sense close to what Husserl had in mind in his analysis of the phenomenal world we live in. For this new, "phenomenological" mentality, the abstract and typifying thinking of modern science, (as it is articulated in typography), is no longer adequate, and it is to be substituted by a return to the meaningless things like electrons themselves, ("zurueck zu den Sachen selbst"), and then by a deliberate production of "fictitious" meanings. We can intuit this new mentality, because this fictitious world of images without material support, this fictitious world of electromagnetic immaterials, is already now being experienced by us as being the real world, ("Lebenswelt"), we live in.

Modern scientific thought, brought about by typography and expressing itself typographically, is about to be overcome by post-modern, post-scientific thought, brought about by electromagnetic images and expressing itself, (as yet very tentatively), in those images. This transition from one mentality to another will no doubt be at least as slow and difficult as was the transition provoked by the invention of printing. This is the reason why we can do nothing more but try to vaguely intuit what lies in store for our children. But one thing seems to be certain: the world view which underlies typing, (including this text, which is being typed), will not survive the transition.