THOUGHTS ON TYPE AND THE DIGITAL REVOLUTION

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The digital revolution swept up people of my generation long after we had consolidated our careers. To some of us it was a shock and the implications took a long while to be understood, metabolized and appreciated. To others the necessity to adapt one's life was immediately recognized and seized with enthusiasm. Briefly, the following is a personal attempt to understand what has happened and to put a few things into some historical context. These concern the mass diffusion of digital technology in the graphic arts in general but with an emphasis on typography that is coloured by my experience of teaching the history and theory of typography in Italy.

At an exhibition a few years ago I was impressed by the sight of what was then a brand new computer sitting next to another model produced by the same manufacturer a few years earlier. The amazing contrast between the two machines was obvious to all. The new one had a wide screen and the transparent housing moulded with fashionable rounded curves proudly showed off its electronic entrails. The older computer was small and was contained in the dull, muddy yellow plastic that we remember of the photocopiers from the 1980s. Some months later when I happened to see a handpress from the 1840s next to a platen press made exactly a hundred years later, those two computers instantly came to mind. A century separated the two presses and there was less than fifteen years between the computers. But the *apparent* time gap between the computers seemed immense and that of the presses insignificant.

Such is the pace of technological evolution in our times. We are all familiar with the game of built-in obsolescence with fridges and cars but in the case of computer hardware we must admit that so far it has been the galloping and ever more convenient technology that has obliged us to buy and consume more computers in order to cope with programs requiring more and more memory and to have instant access to broadband internet. But the digital revolution that has changed our lives over the past twenty years may be entering a phase of stability. Maybe we are in for a pause to the frenzied technological leaps that now transform sophisticated fully-functional machines into embarrassing rubbish within a time-span of four or five years. Apart from the beneficial ecological implications of such a pause (which could be a minor point), for me this would mean not having to change computers for want of an increase in memory (which is certainly a minor point). But perhaps this is just wishful thinking because on

the other hand some informed people say that we are close to the inevitable dawn of another 'revolution within the revolution.' Digital storage systems will again become incredibly mightier yet infinitely smaller. But they will require new software and new computers – a fearsome bore for some (like me) and an exciting new challenge for others who cannot wait for it all to happen. Nevertheless, whichever way things turn out over the next few years, we still seem to be in the thick of the *mêlée*. Only future historians will really be able to put this period into some kind of perspective and declare the early years of the 21st century to be part of the first, second or whatever phase of the digital revolution – if that particular name stands the test of time.

It is becoming quite difficult now to think of professions that are still immune from the necessity of work done on a computer. My dentist has a PC and he can show me diagrams of my molars and canines with the click of a mouse. He can also substitute toothache with a different kind of pain by showing me his invoice on the same screen and printing a copy of it within seconds. The proprietor of a quite nice pizzeria near my house designs his own menus on a computer and prints them himself with downloaded illustrations of the ingredients in gaudy colours. He is not a graphic designer or a printer but for his own very specific requirements digital technology allows him to become a semblance of both. However, shifting our attention directly to the graphic arts – which seems more appropriate than teeth or pizzas for this article – was DTP really the first example of 'democratization' of the 'black art' or, to be a bit more precise, 'do-it-yourself' printing?

Although we cannot claim Louis XV as a champion of democracy, while he was still a child he was trained to set type and print because this was thought to be a suitable amusement for the future king and, more importantly, an *aide memoire* for his lessons too. Later, the idea that printing could become a sort of game or pastime for the middle classes in Britain and Europe became a reality when certain Victorian manufacturers opened an amateur market by producing toy and miniature presses – this latter being a genre which was successful right up to the end of the letterpress period. However, some simple table presses were produced which were conceived by their manufacturers as instruments for real work. Some of these small, discreet and easy to operate presses were to achieve heroic status during the Second World War when they were used by partisans from the Piedmontese Alps to the Warsaw ghetto for printing anti-nazi leaflets. But many years earlier some of these presses may have been installed in schools, offices or small businesses where there was a constant need for printing small runs of circulars, notices, labels, etc. In 1878 the Milan typefounder and manufacturer C. Zini cleverly advertised his table press as a simple and convenient alternative to leaving the job in the hands of a professional printer. An advertisement shows

a wood-engraving of the press with testimonials from twenty-two happy customers. '… it is simple, elegant and precise and it is particularly useful in places that are a long distance from printers,' writes the owner of a chemist shop. Whether the testimonials were real or made up by Zini we shall never know. A more interesting question is whether this example of printing technology moving from professional to non-professional was anything of a phenomenon in Italy or elsewhere. Although at this stage we are still a long way from talking about the 'masses' gaining possession of printing technology, the Zini advertisement does at least seem to point in that direction.

The first profession to 'spill over' into a mass amateur activity was photography. When this new art started off as a profession with Niepce and Daguerre in the 1830s some saw it as a threat to the painter – especially to portrait painters. And although it is true to say that this latter suffered a decline in the wake of photography, on the whole painting as an art form not only survived but redefined itself and gained in vitality. In 1888 the American Eastman Kodak company opened up what was quickly to become a colossal international amateur market based on the sale of cheap cameras and rolls of film. And this was a lot more than just another of the numerous technical leaps that occurred so frequently in every area of the graphic arts during that century. Our grandparents or great grandparents and the following generations became Sunday snap-shotters with the subjects of our photos yelling 'cheese' to make acceptable substitutes for real smiles. Digital photography has since then cut out the amateur's dependence on chemists or other specialists to develop the film and print the pictures. Do-it-yourself photography is now totally self-reliant as a result. Yet despite the spilling over from professional to amateur, the demand for all kinds of specialized photography continued and the profession itself has never been seriously threatened. Likewise, something similar can be said in the case of design for print. In spite of the fact that graphic design or 'visual communication' is practised in one way or another by large sections of the population, the need and the demand for good professional design has not ceased. The huge increase in university courses in design all over the world provides ample proof of this.

Democratization (not an entirely satisfactory word) or the popularization of technology has been especially intense within the graphic arts and it is worth remembering that photography itself is a worthy member of this very grand family. Although the old wood-engravers were able to produce very clear and beautiful images based on photographs, professional photography killed off wood-engraving as a commercial profession. But, paradoxically, catalogues of machinery or consumer goods with retouched black and white photographs from the 1950s and '60s were dull in comparison with their wood engraved counterparts of sixty or seventy years earlier. Nevertheless,

until not so long ago photographic retouching was one of the most highly skilled professions within the vast complexity of the graphic arts. The retoucher virtually disappeared the day after Photoshop and its magic burst into Macintosh computers. This program immediately became as much a necessity to designers as pencils and set-squares had been during the pre-digital offset period. Graphic designers still practise design, but the digital revolution has also transformed them into compositors, correctors, retouchers, digital paste-up artists and certainly much more too if we consider web design and not just design for print. But what more can be said of digital technology that has transformed and even eliminated various professions within the graphic arts?

After having maintained a key position in printing for nearly five and a half centuries the compositor disappeared. 'Comps' were well organized in unions and earned good wages during the letterpress period – especially in Britain when the national daily papers were still printed in Fleet Street. This highly esteemed profession, with an apprenticeship of about six years (with evening classes), succumbed when typewriters were replaced by computers and there was no longer a need for a professional to compose and typographically articulate the typewritten text supplied by an author or a journalist. From a typographic standpoint typewriters were very basic. They had no dashes (just a hyphen), no italics or bold type for contrasts and no small caps. Technical limitations permitted just one typeface in one size where all the letters were of a uniform width: an 'i' was as wide as an 'm'.

Today, responsibility for good typographic representation of the text lies entirely with the designer or typographer (as the case may be) who have absorbed the compositor's profession. But as an author also works on a computer with a variety of fonts, each with roman and italics, square and round brackets, em and en dashes etc., etc., the idea that he or she could take on this responsibility has been under discussion since the earliest years of the digital period. Authors can now articulate their own texts directly either by following the traditional composition rules or by using typography as a means of expression to enhance meaning. J. Safran Foer's *Extremely Loud and Incredibly Close* (London, 2005) is a recent and notable example of an author using typography in a creative manner to reinforce meaning. Composition has become an essential part in the training of graphic designers and typographers, but as we have seen, various strata of the population also choose fonts installed in computer operating systems and produce typographic texts of all kinds – from doctoral theses to the printing of parish bulletins, price-lists, menus and wedding invitations as well as for blogs and websites. Consequently the question is not whether the rudiments of typographic design on computers should be taught to the general public, but whether they

should be taught in primary or secondary schools. I would say that the basic elements of page layout and composition should be given an importance second to that of reading and writing. Moreover, as the Latin alphabet is used by most of us in Europe and the rest of the world, teaching something of its origins and history in schools might also be a good idea.

Now that uppercase has been abandoned by almost everyone, emails are often about as typographically primitive as telegrams or SOS messages stuffed into bottles. On the other hand, while DTP can be done by anybody who has two index fingers and a computer, the technical means for producing decent typography are available for texts that go beyond mere personal communication. But very often knowledge of programs like Word is not enough to produce texts that are decent and readable.

Design and production of type has traditionally been the most highly specialized of all the skills relating to the graphic arts. Like the history of printing, which is a very good paradigm of the history of human progress in so many fields, we may consider type to be not only the basic element in the transmission of human knowledge, but also a paradigm within the paradigm. Historically, all technologies from craft to mechanical to digital have been involved in its production. Type designs have interpreted fashions and all artistic tendencies from the Renaissance to neoclassical to art nouveau to rationalism and post-modernism. This has been especially true outside of the world of books (in advertising) since the early 1800s. Inside books stylistic changes in roman type for texts have also reflected the fluctuations of artistic climate. But these have been subtle and have hardly been noticed by the general reading public. Stanley Morison would have been pleased to know that 21st century books are still set in traditional old face romans. These continue to flourish and still seem to be a necessity – with the many versions of Garamond still holding their own as some of the most popular book faces.

Long before I became interested in type or printing, I remember the thrill of seeing my name in a boys' magazine printed in roman type. This was a very different emotion to seeing one's name typewritten or handwritten by someone important such as a headmaster. Since then roman type has lost its particular aura of authority or special importance. In the 1980s we started to receive bills in roman type, and before internet virtually put an end to the delightful activity of stamp-licking many of us will remember the surprise of getting letters in Times New Roman from friends who had previously used typewriters. Even official government announcements in various countries, which were once invariably in roman, are now often dressed up in the visual language of advertising and they can come in almost any typeface. But books resist. They are still the citadels of roman type – probably for the reasons indicated by

Beatrice Warde in her essay *The Crystal Goblet* (1955). In times of tempestuous change we all need a few things that stay the same and for me – while I am not at all adverse to experimentation and progressive design – it is a comfort that a lot of good modern books still adhere to Renaissance design principles.

With the diffusion of the first programs for type design on the computer in the 1990s, what had previously been a highly skilled and restricted activity practised by a few dozen specialist designers became a possibility for any designer who owned a computer and fancied trying his hand with programs like Fontographer. Besides some lively and successful interpretations of the roman theme, the early results included a crop of bizarre hybrids and fascinating monstrosities. Some of these were quite similar to another bizarre crop that filled the specimen books of the U.S. typefounders soon after Linn Boyd Benton invented his pantographic punch-cutting machine in 1885. Changes in technology always liberate new creative energy for design and traditional tastes are challenged. Bizarre type designs are always ephemeral but that does not necessarily make them less interesting than 'normal' type.

Prior to Benton's invention punchcutters were usually needed for making type. But following the success of the new machine these extraordinary craftsmen (who in many cases had also been designers and not only makers of type) were no longer required. Thus the 'type designer' emerged. He drew or painted letters in black and white on paper but had to find a typefoundry willing to produce them in metal. Although quicker than cutting steel punches, drawing type by hand was still a slow business. But both methods had always required perseverance and skill. Financial compensation was rarely overwhelming – as Francesco Griffo and Claude Garamond demonstrated when they both became publishers after successful careers as punchcutters and typefounders. But production of type was expensive. In the past century it needed solid organizations like typefoundries and (later) producers of type for photocomposition and other technologies to sell it. Type remained expensive up to the advent of digital design programs in the 1980s when it started to be purchased by designers with computers instead of only compositors with composing machines.

Once it was harnessed to type design, Pierre Bézier's invention of a vector system for producing curves stored as mathematical data completed the evolution of type. New digital typefoundries (often hardly more than one-man-bands) started to challenge a market dominated by big companies like Adobe. Thus the 'democratization' of the design and production of type also became a reality. Today there are thousands of graphic designers all over the world who have started to design their own type and the number of Latin fonts free or available for purchase on the web is certainly well over a hundred thousand. People are designing and making type for their own delight for

the first time since Bodoni. Type design has become a media for artistic expression because it is now easy, quick and cheap to produce. Other designers are clever enough to start their own digital typefoundries and sell their work on their own websites or get commissions from newspapers, institutions or private companies interested in an exclusive type design as part of their corporate identity. Design schools and universities have started to provide courses in type design for students of visual communication and this year in Italy alone, amazingly, at least half a dozen such courses have seen the participation of well over a hundred students.

Historical sources continue to provide much inspiration for digital type design. The availability of high quality type on the web together with many publications, websites and blogs with ongoing discussions about type has sparked off an increase in curiosity about the theory and history of typography on an international level. My recent experience in teaching in Italy has shown that students are better informed than ever and the best of them are eager to discover the great heritage of typography in its broadest sense. This is now understood not just as type but anything alphabetic from epigraphy to calligraphy to neon signs and graffiti.

In Italy this new interest in the culture of typography is gratifying and it is particularly significant for two reasons. The first and most obvious reason lies in the word 'heritage' which, as we all know, in the case of Italy is indeed great. The second reason is more complex and concerns a 'modernist' attitude that prevailed in graphic design circles and the teaching of design and typography in Italy until about a dozen years ago. Aldus and Bodoni were considered irrelevant and the heritage was limited to little more than F. T. Marinetti, the Bauhaus and Helvetica. Fortunately, thanks not only to the internet but also to the work and publications of people like Giovanni Lussu, Fabrizio Serra and the late Giorgio Fioravanti (not to mention James Mosley and Robert Bringhurst), in Italy the tide has turned and many young people are realizing that the past can provide inspiration for the present.

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