Comic Sans: The Typographer Replaced

by Till A. Heilmann

Dogs Don't Talk Like That

Introduced by Microsoft with the release of its operating system Windows 95, Comic Sans MS is a font that has become a permanent fixture in the personal computer software environment as one of the company's complimentary core fonts. Widespread around the world, Comic Sans is today available to practically every personal computer user, to the extent of being one of the most well-known digital fonts, and is used for all kinds of text, both personal and professional.

Unlike the electronic forms of traditional print or type fonts like Times or Helvetica, Comic Sans belongs to the group of cursive fonts that include Robert Smith's Brush Script and Roger Excoffon's Mistral, and digitally imitates handwriting. Its forms are similar to those of non-cursive handwriting and it seems as though a moderately practised student has carefully, yet still swiftly, put it on paper. The lines look as if they have been drawn with a semi-thick marker; their width varies only marginally, and non-connecting lines end in rounded tips. Every form "wobbles". No bowl is completely smooth, no two lines are at right angles to each other, no stem is really upright and no arms or bars are completely horizontal. Nearly all characters are – as the Sans in the name already suggests – lacking serifs. Only the capital I and J have such serifs, the capital C and lower case r have indicated serifs.

Originally Comic Sans was not intended to be used freely. It was only meant to be part of MS Bob, a graphical user interface developed by Microsoft in 1994 for personal computers, especially for novice users and children, and specifically intended to make Rover, MS Bob's animated golden retriever, talk. The comic-

style MS Bob inhabited the screen with different characters like the rat Scuzz, the cat Chaos, and the talking chequebook Lexi. To make interacting with a computer easier for new users, Rover and his friends uttered their more-or-less helpful hints in speech balloons: “Woof, woof! Where’s the manual? There isn’t one! When you want to do something, just follow your guide. That’s me!”.

A draft version of MS Bob fell into the hands of Vincent Connare, an American font designer who was working at Microsoft at that time. He was appalled when he saw that Rover’s hints were written in Times New Roman, and thought, “That’s silly. Dogs don't talk like that.”. He believed it would be better if it looked like a comic book and decided to design a set of more fitting characters. He modelled the lettering after a popular title that he had lying around in his office, Alan Moore’s Watchmen (the Citizen Kane of the genre), that included drawing and lettering by Dave Gibbons. The result of Connare’s work did not make it into the final version of MS Bob, which was to turn out to be a flop anyway. The font’s characters were just too wide for Rover’s speech balloons.

But in-house the new font was immediately a huge success. The personnel in Microsoft’s administrative department started using the font for internal emails and correspondence, and Comic Book, as it was first called, was practically used as Microsoft’s corporate font for a while. A programme manager then became aware of Connare’s font and at first he had the font integrated into 3D Movie Maker, under the name Comic Sans. Later, complemented with Cyrillic and Greek characters as well as the Euro symbol, Comic Sans was delivered along with Microsoft’s Internet Explorer and as a pre-installed system font with Windows 95. An ad-hoc solution to a problem had unexpectedly turned into a common computer font; whenever a text had to be written on the computer, Comic Sans could be used as its font. With the growth of the personal computer market and the rapid expansion of the internet in the second half of the 1990s, Comic Sans was soon available to users around the world. Its popularity increased so much that, in 2008, the British trade journal Design Week even questioningly crowned it, “The world’s favourite font?” on its front page. Aesthetically speaking, Connare's Comic Sans contrasts with the means of its technical use and application, which is probably the reason it became so popular among personal computer users. With the simplicity of its characters, the imperfection of its graphic style, and its seemingly handwritten character, Comic Sans counters the high-tech complexity of the personal computer’s hardware and software and the standardisation of the characters on the keyboard. Its seemingly uncontrived form is what makes Comic Sans stand out from the cold precision of computer graphics. Thus, although developed with the latest font technology, through its imitation of handwriting, Comic Sans, the computer font, contradicts itself.

What You See is What You Get

It is no coincidence that the origin of Comic Sans coincides with the idea of a graphical user interface specifically for personal computer novices, because the original concept of the graphical user interface itself, that determines our use of computers today, emerged from the desire to make this complex technology available to non-experts. Until well into the 1970s, computers were far from being “personal”. The dominant model during the first decades of the development of the computer was that of the electronic calculating machine: a punch card mainframe operated by system specialists and engineers. It was used for batch processing mainly mathematical, scientific, or accounting calculations, in arenas such as the aerospace industry, warehouse logistics, and payroll accounting. But over the years the image of the computer merely as a calculating machine eroded. From the early 1960s the principle of an interactive use for computers

began to prevail, not only in activities such as military aerial surveillance and flight reservation systems, but also at American universities – that, among other things, became the setting for the realisation of the online operation of computers via text terminals, graphics programs with data pen input devices, and the first screen-based computer games like Steve Russell's *Spacewar*

The prospect that computers would soon be small and inexpensive enough to be used in private households was predicted by (among others) Gordon Moore, one of the co-founders of Intel. "Integrated circuits will lead to such wonders as home computers ... and personal portable communications equipment", Gordon concluded in 1965 in his famous Moore's Law about the development speed of semiconductor technology. At the beginning of the 1970s, a counter culture to the "calculating machine" had formed among hobbyists and around projects of visionary outsiders like Douglas Engelbart and Ted Nelson. This counter culture wanted to turn computers into personal and easily usable tools for intellectual creativity. Everyone, particularly non-specialist ordinary people, was supposed to understand them. "You can and must understand computers NOW", was written on the cover of Ted Nelson's 1974 programmatically titled emancipation book, *Computer Lib*.

The first personal computers were however anything but user-friendly. Delivered with rudimentary interfaces and little or no software at all, these computers were nearly impossible for non-specialists to use. The MITS Altair 8800, whose market launch at the end of 1974 was considered to be the starting point of the personal computer age, came as a kit for self-assembly. If after hours of tinkering you had successfully assembled it, you were confronted with the Altair's rows and rows of small control lamps and toggle switches. Without further interfaces (screens and keyboards were too expensive back then), and programmed in the binary machine code of the Intel 8080 processor, the Altair mainly caused sore fingers.

Graphical user interfaces like we know them today became marketable commodities only a decade later, in 1984 with Apple's Macintosh, and in 1990 with Microsoft's Windows 3.0 for IBM compatible personal computers. But graphical user interfaces had already been invented during the time when brave hobbyists were still soldering their Altairs. In the late 1960s the photocopier manufacturer Xerox, under then CEO Peter McColough, had planned to enter the business of digital computer technology due to the growing expansion and sales in the industry. To this end the company founded a development lab in Palo Alto, California, where the "architecture of information", as McColough put it, was to be researched and realised in innovative office devices.

Probably the most important innovation of the Palo Alto Research Center (PARC) was the Alto, named after the location of the lab: the prototype of the modern desktop computer with a graphical user interface and, equally important, with "what you see is what you get" (WYSIWYG) capabilities. In the field of computer technology, WYSIWYG initially meant nothing more than the fact that when texts, drawings, and images were being edited, the graphical user interface displayed them on the computer screen in a simulacrum of how they would be seen in their eventual printed form. (So more precisely it should be, "what you see on the screen is what you get on paper.") Conceptually speaking though, WYSIWYG is an expression of the philosophy behind the idea of the Alto, and the idea for the Alto itself came from the American computer scientist and engineer Alan Kay. At PARC, Kay had been working on a computer for children. Influenced by the work of contemporary developmental psychologists Jean Piaget, Jerome Bruner, and Seymour Papert, and their emphasis on the involvement of the learner in the learning process, and also by the Marshall McLuhan's media theory that campaigned for the creative character of technology, Kay wanted to turn the computer into an "active medium". As a dialogical, adaptable device, the computer

was supposed to accompany and support students during their learning processes. “It may be something with the attention grabbing powers of TV, but controllable by the child rather than the networks. It can be like a piano: a product of technology, yes, but one which can be a tool, a toy, a medium of expression, a source of unending pleasure and delight.” Kay’s design study described a small, light, and multimedia-capable computer (like the notebooks and tablets of today) that was supposed to replace printed educational materials. The Dynabook, as Kay named the computer, would be a “better book”, one whose contents were not to be passively absorbed, but actively shaped by the learner. Because it was intended for children, Kay’s design for the computer was actually aimed for the ultimate non-specialist.

Due to technical and economic reasons, the production of the Dynabook was impossible in the 1970s. But at least Kay was able to use the spirit of the start-up period at PARC and convince the management of the research centre to realise a high-performance computer in the form of an “interim Dynabook”. This kind of computer had long since been a vision of many computer scientists, and was to be Xerox’s pilot project for future products while also retaining essential features of Kay’s Dynabook. The result of this was the Alto, completed in 1973 after only a few months of work by the chief designers Butler Lampson and Charles Thacker. This computer was the precursor to many things that today are taken for granted in the field of personal computing, and included applications for text and image editing, an object-oriented development environment, server and email services, connectivity to printers and, as previously mentioned, a graphical user interface with WYSIWYG capabilities. Great importance was attached to the graphical interface of the Alto. Following the concept of the Dynabook, Lampson and Thacker made the new computer a flexible multimedia device: as Kay put it, it was a “meta medium”, able to adapt to different needs by simulating different media at the same time. To better facilitate quick and easy operations even by inexperienced users, the Alto was the first computer ever to possess a well-engineered graphics system that allowed for (by its contemporary standards) the high-quality display of texts, diagrams, and images on the computer screen – albeit only in black and white. As Kay had claimed for the Dynabook, his “better book”, the Alto was able to display characters and other forms as high-definition bitmap graphics.

When in the mid 1970s the engineers at PARC looked at the screens of their computers, they could simultaneously look into the past and the future of media technology. The precedent for the Alto’s medial capacities was, according to Butler Lampson “ink on paper, a proven and fitting metaphor”. And following this traditional writing media, the Alto even went so far such that the surface area of the upright standing monitor (eight and a half by eleven inches) was equivalent to the exact measurement of the American standard paper US letter; if you were using the Alto to write with “digital ink” on the screen, you were actually writing the text in the format of a sheet of “digital paper”. Bravo, one of the Alto’s most popular programs, was a software for writing texts and was the first real text processing application for computers. All later text editing programs, even Microsoft Word and OpenOffice Writer, trace their heritage back to this software.

Bravo was developed in 1974 by Lampson and Charles Simonyi, a young Hungarian-born computer scientist. Bravo made it possible for the first time not only to create text digitally, but also to use different fonts like the popular Times and Helvetica, in different sizes, and styled as italic, bold, or underline, with all these options displayed on screen. Moreover because researchers at PARC had rebuilt a commercial Xerox photocopier into the first functioning laser printer only a few years before, it was now possible to print the texts written with the Alto in the exact form in which they were displayed onto a sheet of paper. A visiting Citibank

employee, who had been shown this system by the proud PARC researchers, remarked to Wilson: “I see, what you see is what you get!”, and so the new technology had found its name.

The Alto’s graphical user interface made complex computer technology accessible to non-specialists and the WYSIWYG text processing with Bravo made complex typography, its setting and manipulation, possible for the uninitiated. Even without relevant training and equipment, it was now possible to create professional looking documents, an opportunity that was quickly taken up with great enthusiasm: relatives, friends, and acquaintances of PARC employees regularly visited the research centre to design and print their private and professional texts, letters, business plans, essays, and meeting minutes. With this PARC had already realised something that only was to become public a decade later, and that, in the shape of the personal computer and desktop publishing, was to revolutionise the computer and printing industry. Unfortunately Xerox did not succeed in transitioning from a photocopier manufacturer into a computer company. The concept of the personal computer that had been tested with the Alto, was never successfully introduced onto the market by Xerox.

In the end it was left to others to cash in on PARC’s research findings, and one of those that ended up doing so was a young software company based in Seattle. Disappointed by Xerox’s inability to commercially utilise the hardware and software developed at PARC, Simonyi left Palo Alto in 1980 and, with his insider knowledge about Alto and Bravo, he went to work for a small company called Microsoft, which back then was mostly only known for their programming languages. As a close confidant of Bill Gates, and the chief designer for their application software, Simonyi was substantially responsible for Microsoft’s monumental success and its rise in the software industry in the years that followed – and in the end one of the most important products that was developed under his leadership was a WYSIWYG text processing application that bore a striking resemblance to Bravo: Microsoft Word.

You Don’t Know Much About Typography

Gates was one beneficiary of PARC’s pioneering work, Steve Jobs another. In 1979 the head of Apple had been urged to visit PARC by his development team, that then included Jef Raskin who was pursuing the idea of “computers by the millions” and creating a user-friendly personal computer. After having seen the Alto and its graphical user interface, Jobs was convinced that the commercial future of personal computing would belong to an easily-usable device with this kind of interface. The efforts of Jobs and Apple to build such a device culminated with the Macintosh in 1984, the first personal computer with a mouse-controlled interface that was successful on the market. But the Macintosh only became a complete commercial success a year later, when the addition of further hardware and software turned it into a unique and truly revolutionary device. The combination of the first page-layout software PageMaker by Aldus, the page-description language PostScript by Adobe (that soon became the leading graphic format for digital layouts in the industry), Apple’s LaserWriter (one of the first affordable laser printers for the personal computer), PostScript-based fonts by Linotype (Times, Helvetica, Palatino, New Century Schoolbook), ITC (Avant Garde Gothic, Bookman, Zapf Chancery, Zapf Dingbats), and Adobe (Courier, Symbol), along with Apple’s Macintosh computer, created an entirely new desktop publishing platform.

The desktop publishing platform introduced by Apple, Aldus, and Adobe changed the whole printing industry. In less than a decade these new digital technologies for setting texts, graphics, and images on screen had nearly completely replaced

the older, photographic techniques. But desktop publishing was also revolutionary for the general public. A graphical user interface, WYSIWYG, and desktop publishing (or text processing) software, provided non-specialists with the means to design high-quality documents and print them with a laser printer. More importantly, everyone was now able to write effortlessly using a range of styles and typefaces. No longer constrained by their own handwriting, or a single face on a typewriter, dozens, hundreds, thousands of fonts from all epochs of the history of writing were soon made available to personal computer users. Even without any calligraphic or typographic skills, it was now possible to display text on computer screens in antique monumental lettering, Uncial, Carolingian Minuscule, Gothic Textura, Antiqua from the Renaissance, the Baroque or the classical period, in Egyptienne, or any other font, as long as it had been digitised for the desktop publishing platform.

This was a novelty. During the first decades of their development, computers could only type out characters via an electronic typewriter or teletype machine. Similarly home and personal computers like the Apple II from 1977, the first IBM PC from 1981, or the Commodore 64 from 1982, could only display a single font set in a rigid grid of fixed columns and lines. But even more remarkable is the fact that the digitising of fonts has always been accompanied by the endeavour to simulate handwriting. Even among the Apple Macintosh's original twelve bitmap-fonts from 1984 there were three cursive fonts: Los Angeles, London, and Venice. Before these, Cream, also a cursive font, had been designed for the Xerox Alto in the 1970s, and this font was to re-emerge in the 1980s with the Macintosh in the development environment SmallTalk – a programming language for children created by Kay and others. Earlier again, during the 1960s, the pioneer of font digitisation, US Navy physicist Allen Hershey had digitised not only different printing fonts, but also a version of a Latin cursive, of English Textura, a Gothic majuscule, and the German Gothic font Fraktur. Those fonts were then used for the computer-based output of technical reports and drawings on microfilm plotters. Clearly then, with the acquisition of fonts through digitisation, came the intent of demonstrating the simulative capacity and performance of the computer, through its ability to display "handwritten", or cursive, forms of text.

The range of digital cursive fonts is, today, seemingly endless. But why, out of all these fonts, is Comic Sans so popular? A simple, but nonetheless important, reason is the fact that Comic Sans was part of the delivered content with Microsoft's market-dominating operating system Windows and the web browser Internet Explorer, and that through this, the font had automatically found its largest possible distribution onto personal computers worldwide. However the reasons for its success also have to be searched within the font itself. The appeal of Comic Sans lies in its deliberate simplicity, and in the fact that the typeface does not aim for any aesthetically added value: the characters are neither especially pretty, nor artful, nor even eccentric (like, for example, Zapfino by Hermann Zapf). The graphical uniqueness of Comic Sans is that the font is nothing special. It is its common, plain form that makes this font so appealing to so many personal computer users. Although the characters look like they were written by hand, they lack the distinctive features of any particular individual's handwriting: anyone could write like that. Just as the barely differentiated faces of some comic book characters, like Hergé's Tintin or the heroes of Japanese Manga, make it easier for the readers to identify themselves with the protagonists, the simple characters of Comic Sans make it easier to identify yourself with the writer.

The downside of its huge popularity is the criticism, the massive rejection, that Comic Sans has been met with. The font is not only particularly loved by non-specialists, but also, by professional typographers, is one of the most hated fonts of the computer age. The internet is filled with websites that call attention to the

shortcomings of Comic Sans. Along with objective discussion, countless mocking, and even spiteful posts in blogs and forums, several anti-Comic Sans comics, parody videos, a “Kill Comic Sans” game, a Facebook group called “We hate Comic Sans”, a plug-in for browsers that disable the display of Comic Sans on websites, and even a rival comic font called “I Hate Comic Sans” can be found on the internet. Probably the oldest and most well-known protest platform on the web is “Ban Comic Sans”, an initiative launched in 1999 by Holly and Dave Combs, two US graphic designers, calling for the worldwide eradication of this font.

The substantiated criticism of Comic Sans especially finds fault with its lack of aesthetic quality. The object of the criticism is the unbalanced stress of the characters that stems from the unvarying line width, along with its unsteady strokes, uneven spacing, and that due to the lack of kerning, the optical adjustment of unaesthetic spaces between pairs of characters, like “VA”, is missing. The consequence of these shortcomings is an unsettled and uneven typeface that severely perturbs the typographically trained eye. Gibbons, whose handwritten comic letters were used by Connare as models when creating Comic Sans, takes this criticism one step further, stating that its design is “a real mess”, letterforms are “particularly ugly” and with the serif-like bars on the capital I and J particularly sparking his ire: “it looks completely wrong to the comic eye”.

The criticism of the improper use of Comic Sans is justified, since the font is mainly favoured by computer users who are untrained in design matters. Thanks to the ease of digital text processing and desktop publishing, the font has advanced into all areas of daily life. Comic Sans is everywhere: on menus, leaflets, notice boards, search posters for missing pets, baby cards. It also adorns semi-professional web presences of companies, the labels of products and shop signs. Wherever written publicity is created with limited means or little expertise, Comic Sans is not far away. But its ubiquity alone is not a valid reason against the use of Comic Sans. It is its random use that arouses resentment of not only experts. Because of its graphical characteristics, every font is suitable for certain purposes and context, but not for others.

With its casual appearance, Comic Sans is always suspected to be not representative enough for serious matters – such as business, legal, or scientific documents. According to a study from 2012, Comic Sans even negatively influences the credibility of texts. No wonder, since those who use Comic Sans are mocked and ridiculed when the font is used in a serious context, like the Power Point presentation about the discovery of the Higgs bosons at CERN, a lecture by Serge Haroche (2012 Nobel Prize winner for physics), or the official web photo album documenting the resignation ceremony of Pope Benedict XVI. According to the Combses, using Comic Sans in all its uncontrived, childlike naiveté for serious matters “is analogous to showing up to a black tie event in a clown costume”. Even if these allegations touch some sore spots, they have to be relativised. As far as the typographic quality of Comic Sans is concerned, it has to be recalled that Vincent Connare had designed it for on-screen use only. It had not been designed as a standalone font, but for the speech balloons of Rover, the dog in MS Bob. In this planned role, displayed in a small point size, with mediocre screen resolution, and without the modern antialiasing of the characters, Comic Sans was actually more legible than the digitised versions of many traditional print fonts. Moreover, as for the improper use of the font, the much-maligned examples noted above are illustrative: in none of the mentioned cases are the texts in question explicitly official documents addressed to public audiences. In none of these does Comic Sans, in a sense, directly compete with a “real” print font.

Since the invention of the printing press, the printed production of official or public material has been inextricably connected to the use of print fonts like Times New Roman. Handwriting – like Comic Sans is simulating – has ever since stood for the private domain. In regard to the use of Comic Sans, all three examples mark a communication situation beyond the conventional categories of these explicitly public and private written forms. The presentations about the discovery of the Higgs particle and the award ceremony for the Nobel Prize alternate between the written form of the slides and the vocal form of the speech, and the web album of Pope Benedict XVI creates an interplay between the privacy of a common photo album and the anonymous publicity of the internet.

Comic Sans – a curious hybrid between minimalistic style and maximum technicity, wobbling lines and precise repetition, handwritten form and mass usage – breaks with the principles of classic print. Its graphical mediocrity and its hybrid state represent the democratisation of typography and the resolution of familiar medial categories through personal computers. With its amateurish look and unrestrained use, Comic Sans seems to be an honest and genuine font that in the simplest way keeps the promise of WYSIWYG: “What you see *is* what you get”. Connare got to the heart of the peculiar standing of Comic Sans, and is sitting outside of the usual typographic conventions: “If you love it, you don't know much about typography. If you hate it, you really don't know much about typography either, and you should get another hobby.”

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