# Type design for typewriters: Olivetti

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*The word utopia is the most convenient way to sell off what one has not the will, ability, or courage to do. A dream seems like a dream until one begin to work on it. Only then it becomes a goal, which is something infinitely bigger.*[1]
-- Adriano Olivetti.

1 Original text: 'Il termine utopia è la maniera più comoda per liquidare quello che non si ha voglia, capacità, o coraggio di fare. Un sogno sembra un sogno fino a quando non si comincia da qualche parte, solo allora diventa un proposito, cio è qualcosa di infinitamente più grande.' Source: fondazioneadrianolivetti.it.

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## Abstract

The history of the typewriter has been covered by writers and researchers. However, the interest shown in the origin of the machine has not revealed a further interest in one of the true reasons of its existence, the printed letters. The following pages try to bring some light on this part of the history of type design, typewriter typefaces. The research focused on a particular company, Olivetti, one of the most important typewriter manufacturers.

The first two sections describe the context for the main topic. These introductory pages explain briefly the history of the typewriter and highlight the particular facts that led Olivetti on its way to success. The next section, 'Typewriters and text composition', creates a link between the historical background and the machine. It shows the typewriter as a subsidiary cause of social changes and new habits in typography. The core contents of this research are included in the last two sections. They offer a description of the type design process in Olivetti, a comparison between typefaces, and some examples of the influence of the typewriter in digital type.

Due to the large number of typefaces included in this dissertation, there is no room for an exhaustive analysis of the lettershapes. Instead, this paper provides an overview of type design in the 20th century for a specific product, typewriters.

**CONTENTS**

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## Methodology

There is not much written about type design for typewriters. In the search of information for this research, only a couple of magazines on this particular topic were found: the article 'Typewriter type faces' by Alan Bartram in *Typographica* 6, and the typewriter type issue of *Print, the magazine of the graphic arts*. The article in *Typographica* 6, offers a good visual collection of typewriter typefaces in the 60s, but the information it provides is extremely brief. The especial issue of *Print* was a useful source for understanding the process of designing type for typewriters, but the story is told from the perspective of the American industry with no specific mention to European manufacturers.

The search for literature on the topic broadened to publications about the history of the company, Olivetti, and the typewriter; which could offer a context for the main topic. Some of the books consulted also included information about type design: *Century of the typewriter*, *The typewriting dictionary*, and *Design Process: Olivetti, 1908–1978*.

The information and images compiled from books and magazines was far from being enough for the analysis of lettershapes. The visit to the *Arquivio Storico Olivetti* in Ivrea (Italy) provided a solid background for the topic. The documents and images examined there were an important part of the research process, and the solid grounds of some of the ideas expressed in the following pages.

Type designers were mostly ignored in the sources consulted. Many typefaces discovered in this research do not mention their author. The interviews to type designers who worked for Olivetti showed another perspective of the design process for typewriters. They created a good balance, a designer who worked as an external contractor, Wim Crouwel, and a designer who still works in the company, Gianmaria Capello.

The analysis of lettershapes needed some extra material to look at. *Colección Sirvent* provided access to 38 Olivetti mechanical typewriters, and printed samples were created from the different models (see appendix 1, p. 73). The Special Collections at the department of Typography and Graphic Communication of the University of Reading provided another 22 samples from other typewriter manufacturers (see appendix 2, p. 75).

**Fig. 1** - The first writing machines commercially manufactured were the *Skrivekugle* (top) and the *Type Writer* (bottom).

-- 1 --

# Historical background

The history of the typewriter is long and complicated. It is out of the scope of this research to explain in detail the origin of the machine. The next pages will offer a brief outline of the evolution of the typewriter as an introduction to the main topic, type design in Olivetti.

## 1.1 - Origin of the typewriter

The first known writing machines were developed in different places during the first half of the 19th century. None of these inventions reached the market. In the 1870s the first typewriters were sold in Europe and America.

The *Skrivekugle* (writing ball) invented by Rasmus Malling-Hansen, and the American *Type Writer* by Sholes and Glidden were the first two successful machines (fig. 1). The 'writing ball' started to be manufactured in 1970, and sold throughout Europe during the next decades. A few years later, in 1974, Remington released the machine of Sholes and Glidden. The mass-produced *Type Writer* reached also Europe, and overtook the market of the *Skrivekugle*.

The value of the *Remington 1*, name given to the *Type Writer*, was not just being one of the first typewriters ever manufactured; this model was also the father of the QWERTY keyboard. The purpose of this arrangement, invented by Christopher L. Sholes, was to avoid the jam of the typebars when typing; so the most used letters were separated one from the others.

The new invention was soon adopted in offices as a useful tool for doing paperwork more effectively and faster. In the next decade, Remington released improved models of the machine and many more companies joined the growing market. The 1890s was a time for expansion in the typewriter industry, hundreds of patents were approved and the competition was rough.

Most typewriter manufacturing plants were located in the United States until the beginning of the 20th century, when the European companies started to produce their own machines. Germany was one of the main operational centres, with companies like Adler, Triumph, or Olympia. In other countries like Italy, trained entrepreneurs saw a niche on the market and opened new factories.

## 1.2 - Evolution of the typewriter

The first decades of the 20th century were a period of stiff competition. The companies concentrated their efforts in differentiating their products and offering advantages over the others.

The American industry had already solved some of the limitations of the *Remington 1*. This machine wrote only in uppercase letters and the text was no visible while typing. The *Remington 2* was the first machine that included a shift key for using both uppercase and lowercase letters.

The *Caligraph* (1883), the *Columbia Bar-Lock* (1888) and the *Wagner* (1893) were the first models that included visible writing.


**Fig. 2** - The *Blikensderfer 5*.

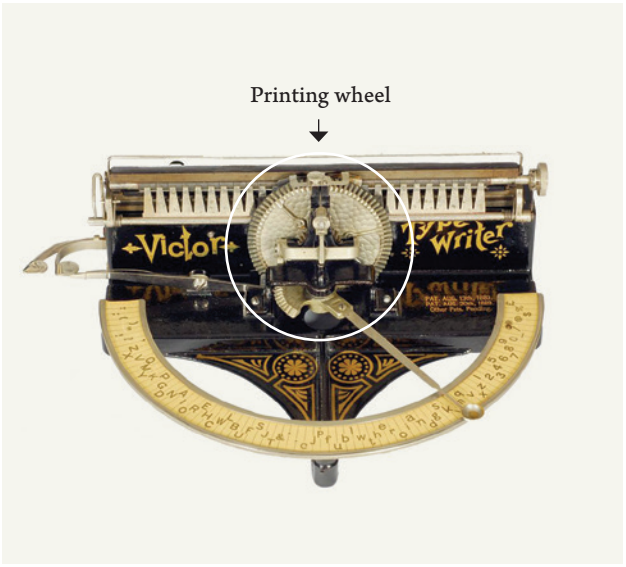



**Fig. 3** - The index typewriter *Victor*.

The *Blikensderfer 5* (fig. 2), released in 1893, can be considered the first portable typewriter. The portability of the machine opened new opportunities in the market. The typewriter started to be sold also for personal use.

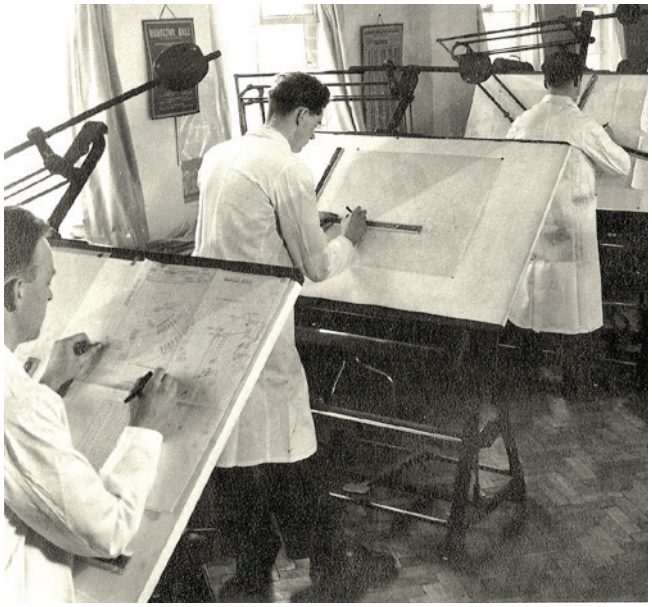
The electric models had an independent evolution. Blikensderfer in 1906, Mercedes in 1921, or IBM in 1935, are a few examples of companies that manufactured electric typewriters in the first half of the 20th century. All these early models used the typebars for printing. The main innovation happened in 1961, when the IBM *Selectric* introduced the 'typeball', a new printing method that allowed for the use of different typefaces in the same machine.

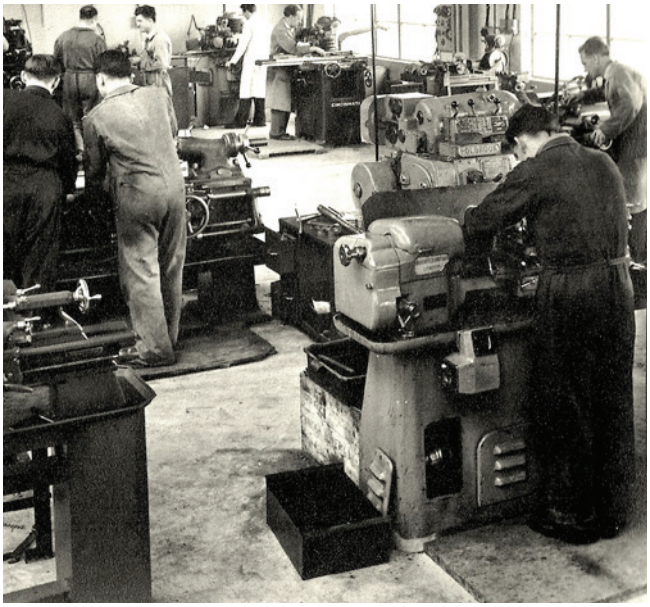
The next big technical advance arrived in the 70s: the electronic typewriter. The new machines included a different printing device, the 'daisy wheel'. A similar element had been already used in 1890 in the index typewriter[1] *Victor* (fig. 3).

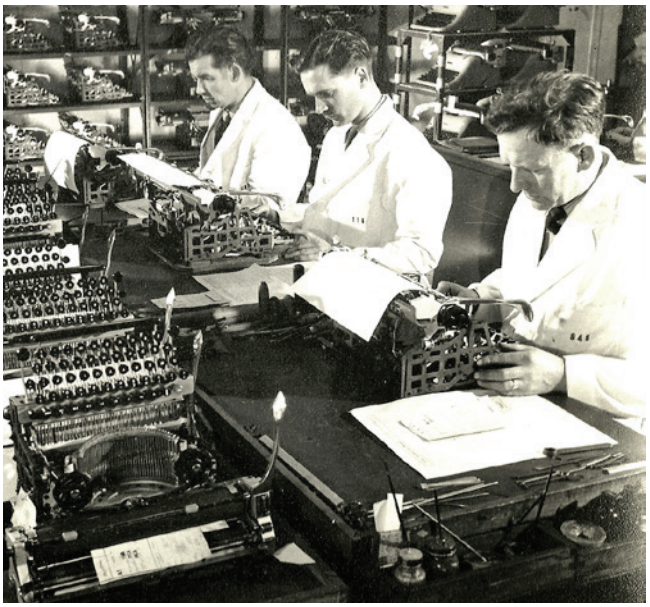
The electronic typewriters were the logic transition between the electric machine and the new technology to come, the computer. When the first Apple computer was released, in 1976, the sales of typewriters started to decline. The typewriter era was coming to an end.

There were companies that linked their history to the machine. The Italian Olivetti became one of the most popular typewriter manufacturers. The company got international recognition for the special attention paid to design. This interest was not only focused on the shape of the machine, but also on the architecture of the factories and the advertising of the products.

1 The index typewriters did not have keyboards. The characters were selected from an index with a pointer, and a lever activated the movement of the type for printing.







a | b
c | d
e

**Fig. 4** - One of the main factories of Olivetti was located in Glasgow. In the pictures different stages in the production of typewriters.
a. The drawing office.
b. The tool room.
c. Polishing the typebars.
d. Operators checking the assemblies of the Lexicon 80.
e. Final checking of the Leterra 22.

## -- 2 --

# 'Olivetti style', the identity of the company

The personality of a company is defined by the image that people perceive. The messages that the company sends about the products are the basis of its identity. The difficult task lies in making a coherent communication through the different channels used to transmit the message. The identity of Olivetti was created using three main vehicles of interaction with the audience: the product, advertising, and the social and cultural activity.

### 2.1 - The product, the company from the inside

Since Adriano Olivetti started to be part of the management team,[1] the internal communications became essential for the good functioning of the production process. The factory was a small community with its own rules and facilities.

> *Cultured, sophisticated and public spirited, Adriano Olivetti was an engineer who was fascinated by art, design and architecture, and drew on his knowledge of those fields in his corporate role.*
>
> -- Alice Rawsthorn, 'Olivetti's Artful Breakthroughs.'

The operators, designers, engineers, researchers, administrators and managers were all members of a interconnected manufacturing network. Adriano was politically active and had his own vision of society. He used the company as a mirror of his ideology. For getting a greater effectivity, the production of typewriters was organised in different stages with a clearly defined order (fig. 4).

In 1929 the allied factory S.A. Hispano Olivetti was founded in Barcelona. Olivetti was built into a multinational business with production centres around the world: Buenos Aires (1932), Glasgow (1949), Johanesburg (1949) and Sao Paulo (1952). The sales network grew fast and the company started to export typewriters to countries like France, Austria, Denmark, Germany, Mexico, United States, Australia, Colombia, Canada, Venezuela, or Cuba.

The typewriters evolved with time, they adapted to different economic and social contexts. Both the technological improvements and the design of the machine were important. All the details of the product were carefully studied. Every new model was an opportunity to create a better typewriter: functional, modern, innovative and beautiful.

### 2.2 - The advertising, the external communication

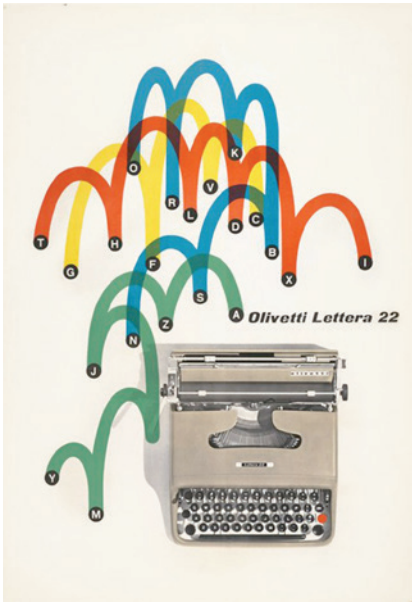
As the company grew the communication campaigns became more complex, they had to adapt the message to different cultures. But the structure of the design department remained the same. The corporate identity and the advertising campaigns were planned from Ivrea, the small town in the north of Italy were the company was founded. Olivetti had changed and the visual identity needed to change as well (fig. 5).

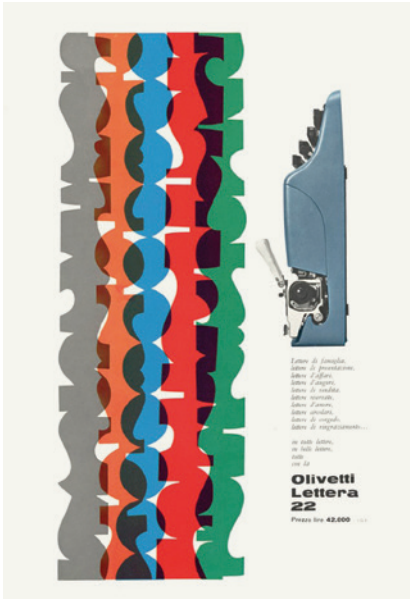
**Fig. 5** - The changes in the logo are just an example of the evolution of the identity of the company.


Unknown (1908) X. Schawinsky (1934) G. Pintori (1947) W. Ballmer (1950)

1 Adriano Olivetti (son of the founder of the company, Camillo Olivetti) became the director of the Advertising Department in 1928. He was the president of Olivetti from 1938 to 1960.


**Fig. 6** - This ad of 1933 for the MP1 describes the identity created for Olivetti typewriters: *The modern taste is not satisfied just by the beauty of artwork. It looks for the original design and style, in the mechanical products too. In its simple and captivating beauty, the Portable Olivetti shows not only the science of the engineer but also the taste of the Italian artist.*
*Be modern, use the Olivetti Portable. Light, elegant, robust, fast*



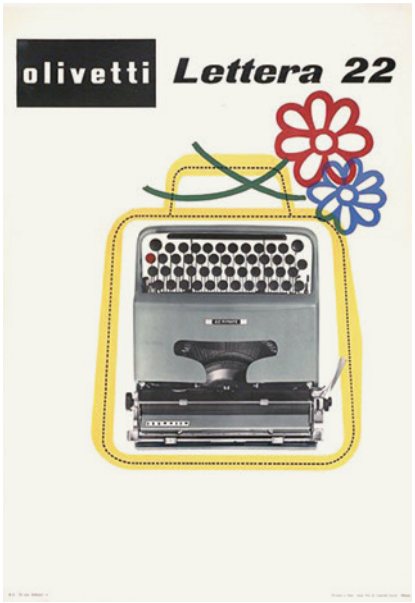




**Fig. 7** - The designers and artists who worked for Olivetti contributed to generate the visual identity of the company. On the right, some samples of the work of Giovanni Pintori for the Lettera 22, one of the most successful Olivetti typewriters.

Olivetti wanted to create a modern image of the typewriter and talk to the audience in a contemporary language. Many international designers, photographers and copywriters worked in the advertising campaings. They were involved in the creation of what was called the 'Olivetti style' (fig. 6 and fig. 7).

> *Under the direction of Adriano a new advertising style was created, characterized by geometric figures, photography and collages, with the most careful design of the typography and texts. A connection between product, graphics and text was sought to playfully extend and enrich the onlooker's image of the product.*
>
> -- Sybille Kicherer, *Olivetti: a study of the corporate management of design,* 32.

Type design was also part of the identity of the typewriter. The catalogue of typefaces created for Olivetti included important designers like A.M. Cassandre or Wim Crouwel. They worked for the company as freelancers. From Wim Crouwel's point of view 'they picked up the right people everywhere ( … ) Olivetti was an example, a great example. Every designer would love to work for Olivetti.'[1]

In the 50s Adriano Olivetti established an in-house office for typeface design. Arturo Rolfo was named head of the department. Gianmaria Capello, who was a member of his team, is currently the only type designer in Olivetti. He points out that 'as there was the necessity to have a specific design for the typewriter they thought that also the typeface had to be *fashionable.*'[2]

Like any other detail of the typewriter, the typeface should show an image of modernity, beauty and functionality.

### 2.3 - The social and cultural activity

The cultural activity played also an important role in Olivetti. The company invested in research, sponsored artists and work as a publishing company.

Olivetti was seen as a reference in design and many museums exhibited its products and printing material. In 1952 the *Olivetti Exhibition* was shown at the Museum of Modern Art in New York. For the first time an European industry was invited by the MoMA to show its products and graphic work.[3] London, Paris, Zurich and Tokyo are just a short list of the cities where the work of Olivetti was exhibited. The MoMA made a clear statement in the press release for the exhibition, 'the purpose of the exhibition *Olivetti: Design in Industry*, is to give recognition to the achievement of this manufacturer of business machines in organising all the visual aspects of its industry under a single high standard of taste, and to encourage American industry to follow his leadership.'[4]

The international recognition came also through design awards. And still today, some Olivetti typewriters and printing material are part of the permanent collections of important museums.

As Emanuele Piccardo remind us in the film *Lettera 22,* Adriano thought that 'the company has the duty to spread beauty around'. And that was one of the main objectives that Olivetti tried to get with its particular style.

1 Interview by the author.
2 Interview by the author.
3 Musatti, Bigiaretti, and Soavi, *Olivetti 1908–1958.*
4 Museum of Modern Art of New York, press release (22.10.1952).


S

**M1** - 1911
**Camillo Olivetti**
The first typewriter made in Italy.
It was not a copy of any other model.
The margin unlock is on the keyboard.
The typebars were placed one by one.
The shift key moves the platen.

S

**M20** - 1920
**Domenico Burzio**
Similar to the M1 in appearance, but with improved mechanics.
The margin unlock is near the scale.
The typebars are in a type basket.
The shift key moves the type basket.

P

**MP1** - 1932
**Levi & Magnelli**
The first Olivetti portable.
Flatter keyboard.
Manufactured in 9 different colours.
Special series: e.g. Invicta Harrods.

SS

**Studio 42** - 1935
**Luzzati, Schawinsky, Figini & Pollini**
The first semi-standard typewriter.
Different series: e.g. Studio 46 (Spain).

S

**Lexicon 80** - 1948
**G. Beccio & M. Nizzoli**
Rounded corners and compact design.
Part of the MoMA collection.
Series: Olivetti Graphika (1957), includes proportional typefaces; Lexicon 80E (1950), the first electric model.

P

**Lettera 22** - 1950
**G. Beccio & M. Nizzoli**
More compact and lighter than the MP1. The mechanism was simplified.
Part of the MoMA collection.
Different series: e.g. Scribe (England) and Pluma 22 (Spain).

SS

**Praxis 48** * - 1964
**E. Sottsass & H. Von Klier**
Electric model that uses typebars.
The main advantage of the electromechanical typewriters was that the typebars always struck the paper with the same force, giving the text an even colour.

P

**Valentine** - 1969
**E. Sottsass & P. King**
It became a design icon. The advertising of this machine brought pop-art into the typewriter industry.
Part of the MoMA collection.

S

**Linea 98** - 1971
**Mario Bellini**
It includes a touch regulator and a quick space bar. The last standard mechanical typewriter designed by Olivetti.

P

**Lettera 35** - 1974
**Mario Bellini**
Model evolved from the Lettera 22, bigger in size and mechanically optimised. The keyboard is more compact. Different series: e.g. Lettera 37 and Italia 90.

S

**Studio 46** - 1974
**Mario Bellini**
Smaller than previous standard typewriter models.
Since the Linea 98 the trend was to design the keyboard in light colour.

S

**Lexicon 90** * - 1975
**E. Sottsass & A. Leclerc**
The first electric standard using the typeball. Like in mechanical typewriters, the carriage moved and there printing point was fixed.

S

**ET 101** ** - 1978
**Mario Bellini**
The first electronic typewriter manufactured in the world.
It could write in bold and underline text. It included a line memory for correcting mistakes.

P

**Lettera 10** - 1979
**Mario Bellini**
The smallest Olivetti typewriter.
It used a cartridge ribbon.
The colour selector was removed.
Part of the MoMA collection.

P

**ET 55** ** - 1987
**M. Bellini & A. Chiarato**
This model allowed right and centered alignment, underlining words and correcting mistakes.

* Electric
** Electronic
**S** Standard
**P** Portable
**SS** Semi-standard

**Table 1** - Featured models of Olivetti typewriters and notes about their mechanism and design.

-- 3 --

# Typewriters and the text composition

## 3.1 - Olivetti typewriters

This dissertation does not intend not go into detail about the technical side of the typewriters, but for the further analysis of type design, it is interesting to have an overview of the machines designed by the company (table 1).

This research focused mainly on mechanical typewriters, but electric and electronic models were also considered to explain the technological advances in the machine and the influence on type design.

Olivetti manufactured mechanical, electric and electronic typewriters. The three technologies used different printing elements: the mechanical typebars, the electric typeball, and the daisy wheel in electronic models. The new printing methods (typeball and daisy wheel) allowed to introduce proportional typefaces in typewriters and to create new machines with interchangeable fonts (fig. 8).


**Fig. 8** - From left to right: detail of typebars, a typeball and a daisy wheel for Olivetti typewriters.

Typewriters can be classified in three main categories:

**Standard,** bigger in size and weight. They were used in offices and repair shops. Sometimes they included a big roller to work on documents larger than A4. And they usually included tabulators for column work.

**Semi-standard,** average size and weight. These machines were designed for both private and professional use.

**Portable,** lighter and smaller. These typewriters were cheaper and easier to carry, they were always sold with a suitcase/bag for their transport.

The new models brought in simplified mechanisms, which tried to increase the speed of the machine and minimise its weight. The evolution in the design of the typewriter led to a stronger separation between the internal structure and the external appearance. The keyboard became smaller and the casings were built into an identity feature of the machine.

The Olivetti Linea 88 and 98 introduced the touch regulator, which allowed the user to select the striking force of the typebars on the paper. This new option was specially useful when using carbon paper for multi-copy documents.

Most typewriters used a standard typeface, so just a few models used type design as a sales pitch. The quality of printing and the speed of the machine were essential aspects to consider before buying a typewriter. The external appearance had also an important value, especially in portable machines.



**Fig. 9** - George Lois was commissioned to create a campaign for Olivetti in the United States. After its release in 1967, Olivetti increased the sales in America. But the campaign was controversial and the *National Organization for Women* described it as sexist. The public response of the company was an adaptation of the first idea, with the actor Joe Namath as an 'Olivetti girl.'

The market appreciated the design of Olivetti typewriters and the company got international recognition. Two of its most famous typewriters, the Lettera 22 and the Olivetti Valentine, received several design awards. Together with the Lexicon 80 and the Lettera 10, they belong to the permanent collection of the MoMA.

### The particular case of the Olivetti Graphika

The Olivetti Graphika is of special interest because it is one of the few mechanical typewriters with proportional type ever manufactured in the world.

The design of Graphika evolved from the standard Lexicon 80. Its external appearance is very similar, but the new machine was created to use characters with four different widths.

One of the main problems of this machine was the difficulty in making corrections. The user had to calculate the width of the typed characters to come back to a previous printing point. The backspace moved the carriage just one unit back (0.8 mm); for instance, the correction of a wide character like 'M' (4.8 mm) required to press the backspace five times.

The Olivetti Graphika, released in 1958, was a market failure. It only lasted in production for two years, but due to the special typefaces used, it became later a coveted item for collectors.

## 3.2 - The typist and the typewriter, the social changes

By the beginning of the 20th century the typewriter was an essential element in modern business. The office had a new professional figure, the typists. They were usually secretaries who learned to use the typewriter. They acquired this new skill attending classes in technical schools, receiving specialised education in the company, or teaching themselves at home. This new professional role enabled the social promotion of many women. It was the dreamed opportunity to move to the city and join the business industry. The image of independent women was repeatedly used for advertising typewriters (fig. 9).

The international speed championships caused great excitement every year. The manufacturers improved their machines and the typists were trained in the best typing techniques. Speed and accuracy were the main goals. These competitions were a sales window for the typewriter companies and a road to fame for the winner.

However, typewriters were not for the exclusive use of secretaries. Writers and, later on, artists found in the typewriter a wonderful partner. The charm of the machine was also appreciated by filmmakers who created memorable scenes with the typewriter as one of the main characters.[1]

Typography was finally accessible to everybody and the user became a text compositor. It was possible to create customised layouts and, in electric and electronic models, one could choose the font. Every typeface was designed for a specific purpose. It was the user responsibility to select it properly. For the first time in history the market told us what typefaces were more demanded. Personal and professional documents were set in typewriters. The sales network offered several type styles, and users made the choice. Manufacturers, like Olivetti, designed their own typefaces and used them as a tool to differentiate their products.

1 The scene of *Who's minding the store?* (1963), where Jerry Lewis writes in an imaginary typewriter, is especially famous.


a b
c d

**Fig. 10** - The arrangement of the keyboard adapted to different languages and scripts. The character set could also change from one model to another.
a. Spanish, Lettera 35
b. Italian, M40
c. German, Dora
d. Russian, Lexicon 80


**Fig. 11** - Type sample (200%). It was common to see typewritten texts where the characters lost the horizontal alignment.

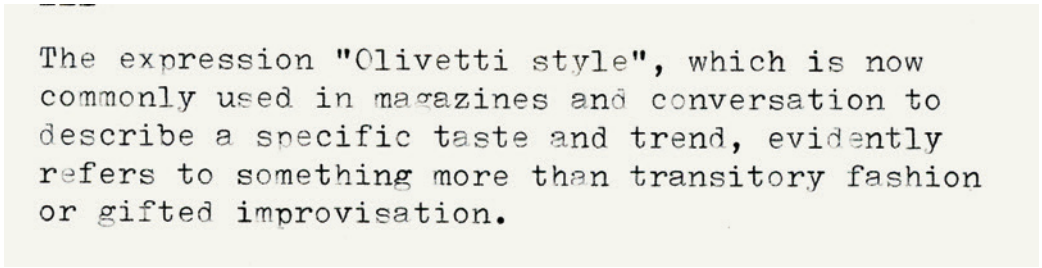



**Fig. 12** - Type sample. The appearance of the printed letters was conditioned by the ribbon, the typebars, and the pressure applied on the keyboard.

The new technology allowed the relatively cheap production of printed material. Social movements, like the punk in the 70s, used the typewriter in publications created to promote their ideas.[1]

### 3.3 - The limitations of the machine

The new technology had its own limitations. The typefaces available for printing could not be used in typewriters. The carriage of the machine always moved the same distance when pressing a key, what allowed the typist to move the paper to a previous printing point, so corrections and tabulations were easier to make. Monospace typefaces were born with the typewriter. For better or for worse, they were part of the idiosyncrasy of the machine. Later on, this new style became especially useful for computer coding and screenplays.

The limited keyboard[2] asked for creative solutions to create some characters. The two hyphens often replaced the en dash, and the lowercase 'l' was used also as number '1'. There were models where the typist even needed to create the exclamation mark from a straight quotation mark and a period. These conventions may not be well seen by the type industry; but typewriters were inventive in finding similarities in the design of the characters, in order to optimise the keyboard to the minimum size. Different languages asked for different arrangements. And diacritics and extra letters sometimes replaced other characters (fig. 10).

The mechanical typewriters only enabled the use of one typeface at a time (one weight - one style). If the typists wanted to emphasise words, they used one of the most common techniques, underlining or uppercase letters. Even though typewriter manuals warned on the abusive use of capital letters.

> *The operator is warned against the too liberal use of capital letters. In business correspondence, they are often altogether too conspicuous by their promiscuous appearance.*
>
> -- Isaac Pitman, *A manual of the typewriter,* 76.

The electric and electronic typewriters made possiblr to switch between different fonts. Several weights and styles could be used in the same document. However, this change was made manually with a consequent waste of time. The typist removed the typeball from the machine and replaced it by a new one.

The alignment of text was another concern for typists. Professional machines included tabular keys for column work, but creating tabulations in portable machines was a challenging task. The horizontal alignment was also problematic. Typewriter manufacturers had to carefully measure the typebars and placed them properly in the machine, in order to get a clear baseline for the letters (fig. 11).

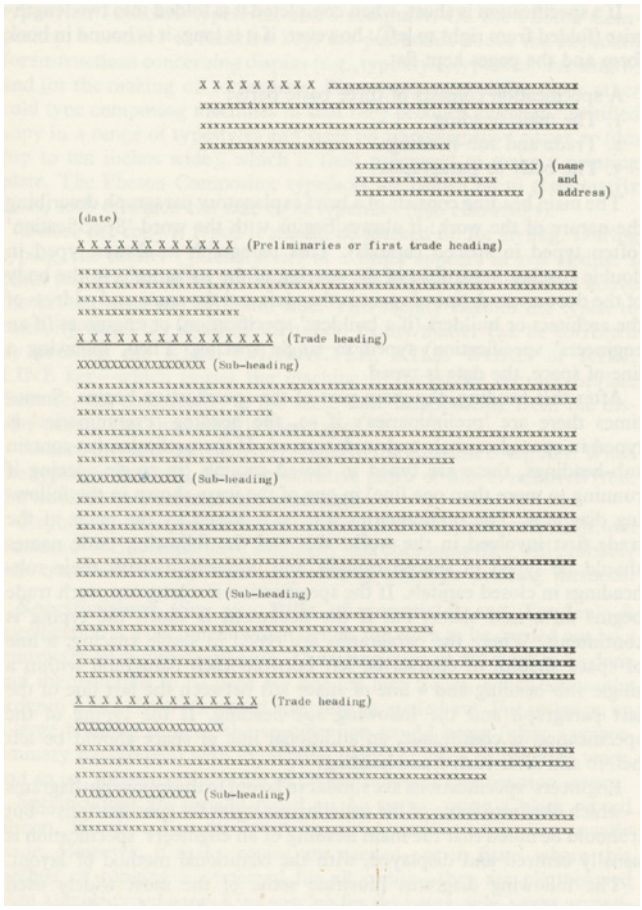
The uneven texture of the inked page was also characteristic of typewritten documents. In electric and electronic machines, the typebars applied the same striking force into the paper. In manual typewriters the typists needed to train their fingers, if they wanted to get an acceptable text colour (fig. 12).

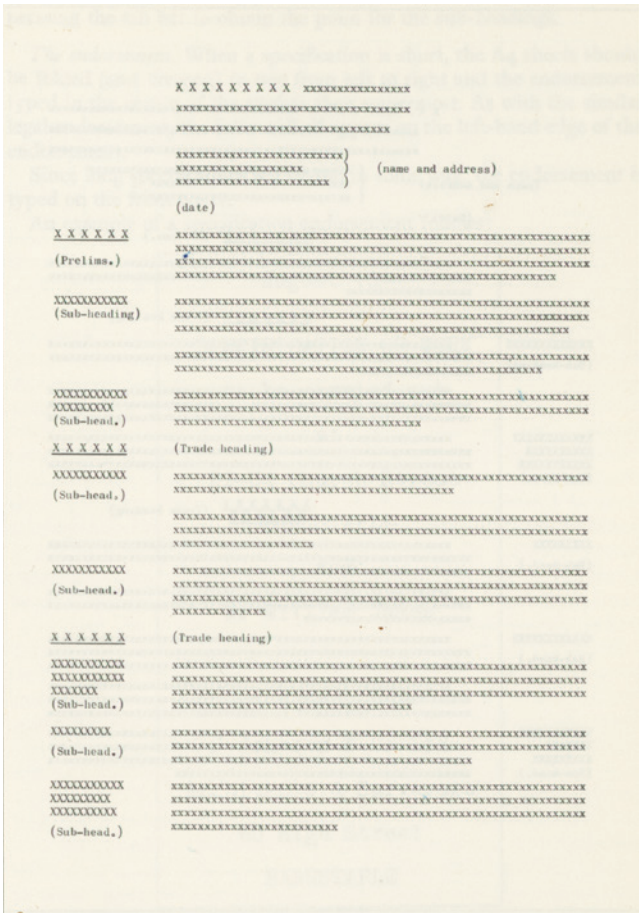
### 3. 4 - The typewriter manual

The early typewriter manuals were focused on the mechanics and maintenance of the machine, but they soon became educational books for typists. They included recommendations and defined some rules for text composition.

1 Popular magazines like *i-D* or *Emigre* used the typewriter as type compositors, enlarging and reducing the text with photocopy machines. Source: Tullett, *Typewriter art,* 82.

2 A standard typewriter usually included just 88 characters.




a b c

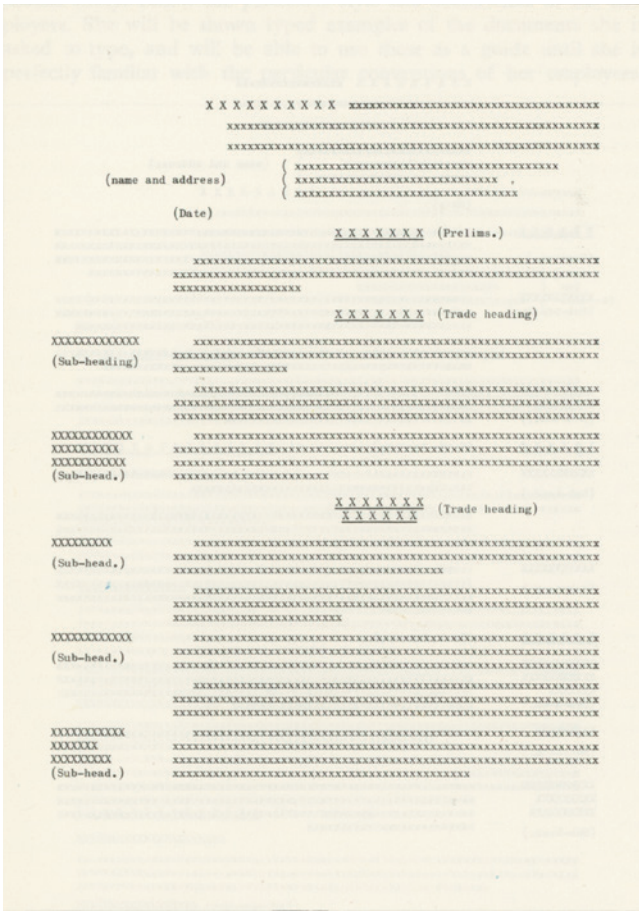



**Fig. 13** - Three examples of standard layouts (40%):
a. Fully-block method.
b. Semi-block method.
c. Traditional method.

One of the first typewriter manuals was written by Isaac Pitman in 1893, who stated that 'regularity is the essence of all good typewriting'.[1] He named a list of irregularities found in typewriter documents and offered advice to solve them. Pitman pointed out that, in order to achieve excellence in typewritten documents, the typist should consider the regularity of impression, the touch,[2] the method of fingering, the regularity of the letter, the line and margin spacing, the placement of the paper, and general accuracy.

Some of those recommendations learned by the educated typist are now acquired habits wrongly used in digital documents; for instance, the use of three spaces after a period or two after the comma. There was just one space width available in the typewriter. Words and sentences were separated by the same distance. The double space was used to differentiate sentences and improve the readability of the text.

There were also standards in text composition (fig. 13). Big companies had a training process when the typist was taught the style for corporate documents.

The straight quotation marks are another example of the legacy of typewriter typography. The typewriter character (") avoided the curved shape of printing typefaces (‘’). This design enabled the used of the same key for creating different characters (fig. 14). Nowadays different countries have different conventions. The straight quotation marks are preferred to the curved ones in Hebrew. The second ones are more used in western countries. Even tough the straight quotation mark does not have any specific function today, most typefaces include it in the character set and it becomes a matter of style to use it or not.

Type composition could sometimes be considered a crafty work. The typist needed to be skilful and smart in the use of paper space. They needed to plan the document in advance if they wanted to do special arrangements, like vertical alignments or tailpieces.[3]

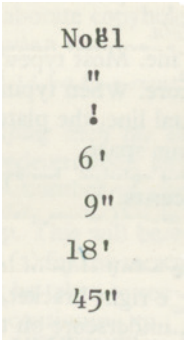



**Fig. 14** - From top to bottom, some functions of the typewriter quotation marks:
– Diaeresis (¨)
– Ditto mark (″)
– Exclamation (!)
– Feet (′)
– Inches (″)
– Minutes (′)
– Seconds (″)

1 Pitman, *A Manual of the typewriter*, 8.
2 This aspect just applied to manual typewriters. The touch refers to the force applied by the typist when depressing the keys. Pitman mentioned that it was important to apply the right amount of force for each character. The quality of touch was also essential, 'the depression of the keys should be "touch and go", and the work done as quickly as possible.' (Ibid., 11).
3 Decorative endings to articles, programmes, book chapters, sections, etc.

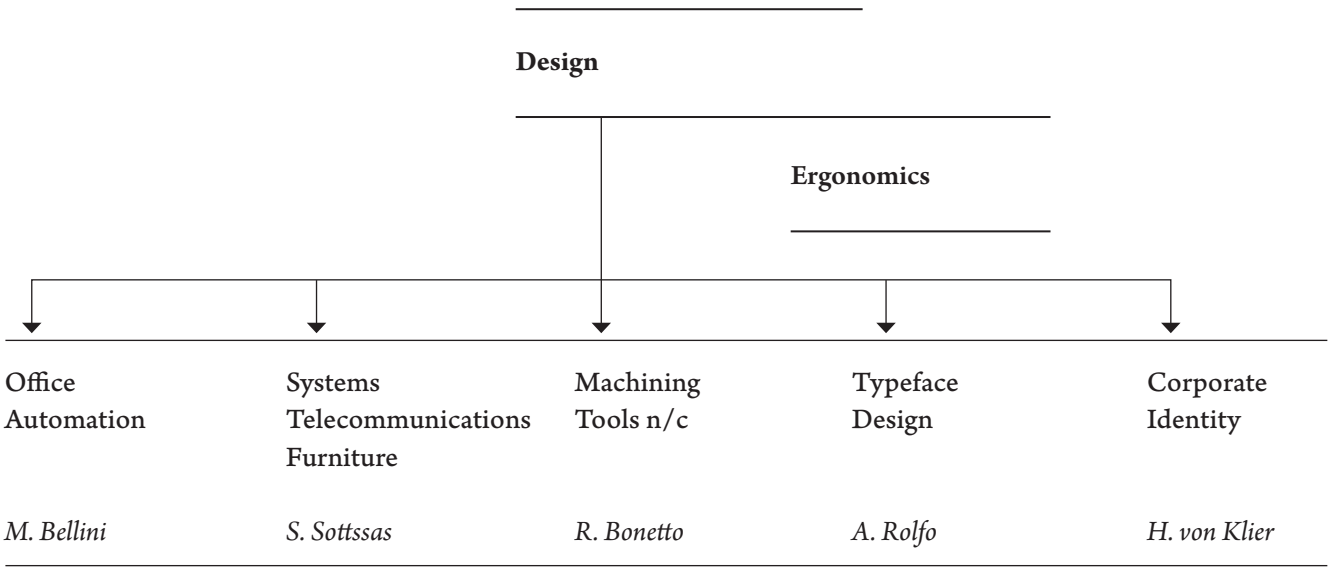



**Fig. 15** - Structure of the Design department in Olivetti in the 50s.

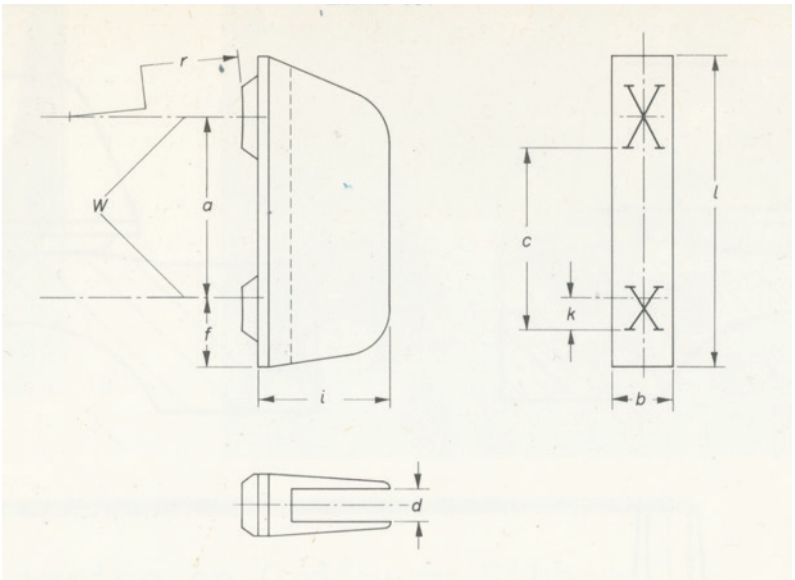



**Fig. 16** - Type body measurements:
a. Distance between baselines.
b. Type body width.
c = a
d. Slot witdh.
f. Distance of the aligning cut.
i. Type body height.
l. Type body length.
r. Radius of the curvature = radius of the platen.
k. Distance between the baseline and the centre of the platen (dependent on the type style).
W. Center of the platen.

-- 4 --

# Type design for Olivetti typewriters

The information showed in previous chapters provided a description of the context in which the main topic of this research took place. In the subject at hand, type design for Olivetti typewriters, it is especially important to understand the circumstances and the environment where the typefaces were created; as well as the special features of the machine which the fonts were made for.

The following sections will focus on type design, showing the typefaces made for Olivetti and shedding some light on the tools and people who created them.

## 4.1 - Olivetti type designers

The typefaces used in Olivetti typewriters were created by designers both inside and outside the company.

As it happens today, when the design is created inside the company the name of the author is usually unknown. The collective recognition is favoured at the expense of the individual. In the following list, the designers who worked for Olivetti are included as a group and the freelance designers are treated separately. When possible, the names of the type designers will be mentioned.

### Olivetti office for typeface design

The company started to operate as a typewriter manufacturer without a specialised team in typeface design. During the first 50 years of production, designers and engineers were responsible for the creation of typefaces. The characters were designed in the drawing room (see p. 14, fig. 1a) and then converted into metal type at the factory.

The company worked in the design of new typefaces for the machine. After all, the function of typewriters was producing pieces of text, which should be clear and legible. One of the earliest examples of the company's interest in type design and its history, was the promotional booklet published in 1938, *Storia della scrittura*. This plublication showed the evolution of writing from the Roman inscriptions to the typewriter characters.

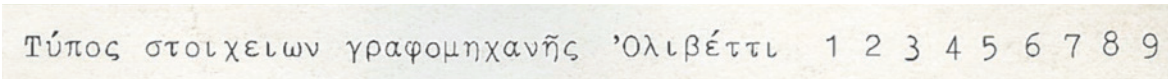
In the 50s type design started to have its own status in the company. It was then when Adriano Olivetti reorganised the departments and established an in-house office (fig. 15). Arturo Rolfo was named head of the new department. Gianmaria Capello highlights that 'he  had a long experience in design, so he could manage to create quality work.'[1]

The main purpose of this office was to create new typefaces and adapt the drawings of external designers for production. Freelance designers did not received technical specifications, like the appropriate measurements of the strokes or the actual size of type (fig. 16). The team of Arturo Rolfo adapted these drawings, 'guided by strict criteria guaranteeing that the results correspond exactly to the original designs.'[2]

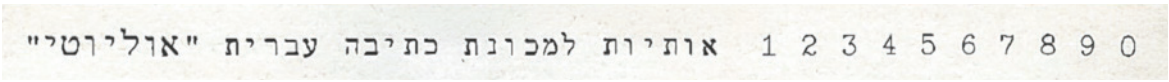
The design of new typefaces not only included the Latin alphabet, but also other scripts. Olivetti researched and developed a considerable number of

1 Interview by the author.
2 Zorzi, *Design Process: Olivetti, 1908–1978*, 226.

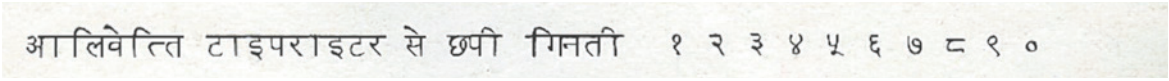
Greek



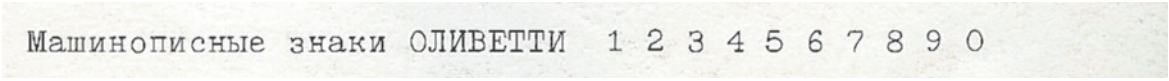

Hebrew



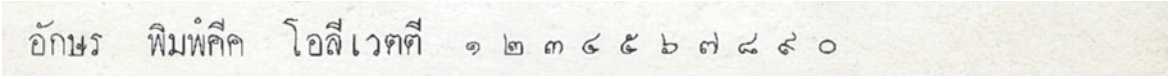

Devanagari



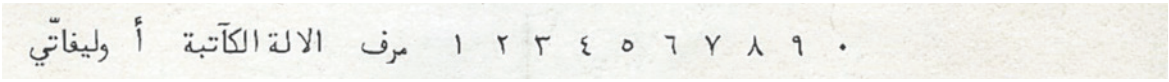

Cyrillic



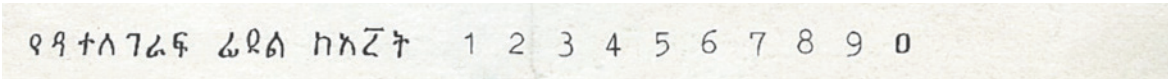

Thai




Arabic




Amharic




Cree

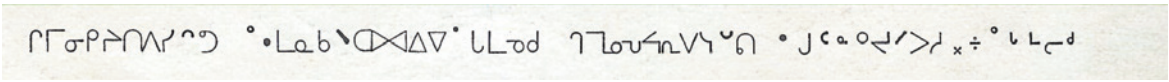



**Fig. 17** - Samples of some of the scripts included in the Olivetti font library.

writing systems to make the machines accessible to different cultures. Arturo Rolfo himself designed typefaces for the Arabic, Thai and Cree[1] script. (fig. 17)

> *Typeface design involves constant research not only in traditional alphabets such as the Cyrillic, Arabic, Greek or the Japanese Katakana, but also those of ancient nations and civilizations emerging today into the technological world, like the Korean, Hindi, Singhalese, Burmese, Nepalese and Thai.*
> -- Renzo Zorzi, *Design Process: Olivetti, 1908–1978*, 226–227.

The design of alphabets for minority languages allowed some communities to use the typewriter as a tool to maintain their writing systems in printed texts.

In 1969 Olivetti created the *Libro Cassinelli*, an internal manual with useful information for the design of typefaces in Olivetti. More than 100 typewritten pages that included texts and visual samples. It covered different areas in type design; from legibility and classification of typefaces, to technical specifications about the design of letterforms. The book had two main objectives: to give information about the peculiarities of the machine, and to offer a wider knowledge about the history and trends in type design. Nevertheless, the most important part was the specific rules for the design of characters: 'those are not just recommendations but an important condition for achieving a good result.'[2]

By the end of the 70s, when Gianmaria Capello joined the team, the company was living the transition between the electric and the electronic typewriters. He explained how the process of designing a new typeface started, 'generally we were asked by the marketing department to draw a new typeface. We made suggestions, making photographic reductions of our drawings to the actual size the typeface would have in the typewriter. The marketing department decided if the design was approved ( … ) when the design was approved the typeface was manufactured.'[3]

Olivetti liked to work with international designers. Imre Reiner and A.M. Cassandre were commissioned to design a typeface for the Olivetti Graphika, and Wim Crouwel, Müller-Brockmann, and Lindinger created new typefaces for the company. All of them were designers whose work was not only focus on type design. This circumstance probably led them to try a more experimental approach to letterforms, which they used as a vehicle of graphic expression.

### Imre Reiner

Reiner studied in Germany and worked as a graphic designer in New York, Paris, London, and Chicago, but he spent most of his life in Switzerland working as a painter, illustrator, and type designer. However, he never identified himself with the International Swiss Style.

In 1957 Reiner got the commission from Olivetti to design a proportional typeface for the new typewriter Olivetti Graphika (see p. 21). The characters had to be designed within four width possibilities. The four groups were created from a basic unit, 0.8 mm; and from there the width options were 1.6 mm, 2.4 mm, 3.6 mm, and 4.8 mm. Reiner designed a proportional typeface whose appearance differed greatly from the standard typewriter type. The colour of the typewritten

1 The Cree is a syllabic script used by nearly all Cree-speaking First Nations in Canada. Initially an invention of the English missionary James Evans to create a non-Latin writing system for Cree and Ojibwe, it was readily adopted because its appearance was unlike that of the Latin alphabet and therefore free of the stigma of colonialism. Source: ancientscripts.com.

2 Aso, *Libro Cassinelli*, 'Introduction'.

3 Interview by the autor.

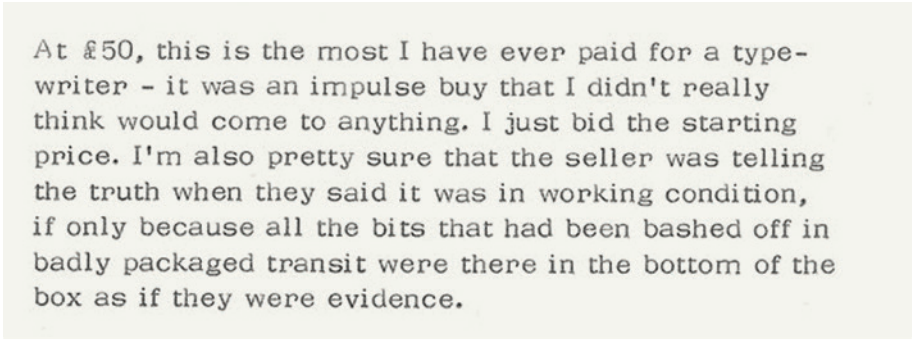



**Fig. 18** - Sample of Reiner typeface.


**Fig. 19** - Sample of Reiner Consilium typeface.

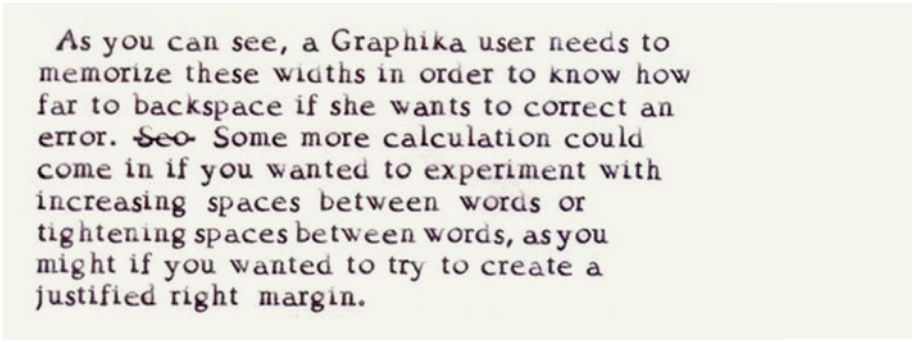



**Fig. 20** - Sample of Cassandre typeface.

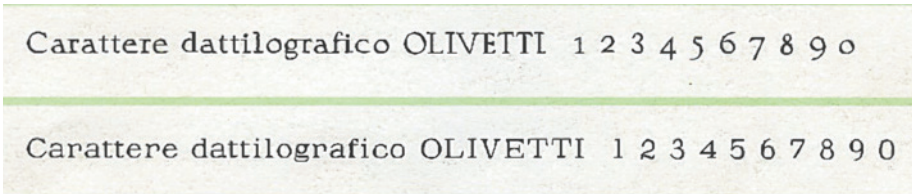



**Fig. 21** - Samples of Cassandre and Reiner typefaces for the Olivetti Graphika.

text was quite even. His design introduce a new style in the font library for Olivetti typewriters (fig. 18).

Olivetti liked to work in a long-term basis with external designers. The commission for the Graphika was not the only typeface that Reiner created for the company. He also designed Consilium (fig. 19) and started a new design that Olivetti called 'Senatus'. In a letter sent to Reiner[1] it was mentioned that this typeface was inspired by the Elzevir type. The reasons are unknown, but this typeface was never released.

Reiner showed in his career an experimental and creative approach to letterforms. He was a productive type designer and most of his typefaces are now available in digital format.

**A. M. Cassandre**

Cassandre was a painter and a graphic designer. He worked also as a teacher and devoted part of his career to typeface design.

Like Reiner, in 1957 he was asked to design a typeface for the Olivetti Graphika. The typewriter was manufactured in two series, one with the typeface designed by Reiner, and the other one with Cassandre's type.

Some theories found the roots of Cassandre's typeface for Olivetti in the Carolingian minuscule.[2] It seemed like the rather static appearance of typewriter typefaces did not fit Cassandre's ideas of letterforms.

> *Each letter is a rhythmic element (like an isolated gesture in choreography). It communicates this rhythm to the word, the phrase, the line as a whole and, lastly, the page.*
>
> -- A.M. Cassandre, *Cassandre,* 148.

The limitations of the machine were not a problem for Cassandre. He found the way to create an expressive typeface. Some unconventional letterforms, like the 'a' and the 'g', gave the text a distinctive appearance (fig. 20).

It is interesting to see how Reiner and Cassandre used differently the four widths available in the machine. For instance the letter 'r' is a wide character in Reiner typeface and narrow in Cassandre's (fig. 21).

The designers were asked to adapt their designs to a monospace typeface, but later on an experts commission in Olivetti decided to dismiss the monospace design and keep the original proportional typefaces of Reiner and Cassandre.[3]

Some sources mentioned another typeface designed by Cassandre for Olivetti (Nuova Pica),[4] but it was no possible to find further information about this design.

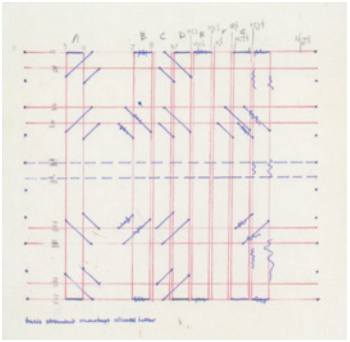
**Wim Crouwel**

Wim Crouwel is a Dutch graphic and exhibition designer who based a big part of his work on grids and experimental letterforms.

Wim Crouwel was not a type designer, but he created a large number of customised alphabets. His design of the Neu Alphabet attracted the attention of Olivetti, the head of the design department contacted him and said 'your way of thinking is quite interesting for us, for a typewriter typeface.'[5]

1 Aso, correspondence with I. Reiner and A. M. Cassandre.
2 Mouron, *Cassandre,* 147.
3 Aso, correspondence with I. Reiner and A. M. Cassandre.
4 Mouron, *Cassandre,* 147.
5 Interview by the author.

a | b
c



affilare tipologia onore teologia canale parallelepipe canale traente
continente grafologia trotterellare citofono noleggiare pioppella film
incognita politecnico fotocopia attaccare cancet concetto girata aereo
carreggiata galleggiante proiettile cofano recitare tecnologia litigio
filarello grafico contrapporre alterare alligatore lettera italiano poi
oggetto poliglotta tinteggiare longilineo

**Fig. 22** - Samples of the typeface that Wim Crouwel designed for Olivetti.
a. Drawings of 'a' and 'm'.
b. Grid for the design of the characters.
c. Printed proof of the typeface.

ABCDEFGHIJKLMNOPQRST
UVWXYZ abcdefghijklm
nopqrstuvwxyz 123456
789 àèéìòùç°§£$&%½*
. , : ; ! ? ( ) ^ + _ – = " ' /

**Fig. 23** - Sample of Olivetti Candia, designed by Müller-Brockmann.

When Olivetti approached Crouwel in 1974, the electric and electronic typewriters were replacing the mechanical models. The new machines worked with proportional type.

The typeface by Crouwel was designed using different widths for the letterforms. The characters were based on a rectangle with 45° cuts, had angled endings, and rounded corners (fig. 22).

Crouwel mentioned that the company was not involved in the design process, so he was able to create the typeface on his own style, 'it was a fantastic job, no restrictions just go on.'[1]

In 1976 the company sent him a proof of the design in a typewritten text, but the typeface was never released so Crouwel got the rights of the design back. Some time later, he received a commission for designing post stamps for the Dutch post service. He used the typeface he had crated for Olivetti, introducing some small changes in the design.

**J. Müller-Brockmann**

Müller-Brockmann was a graphic designer who worked in advertising and taught in several design schools. He is probably the main reference of the International Swiss Style born in the 40s. His work was influenced by different design and art movements like the Constructivism, De Stijl, or the Bauhaus. The use of the rational grid and the asymmetrical layouts were part of his design identity.

Olivetti was probably trying to find a new perspective for the design of typewriter typefaces. In the 70s, the company asked Müller-Brockmann to design a new typeface for the machine. He was another example of the important figures in the design industry who worked for Olivetti.

Müller-Brockmann had been working as a graphic designer for other typewriter companies, like Hermes and IBM. This previous experiences in the industry were related to advertising, but they were probably helpful in his commission for Olivetti.

The typeface that Müller-Brockmann designed for Olivetti was called Candia, which was the name of a municipality in the region of Canavese, in the north of Italy. Candia was a monospace sans serif that showed the rational design style of Müller-Brockmann (fig. 23).

Candia was a 12 pitch typeface, created for fitting 12 characters to the inch.[2] Olivetti also released a pitch 10 version of Candia, it was called Livius.

**H. Lindinger**

Lindinger was an industrial and graphic designer directly involved in the Ulm School of Design, founded in Germany in 1953. In operation from 1953 to 1968, this school was very influential in design education.

Most likely, Olivetti got in touch with Linginger through this institution. People like Müller-Brockmann and Herbert Bayer, who worked with Olivetti, had been visiting lecturers of the Ulm. The connection between Olivetti and this school went even further, as they worked together in some collaborative projects. Hans von Klier, who was head of the corporate design department in Olivetti, had also studied at the Ulm.

1 Interview by the author.

2 In typewriters, pitch is a term that refered to the size of the typeface. The two most common pitchs were pica (10 characters to the inch) and elite (12 characters to the inch).

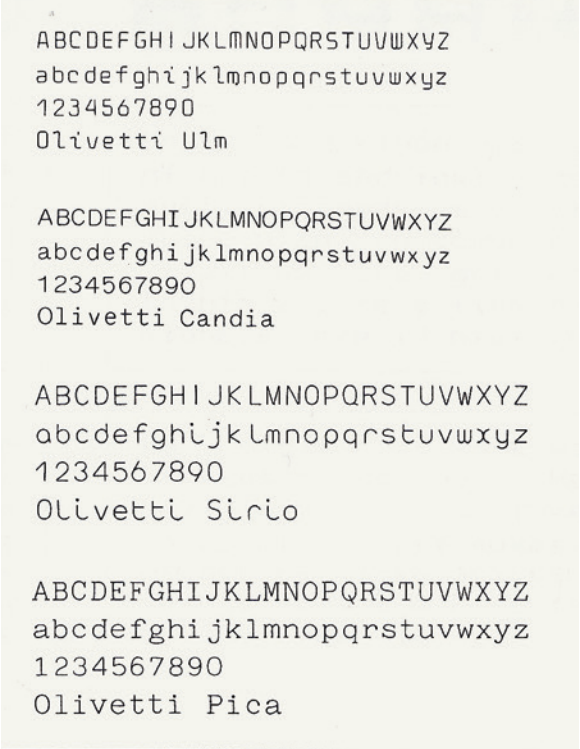



**Fig. 24** - Sample of the typefaces Ulm and Sirio, shown together with Candia and the conventional Pica.

Ulm Sirio Candia Silva Livius Pica Cicero Elite

**Fig. 25** - Comparision of letter 'a' in different Olivetti typefaces.

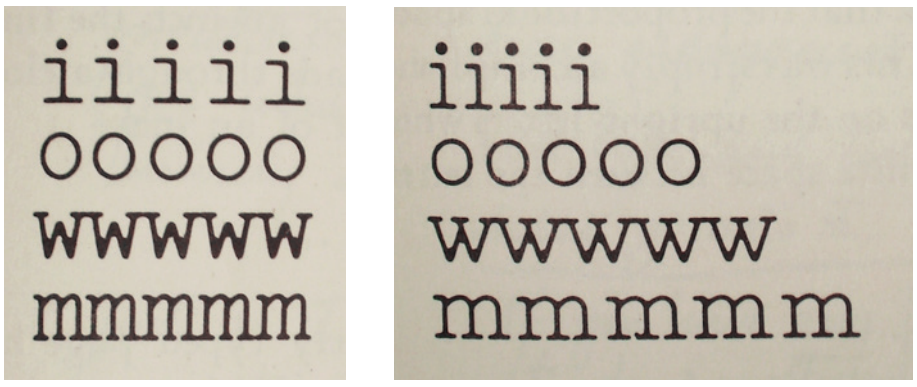



**Fig 26** - Comparison between monospace and proportional type in typewriters.

Lindinger designed a couple of typefaces for Olivetti, Sirio and Ulm (fig. 24), both of them were monospace typefaces. Sirio was a pitch 12 typeface, and Ulm was created for pitch 10.

It is hard to conceive Sirio as a text typeface because the readability of the text would be compromised in a long piece of writing. It was a design that contrasted with the conventional typewriter type Pica. In the fig. 25 there are a few samples of the design of letter 'a' in different Olivetti typefaces, the designs by Lindinger stand out for their originality.

The Ulm typeface, with its rational and constructive appearance, showed the design approach of an industrial designer. It was a design that Lindinger probably created following the ideas of the Ulm school, a pioneer in the integration of science and art.

It is important to remember that type designers had to consider the particular features of the typewriter before creating a typeface. In the following section there is a explanation of the peculiarities of the machine. The text will provide the reader with a better understanding of typewriter letterforms; and it will explain the reasons for their particular style.

## 4.2 - The brief, the peculiarities of the typewriter

The design of typewriter typefaces was influenced by the mechanical limitations of the machine. The size of the characters had to be thoroughly defined. There were three main dimensions to consider: the width of the characters, the height of the design and the width of the strokes.

### The width of the characters

The first and most obvious attribute of typewriter typefaces is the use of a single width for the design of all the characters. This width included the white space around the letterforms. To make the space between characters as even as possible, some narrow characters like 'i' included long serifs; and wide letters like 'm' were compressed to the size of an 'n'. (fig. 26)

The size of a typewriter typeface was measured with a different method from the printing type. It depended on the characters that fit horizontally in one inch. The most common sizes were pitch 10 (10 characters to the inch) and pitch 12 (12 characters to the inch). There were other smaller and bigger sizes, from pitch 17 to pitch 5; but they were just used for special purposes.

The improved methods for printing in electric and electronic machines enabled the use of several character widths. The new models offered four width possibilities, a range that was still far away from the proportional type used in the printing industry.[1]

### The height of the design

The characters were engraved in metal for manual and electric machines and in plastic for electronic models. The dimensions of the metal or plastic type set the limits for the design of the characters.

1 The Linotype machine used from 12 to 17 different widths.


**Fig. 27** - Typewritten 'a' printed with ribbons made of different materials.

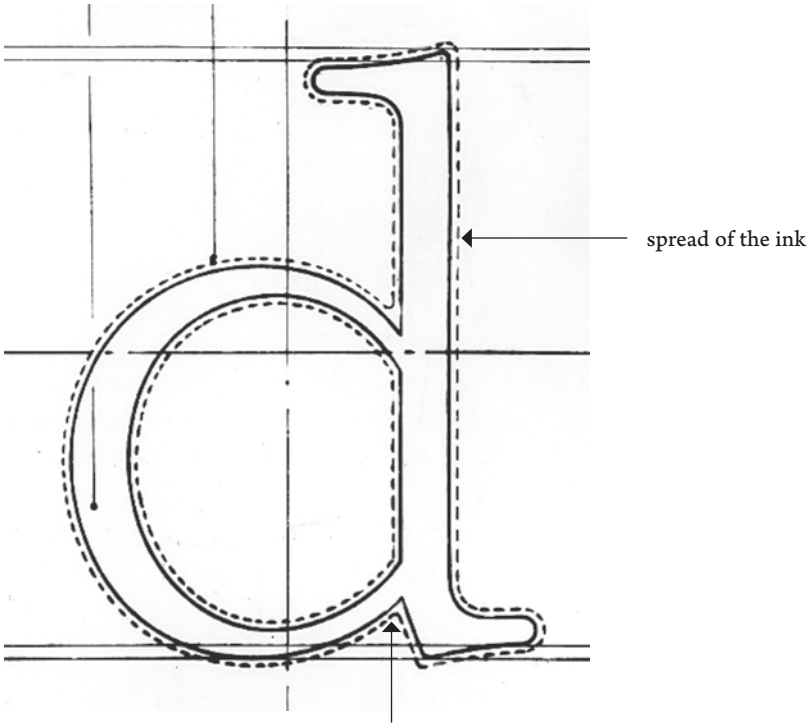



**Fig. 28** - Drawing of letter 'd' with a visual reference to the spread of the ink.

a | b
c | d

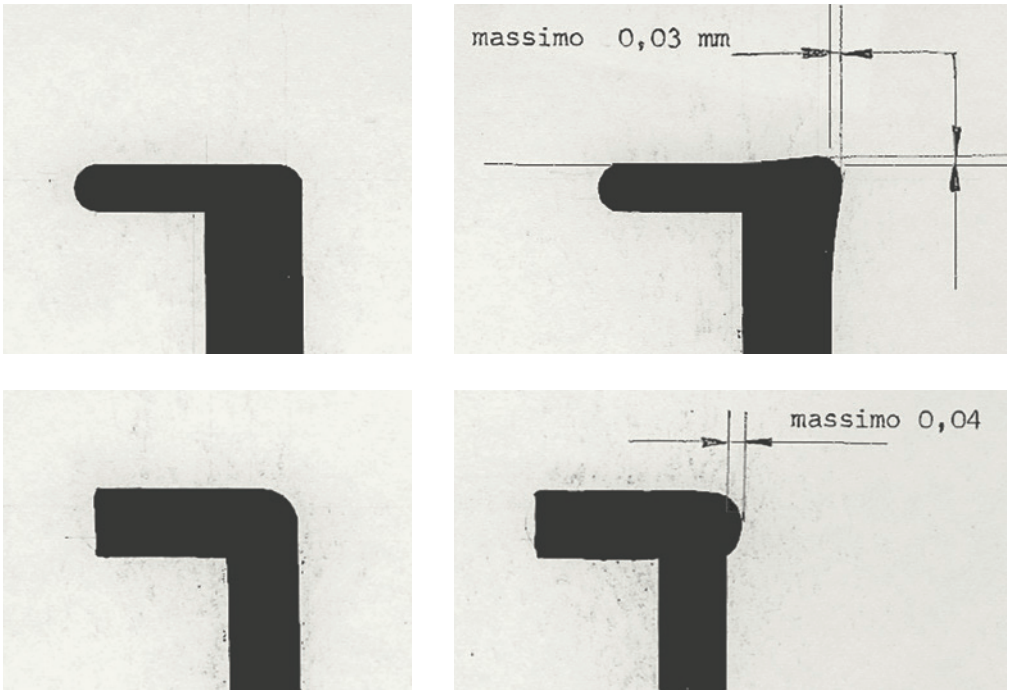



**Fig. 29** - Two different corner adjustments for the design of typewriter typefaces.
a. Normal design.
b. Adjustment of the drawing in a.
c. Normal design.
d. Adjustment of the drawing in c.

The letters were drawn at a big scale (50:1 or 90:1), and later reduced to the dimensions of the actual type to have an idea of the final result.

In typewriter type the proportions of the letters were different from printing type. The x-height was normally larger, generally between 2 and 3 mm in the actual type. And descenders and ascenders were smaller. The type slugs had a limited space and the two characters of each key had to fit in there.

The dimensions of the type created a frame for the characters. The designer had to define then the proportions of the letters and the thickness of the strokes.

### The width of the strokes

In manual typewriters the final appearance of the letters depended on different factors: the pressure into the keys, the ribbon and the condition of the machine.

The pressure applied into the keys affected the result obtained in the printed letters. If the pressure was too light the ink would not reach the outlines of the design. On the other hand, if the pressure was too strong, the letters would lose their modulation. It was difficult to create high-contrast characters in a typewriter.

In electric and electronic machines, the pressure applied into the keys was not a problem anymore. The type reached always the paper with the same striking force and the appearance of the characters was more uniform. However, this was not the only factor that caused the irregularity of the letters.

Typewriters printed the characters through a ribbon. This transfer method caused the spread of the ink, and consequently, the lack of sharpness in the printed letters. The ribbons used in typewriters also changed with time and different materials offered different printing qualities (fig. 27).

It was important that the designer adjusted the design to the printing conditions of the machine. The thickness of the stroke was calculated, considering that the letters would look different when printed (fig. 28).

The spread of the ink was the main reason for the monolinear appearance of typewritten letters. Type designers tried to find solutions to achieve an acceptable quality of the printed text. And some manufacturers had their own recommendations on typewriter type design.

### Olivetti specifications for typeface design: *Libro Cassinelli*

In 1969, Olivetti created an internal manual with guidelines for obtaining an optimum result in typewriter typefaces, the *Libro Cassinelli*. The drawings of the lettershapes needed some special adjustments.

The ink did not always reach the sharp corners of the outlines. The designers used sometimes the distortion of the corners to solve this problem (fig. 29). This adjustment was not new, it was also used in type design for phototypesetting.

The typewriter and the printing industry shared some concerns about type design. In both cases, the ink tended to thicken the joints of the strokes. The sharp corners had to be avoided to minimise the problem (fig. 30).


**Fig. 30** - Example of how to draw the joints of the strokes in letter '**M**'.


**Fig. 31** - Specifications for the design of typefaces for Olivetti typewriters.

There were not strict rules about the proportions of lettershapes. In typewriter typefaces the x-height of the lettters was generally bigger than in printint type. In letters like 'a' and 'e', the spread of the ink could close the countershapes, so they were usually enlarged.

The *Libro Cassinelli* described also some optical adjustments and reference measurements for letters like 'e', 'a', 'g' and 's' (fig. 31). These rules were born from the knowledge and experience of the company in typewriter type.

The internal manual was mainly focused on the Latin alphabet. Other scripts were mentioned, but there were not specific recommendations for the design.

### Multi-script challenges of type design for typewriters

Typewriters represented the access to the printed word for many writing systems. In some cases the text was not even composed by letters but by symbols.

The designers who created the typewriter type for foreign scripts did not know much about them. They needed to do some research and looked at other typefaces as a reference for their work.

Some scripts were more complex than others. They required not only the design of the characters and adapting the keyboard, but also creating new mechanics for the machine.

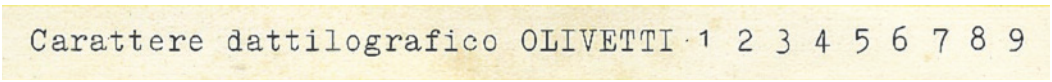
Chinese, Korean and Japanese were probably the most challenging case. It was very difficult to find an effective solution for the arrangement of the keyboard. Some typewriter companies tried to simplify these writing systems, but the solutions they offered never got a big popularity in the Asian market.

Other scripts, like Devanagari or Arabic, create the words with joining letters. They needed to correct the broken appearance of the typewritten text. The machine had to offer a good horizontal alignment, and avoid the gaps between letters.

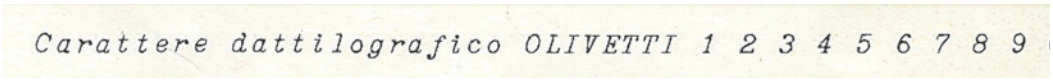
The 'dead keys' were created for placing diacritics and other marks above and below the main character. When one of these keys was pressed the carriage did not move, so the typist could create the complete character before typing the next one.

Typewriter typefaces had to offer character sets for different scripts, but also for different languages. The keyboard varied from one country to another, and the alphabet had to be completed with new letters, symbols and marks.

Pica, conventional

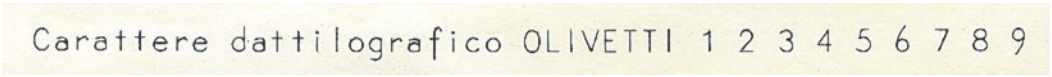



Italico, italic



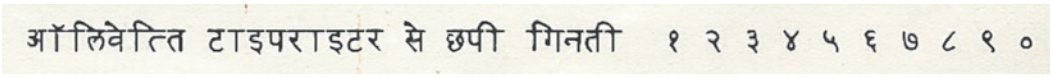

Lettera, imperial


Simplicitas, sans serif




Reiner, proportional


Hindi, non-Latin




Perforante, special purposes


**Fig. 32** - Examples of Olivetti typefaces for every group of the classification. Above the images, name of the typeface and group.

The previous pages have shown the particular circumstances that made typewriter typefaces became an unique style. However, the typefaces designed for typewriters do not look all the same. Different companies offered different designs.

### 4.3 - Olivetti typefaces, evolution and classification

Olivetti was one of the very few companies that designed and manufactured type for their own machines. This fact helped the company to built the identity of the typewriters and differentiate them from the competitors.

There was not a standard classification for typewriter typefaces; every company had a different system. The metal type usually included a reference number, which was used for identifying the typefaces. They were organised in the specimens by size or just alphabetically.

Olivetti tried to classify the font library several times. In 1958, a specialised commission organised the typefaces in four main groups:[1]

**Pica**. It was the most common style used in typewriters, which could be considered a branch of slab serif typefaces.

**Italic.** There were not typeface families in typewriter type design, every style and weight was independent from the others.

**Imperial.** They were the designs with contrast in the thickness of the strokes.

**Sans serif.** They were initially only used for special purposes. By the second half of the 20th century, sans serif typefaces became popular in typewriters, and manufacturers offered new designs of this style.

One of the last Olivetti type classifications was made by Gianmaria Capello in 1977. His chart included more than 100 typefaces.[2] Some groups that were not included in the previous classification complement the list:

**Proportional.** These typefaces were designed with different character widths.

**Non-Latin.** The designs for writing systems other than the Latin alphabet.

**Protective-writing** and **handwriting.** These two groups included typefaces with a specific function. They will be explained more broadly in 'typefaces for special purposes'.

The two classifications shown above will be used for arranging the Olivetti typefaces in different groups (fig. 32). The first group mentioned, pica, will be renamed 'conventional typefaces'. The word 'pica' was very confusing in typewriter terminology. It was commonly used as an equivalent to pitch 10, and to refer to one of the most common typefaces used in typewriters.

Typewriters evolved with technology, and the typefaces designed for them also changed. It is not easy to create a complete list of typefaces designed for Olivetti. Some of them were never released and some others lasted in the market for a short time. Moreover, when the company bought Underwood in the 60s, some of the American typefaces started to be used in Olivetti typewriters. The designs that were not originally created for the company will not be included in this research as Olivetti typefaces.

1 Records of a meeting held in Olivetti (20.01.1958). The type design commission was composed by the engineer Berla, the professor Pampaloni and the engineer Rozzi.

2 *Elenco scritture e tasti,* Uff. Tec. Olivetti (1977).

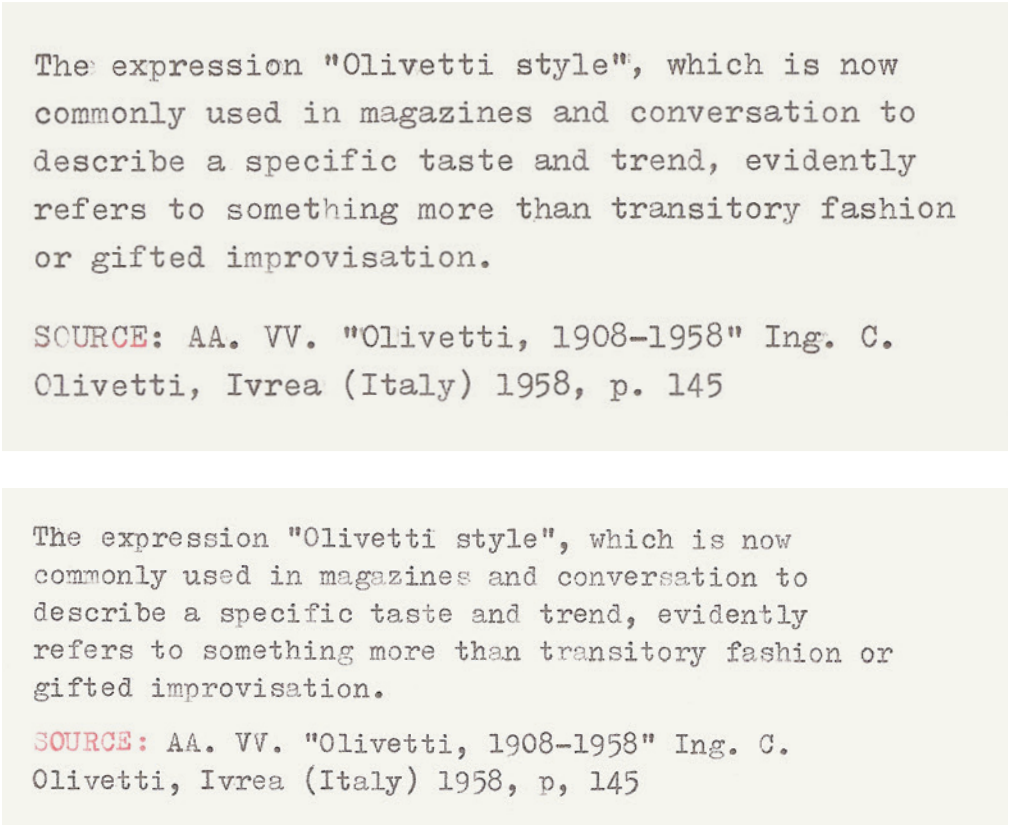



**Fig. 33** - Typewritten samples of Pica (top) and Elite (bottom).


**Fig. 34** - Comparison between Pica and Elite lettershapes. The scale of the Elite characters is bigger, in order to get the same x-height in both samples.

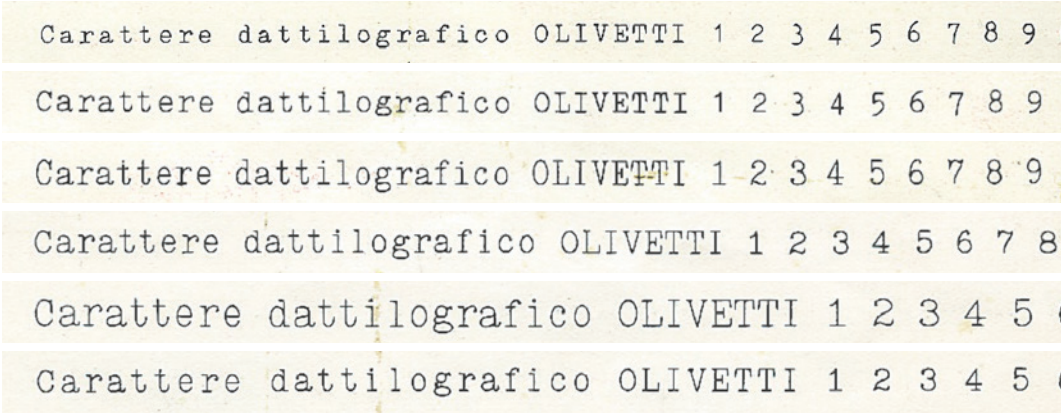



**Fig. 35** - Samples of the Olivetti conventional typeface offered in different sizes. From top to bottom, name of the typeface and width of the characters:
– Elite Pica (2.6 mm)
– Pica Large (2.6)
– Roman Medium (2.6)
– Roman Large (2.8)
– Ministero (3.14)
– Roman Large (3.14)

## Conventional typefaces

The typewriter was born in a late stage of the industrial revolution. The 19th century was a time of technological and social changes. The population was concentrated in the cities. The lifestyle was fast, and advertising needed to find a way to attract the attention of people running to the office. In this context a new type style was born, the slab serif. It happened that slab serif typefaces offered optimum results in typewriters. The square serifs and the low-contrast design suited the printing peculiarities of the machine. Since the early years of the industry, this style was used as the unofficial standard for the machine.

The conventional typefaces for typewriters were designed with long serifs. They reinforced the horizontal alignment of the letters, and filled in the gaps created by narrow characters, like 'i' or 'l'.

Probably because the first typewriters only offered one typeface, manufacturers did not give it a name. They referred to it by the size of the type. Pica and Elite were the two first typefaces used in Olivetti typewriters (fig. 33). Pica stands for pitch 10, and Elite for pitch 12.

The characters of Pica and Elite were based on the same design and adapted to several sizes. To fit the Pica typeface in the pith 12 size, the lettershapes were scaled but also slightly modified. For instance, letters like 'a' and 'f' shortened their top terminals, and some other characters like 'w' and 'M' changed their shape (fig. 34).

In the first half of the 20th century the typewriter was a growing industry. Olivetti released new models, and the conventional type mutated into different sizes (fig. 35). In some cases like Pica Large and Roman Medium, the vertical proportions of the design were modified, while the width of the letters was the same as Pica. In some others like Roman Large and Ministero, the width of the characters also changed.

The conventional typeface was used in typewriters throughout their history. The design of the lettershapes suffered some adjustments, but the overall appearance remained the same. A few examples of these small changes are shown in fig. 36. In older machines some countershapes, like the top bowl of 'g', were smaller; some uppercase letters, like 'G', were narrower; and the tail of 'Q' was shorter.

The character set of conventional typefaces was usually bigger than other styles. Pica and Elite were adapted to different languages and scripts. Pica was the 'default' typewriter typeface before the II World War. In the 40s Elite became more popular, and the typewriter manufacturers started to offer new type styles.[1]

**Fig. 36** - (400%) Examples of the evolution of the Elite typeface in Olivetti. The top row of letters were typewritten in a Sudio 42 (1935) end the bottom one in a Lettera 22 (1950).

1 Beeching, *Century of the typewriter*, 78.


**Fig. 37** - Samples of the Olivetti italic typefaces. From top to bottom:
– Italic
– Large Italic
– Elite Italic

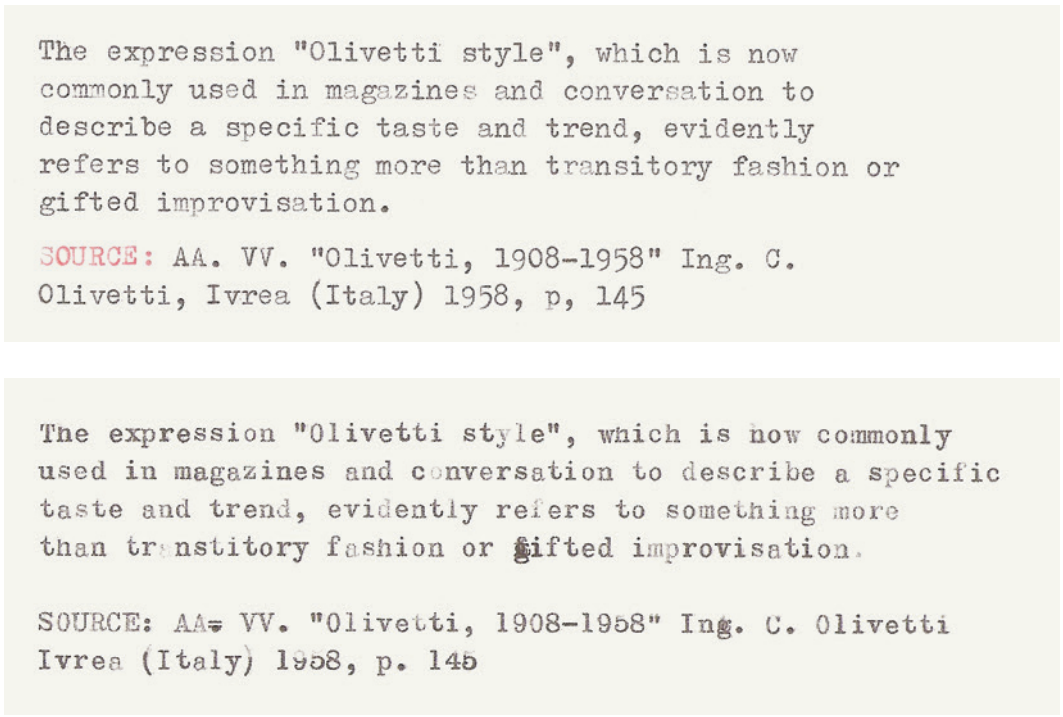



**Fig. 38** - Typewritten samples of the Olivetti typefaces Elite (top) and Lettera (bottom).


**Fig. 39** - Comparison between Elite and Lettera characters.

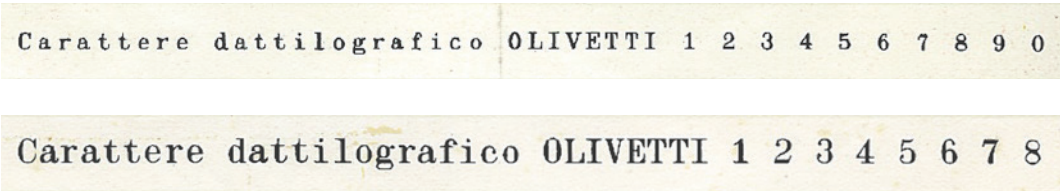



**Fig. 40** - Extra styles of the Lettera typeface, Lettera Pica (top) and Imperial (bottom).

### Italic typefaces

The term 'typeface family' did not apply to the typewriter industry. Different sizes and weights were new typefaces that were independent designs.

Italic typefaces were created for personal correspondence and other informal documents. They were not intended for professional use.

The design of uppercase letters was normally a slanted version of the conventional typeface Pica. Instead, most lowercase letters and numbers were designed with cursive shapes. There were three Olivetti typefaces in this group, Italic, Large Italic and Elite Italic (fig. 37). The first two were pitch 10 size and the last one was pitch 12.

### Imperial typefaces

A new type style appeared in Olivetti by the 50s. The new typeface Lettera[1] was a design with some contrast in the typewritten letters. It offered a darker and more severe appearance to the text (fig. 38).

The market demanded new typefaces, but the mechanics of the machine and the low-quality printing were built into big walls for the evolution of typewriter type design. The imperial typefaces were one of the first attempts to create a new style for the machine.

Lettera, like Elite, was a pitch 12 type. Comparing the two of them, the characters in Lettera were narrower and smaller, so the letters looked more widely spaced. The shapes of the numbers were substancially different. While Lettera used lining figures, Elite used old-style numerals.[2] (fig. 39)

There were a couple of variants of Lettera: Imperial, bigger in width and height, and Lettera Pica, which was basically the design of Lettera placed in type slugs for the pitch 10 size. (fig. 40)

Lettera was widely used in Olivetti. It was included, together with Pica and Elite, in the group of standard typefaces used in typewriters.

The variety of typewriter styles grew quickly after World War II. New trends in type design and changes in the taste of users favoured the arrival of new typefaces.

### Sans serif typefaces

Sans serif typefaces had been part of the printing industry for a long time. The typewriter manufacturers also wanted to include this style within the possibilities of the machine.

Sans serif typefaces were difficult to adapt to a monospace design. The white space created around narrow characters, like 'i', broke the rhythm of the text and had a negative impact on legibility. Most of the early sans serif typewriter typefaces were alphabets with only uppercase letters.

The first Olivetti sans serif typefaces were created for specific purposes. The font library included designs of special sizes, smaller and bigger than the conventional pitch 10 and 12.

The smallest sizes were used to accommodate text in narrow columns, usually statistical tables. Without serifs, the lettershapes could be condensed maintaining a minimum of legibility. Olivetti created two typefaces for small sizes: Mikron and

1 Also called Imperial Elite in some of the sources consulted.

2 The lining figures have all the same height and they are designed over the baseline. Old-style numerals have not all the same height, some extend above or below the baseline.


**Fig. 41** - Samples of the Olivetti typefaces for small sizes. From top to bottom:
– Mikron Piccolissimo
– Mikron Piccolo
– Mikron
– Perla
– Perla Elite


**Fig. 42** - Samples of different sizes of Stampatello. From top to bottom:
– Stampatello Elite
– Stampatello Piccolo
– Stampatello
– Stampatello Grande


**Fig. 43** - Samples of Telegrama (top), Avvisi (middle) and Gigante (bottom).

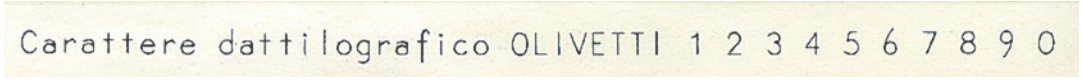



**Fig. 44** - Sample of Simplicitas.


**Fig. 45** - Design of four lowercase letters of Quadrato (10:1).

Perla. The characters of Perla were less condensed and the x-height was shorter. Both of them were offered in several sizes (fig. 41).

Another group of sans serif typefaces were the alphabets without lowercase letters. These designs only included uppercase letters and small caps. Stampatello was the name used by Olivetti to refer to this style (fig. 42).

Three sans serif typefaces designed for specific purposes that are worthy to mention: Telegrama, whose name is self-explanatory; Avvisi, a display typeface; and Gigante, a shiftless alphabet[1] created for advertising. (fig. 43)

Simplicitas is an interesting example in this group. For many years, it was the only sans serif text typeface for Olivetti typewriters. The simplicity of the design confered the letters a gentle look (fig. 44). Nonetheless, it seems like it was not a popular design. There were not many references to the use of this typeface in Olivetti typewriters.

The typefaces mentioned above were only secondary options barely used in manual typewriters. The history of typewriter type design changed in the 60s, when a new style of sans serif typefaces started to be used in the machine. It was the 'techno' type. The geometric appearance of this new style suited the machine.

Quadrato, released in 1963, was a good example of this new trend in typewriter type. It was a design by Arturo Rolfo that turned into one of the most popular typefaces of Olivetti typewriters. Quadrato was firstly designed for the Olivetti Valentine and used later in other models.

The typefaces by Aldo Novarese, Microgamma (1952) and Eurostile (1962), were the reference for the design. The characters were based on a square shape with round corners. The endings of the strokes were also round and the countershapes were relatively big (fig 45). However, Quadrato was not strictly a sans serif typeface, and some letters like 'i', 'l', or 'r' included serifs (fig. 46). This was not the last sans serif typeface designed for Olivetti. Notizia was created later, for electronic typewriters. The design included the same round endings as Quadrato, but the characters were narrower and the overall appearance was closer to a conventional sans serif typeface (fig. 47).

The electric and electronic typewriters introduced the possibility of designing typefaces with several character widths. And the hegemony of monospace typefaces in typewriters came to an end.


**Fig. 46** - Sample of Quadrato.

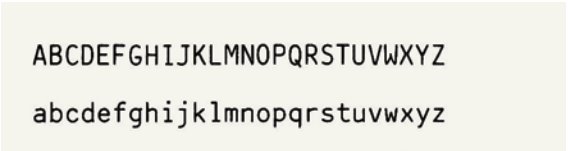



**Fig. 47** - Lowercase and uppercase letters of Notizia.

1 A shiftless alphabet was a type design that only included one character per typebar, so the typewriter did not need a shift key.

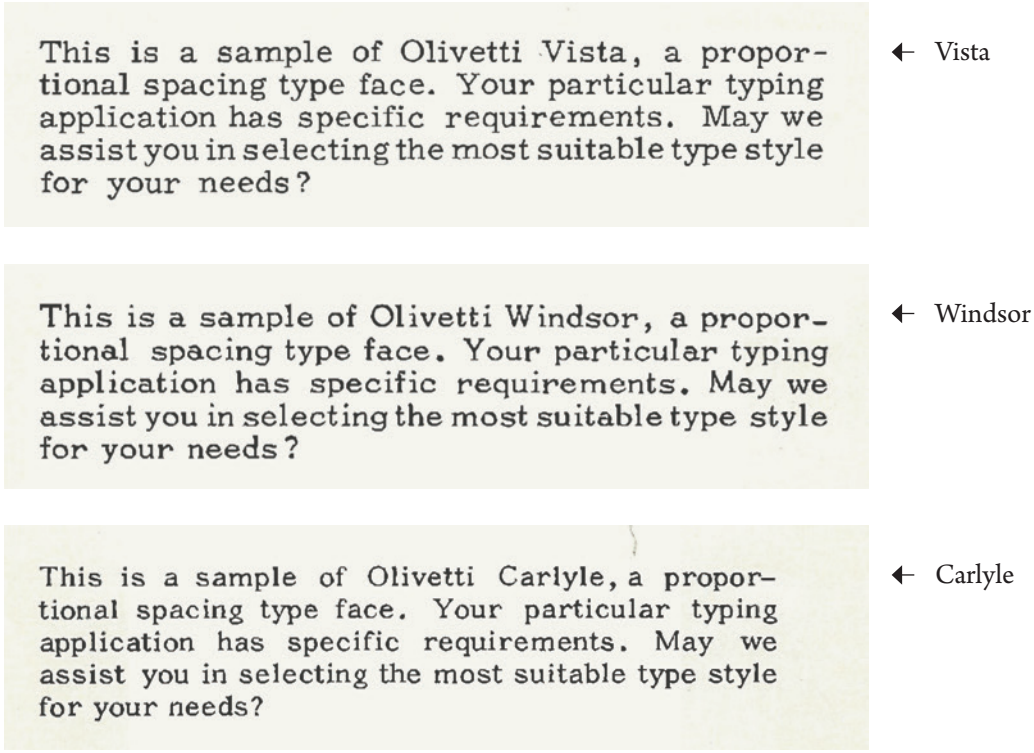



**Fig. 48** - Samples of three proportional typefaces for Olivetti.


**Venezia (1964–1965)**
Editor 5
electric typewriter

**Carlyle (1968)**
Editor 5

**Venezia (1974)**
Lexicon 93
electric typewriter

**Venezia (1976)**
TES 501
electronic typewriter

**Fig. 49** - Example of the evolution of proportional type in Olivetti.

### Proportional typefaces

As it was mentioned before, Olivetti had created proportional typefaces for the manual typewriter Graphika in 1958. These designs were not as successful as expected, and it was not until the arrival of the electric typewriter that Olivetti decided to design more proportional typefaces.

The type design department of Olivetti worked in new proportional designs. The font library of the company grew and electric models used typefaces like Venezia, Tempo, Kent, Windsor, Vista, Doricus, or Carlyle. Unfortunately, it was not possible to find samples of all of them. (fig. 48)

The internal manual for type design, the *Libro Cassinelli*, included specifications for the distribution of the characters in different widths. This information showed how the width distribution could change from one design to another (see appendix 3, p. 77). The proportional typefaces for Olivetti were based on five modular units. The smallest sizes used a basic unit of 0.7 mm, and the standard size typefaces used 0.8 mm as the basic unit. In proportional type, uppercase letters were usually wider than lowercase; the narrowest characters were 'I', 'J', 'f', 'i' and 't'; and the widest 'M', 'W' and 'm'.

All the typefaces mentioned in this group, were designed for the typeball. When the first electronic machine was manufactured, most of them were adjusted for the daisy wheel. The design of the proportional typefaces in Olivetti evolved with the machine (fig. 49). The width of the characters and the thickness of the strokes changed through different models.

Venezia was one of the most used typefaces in Olivetti electric typewriters. The lettershapes were not a monolinear design, they had some modulation in the strokes (fig. 50). Still, typewriters were not reliable as a printing method, and a big part of the modulation was lost in the printed letters.

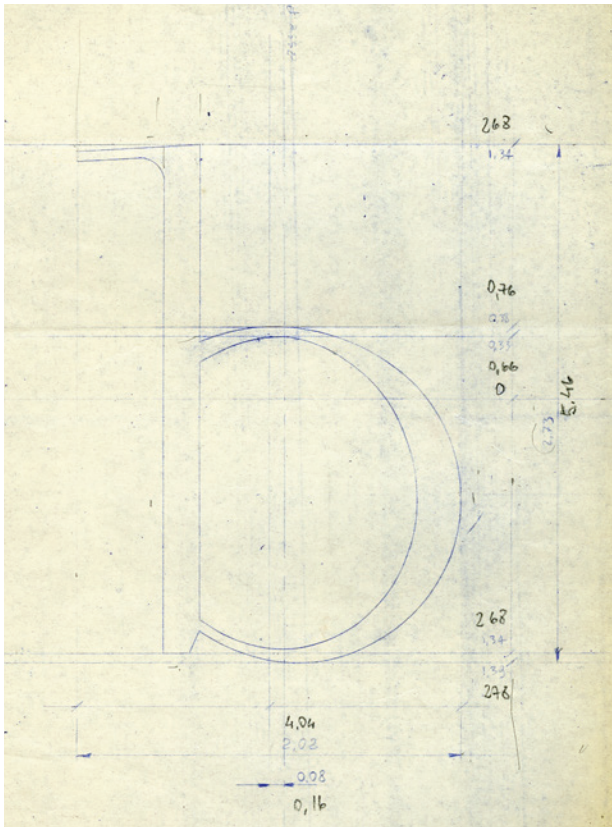



**Fig. 50** - Drawing of Venezia lowercase 'b' (25:1). For seeing the image in original size go to appendix 4, p. 79.

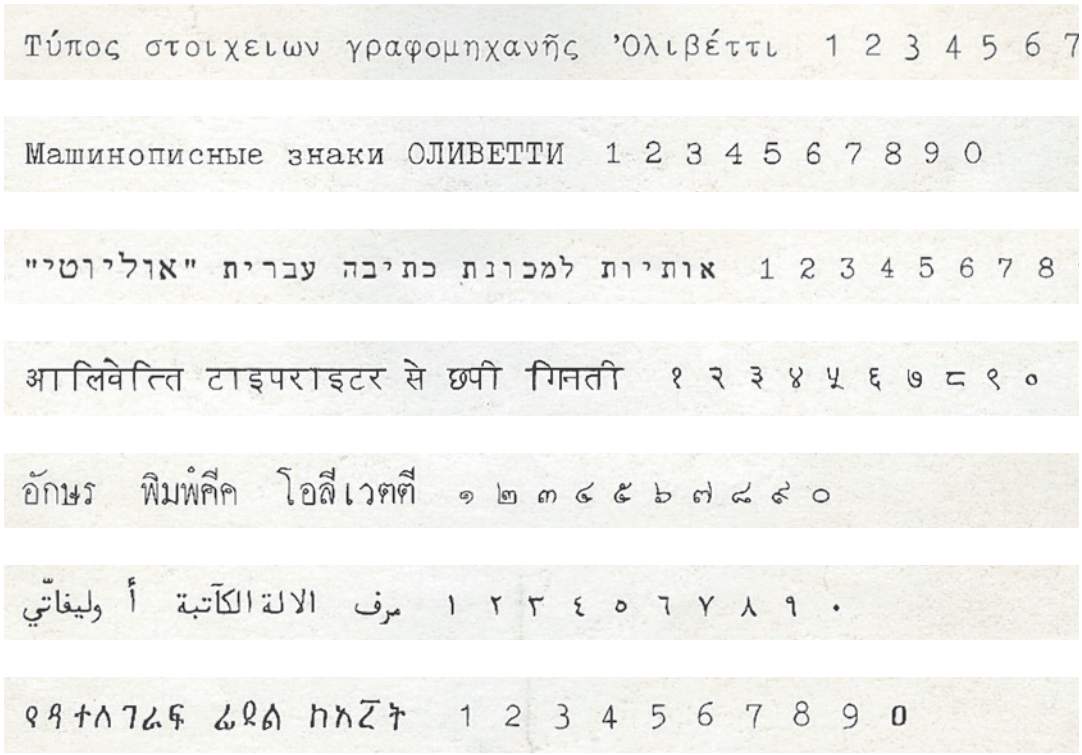



**Fig. 51** - Samples of Olivetti typefaces for different scripts. From top to bottom:
– Greek
– Cyrillic
– Hebrew
– Devanagari
– Thai
– Arabic
– Amharic

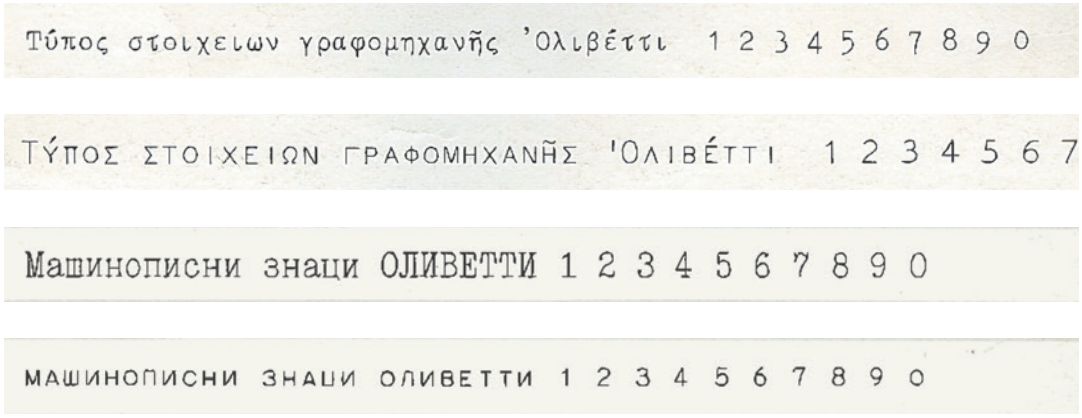



**Fig. 52** - Samples of different type styles for Greek and Cyrillic. From top to bottom:
– Greek Elite
– Greek Stampatello
– Cyrillic Roman Medium
– Cyrillic Stampatello

In the 70s, there was an attempt to design a new proportional typeface. Olivetti commissioned Wim Crouwel, but his design was never released.

The design of proportional typefaces increased the variety of styles available for the machine. The font library grew and changed with time. The typefaces were drawn in different styles and scripts.

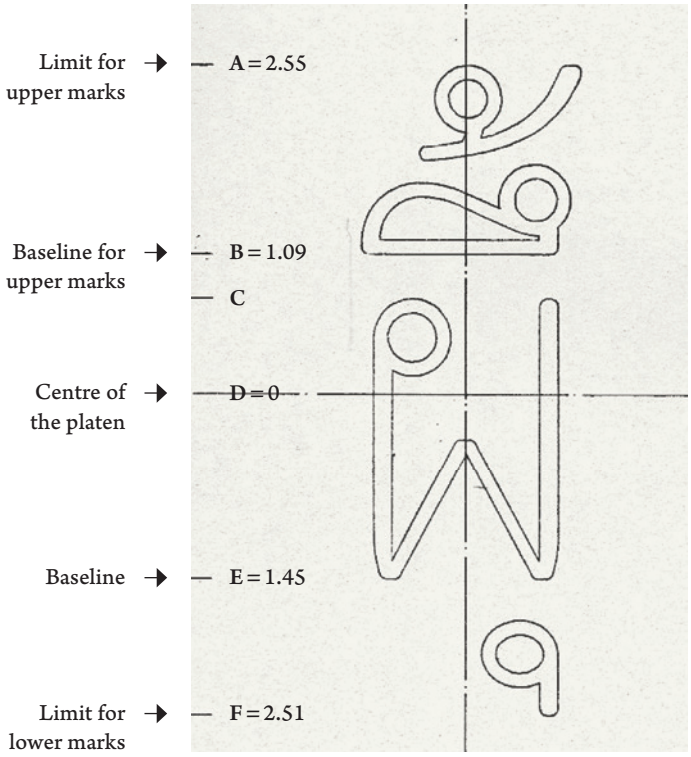
### Non-Latin typefaces

There is no room in this research for an exhaustive analysis of the design of the different scripts created for Olivetti typewriters. However, it is interesting to show some examples of the writing systems that the company supported (fig 51). Some scripts were developed further, and they were available in several styles (fig. 52).

Every script had particular features, and the dimensions of the characters did not always fit in the 2.6 mm width of the conventional Pica. For instance, in monospace typefaces, the width of Arabic characters was 2.8 mm, and in Amharic letterforms it was 3.14 mm.

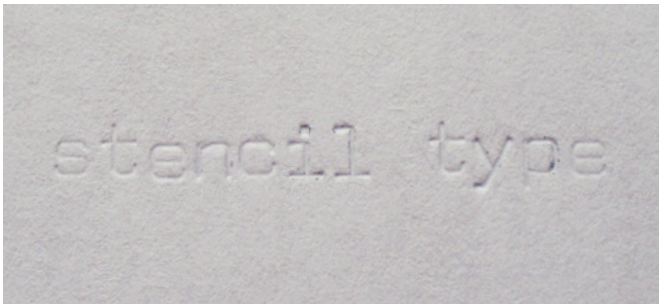
Some scripts like Thai needed to place marks above and below the letters, so the height of the characters was also a factor to consider for the design (fig. 53).

The design of multi-script typefaces pursued the access to foreign markets. The sales in the Latin script market was more segmented, and some fonts were made to fulfil particular purposes.




A–F = 5.07 mm (maximum height of the design)
C–E = 2.19 mm (height of the main character)
width of the character = 2.1 mm

**Fig. 53** - (75%) Specifications for the design of Thai characters for Olivetti (1982).




a | b

**Fig. 54** -
a. Colour selector in a Lexicon 80, the white circle is the option for stencil type.
b. Close-up of a text sample typewritten in the stencil mode.

Perforante


Stampatello and Perforante

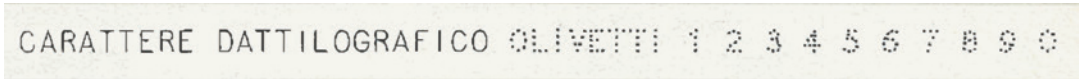



**Fig. 55** - Samples of the two Olivetti protective-writing typefaces.


**Fig. 56** - Sample of the typeface Roma in an Olivetti type specimen (1970).

### Typefaces for special purposes

The typewriter evolved with time, and that evolution came with new market demands. The machine was both used in the office and at home. The requirements of a typeface for private purposes were different than those of a typeface for professional use. The next examples are typefaces designed by Olivetti with a specific function.

Perforante was a typeface used for protective writing in cheques and similar work. The typewriter included an option for stencil type that embossed the letters on the paper, instead of printing them (fig. 54). The Perforante characters were engraved in the metal type with sharp contours, so that it cut the paper when using the stencil mode. Olivetti offered a type variant that included both Stampatello and Perforante. With this typeface, the user could cut and print letters in security documents with the same machine. (fig. 55)

There was another group of typefaces that were designed with a very particular function, the script style. The increasing number of users that bought typewriters for personal use, created the need for more informal designs. The tone of a letter written to a client was not the same as a letter written to a friend. The script style imitated the appearance of handwriting, and gave an informal appearance to the typewritten letters.

In the sources consulted for this research, just one sample of this script style was found among the Olivetti typefaces. It was called Roma, a typeface used also by other typewriters like Olympia or Facit. This is an example of a typeface designed by an external type foundry and sold to several companies. Roma cannot be included in the group of typefaces designed for Olivetti, but it is shown in here as a sample of other type styles designed for the typewriters (fig. 56).

The typefaces mentioned in previous pages are samples of the type styles designed for Olivetti typewriters. They have shown the evolution of type design in the company. In order to have a wider perspective, the Olivetti typefaces will be compared to a few designs created by other companies. The next pages offer a description and visual samples of several typewriter typefaces, and an explanation of the differences and similarities with those made for Olivetti.

## 4.4 - Comparison with other typewriter typefaces

The conventional Pica type was the most popular typewriter style before World War II. It could look like all the companies used the same typeface, but this is far from being the case. There were many different versions of the Pica typeface. Every manufacturer used its own design.

The earliest typewriter machines used shiftless sans serif alphabets, but by the end of the 19th century, all the typewriter companies were using the Pica type. This style is still today the most recognisable typewriter typeface.

The design of Pica suffered many transformations in the more than 100 years of existence. The changes from one typewriter to another, made the Pica type an interesting case of study. Document analysts, like the American David A. Crown, used the design differences between Pica typefaces to identify typewritten

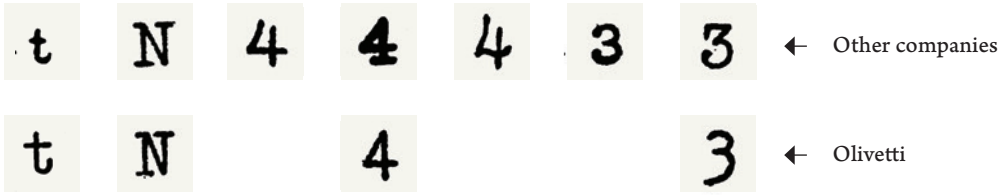



**Fig. 57** - Comparison of Olivetti characters with other typewriter manufacturers.

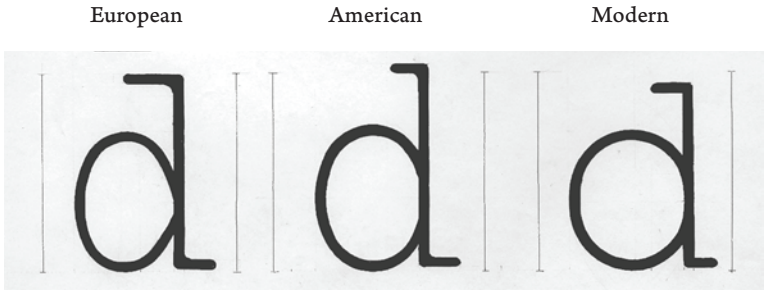



**Fig. 58** - Drawings comparing three different designs of 'd' for a Pica typeface.


**Fig. 59** - Comparison of the conventional typeface of different manufacturers. The circle highlights the characters with more distinctive features in each sample. From top to bottom:
– Olivetti
– Remington
– Corona
– Imperial
– Smith-Corona
– Underwood

documents. Some references to typewriting identification appeared as early as 1891 in the Sherlock Holmes story 'A Case of Identity':[1]

> *It is a curious thing ( ... ) that a typewriter has really quite as much individuality as a man's handwriting.*
>
> -- Arthur Conan Doyle, *Tales of Sherlock Holmes*, 409

In his article of 1968, 'Class characteristics of foreign typewriters and typefaces', Crown showed the main differences between American and European typewriter typefaces. He used as examples typefaces from different manufactures, among them the Olivetti Pica and Elite (fig. 57).

The *Libro Cassinelli* also included a reference to the differences in the design of conventional typewriter typefaces. By looking at the pictures in fig. 58, it can be said that the European Pica had longer serifs and smaller countershapes, and the trend in the 'modern' style was to create wider characters with shorter ascenders.

There were many differences in the Pica typeface form one manufacturer to another. In the fig. 59 there are text samples of several typewriters. The most distinctive characters in each sample have been underlined. The letters that might make the identification easier are 'a', 'g', 't', 'w', 'E', 'J', and 'Q'.

European manufacturers used slightly different sizes from the American companies. Apart from the American 2.54 mm width for pitch 10, in Europe, the characters were also designed for 2.50 and 2.60 mm; and 2.00, 2.12, 2.20, 2.23, 2.25, and 2.30 mm were possible widths for pitch 12.[2]

The changes in the width and height of the letters, and the small differences in the design of the characters influenced the colour of the typewritten text. The typeface, the typewriter, the typist, and the ribbon, were factors that made every document unique.

The second half of the 20th century was a complex time for the industry. The exclusivity of typefaces became part of the past and manufacturers shared the designs offered by external companies. It was common to find the same letterforms in machines of different brands. The merge of companies, like Olivetti and Underwood, also changed the typewriter scene; and making a clear classification of typefaces was complicated.

Some type styles were especially popular in the industry. In the 50s, the 'techno' pica was a breakthrough in the typewriter market (fig. 60). The 'techno' typeface by *Caractèreres*, Cubic, was used in Olivetti typewriters.

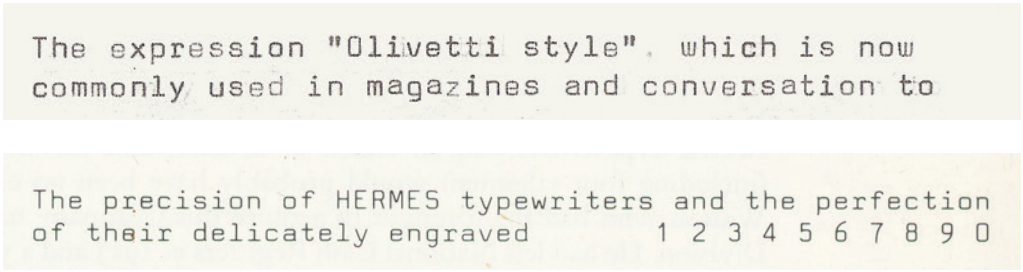



**Fig. 60** - Samples of two 'techno' typefaces: Cubic by *Caractèreres* (top), and Techno Pica by *Setag* (bottom).

1 Crown, 'Landmarks in typewriting identification,' 105.
2 Hilton, *Scientific Examination of Questioned Documents*, 47.


**Fig. 61** - (400%) Comparison between some letters of Quadrato and Cubic.


**Fig. 62** - Samples of Quadrato (top) and Cubic (bottom).

Cubic by *Caractèreres*, in a Facit TP1.

Techno Pica by *Setag*, in a Hermes 3000.

**Fig. 63** - Close-up of the type slugs of two typewriters with a 'techno' typeface.

Quadrato, the typeface designed by Arturo Rolfo for Olivetti, was also included in this style. The design by Rolfo was quite different from the other 'techno' typefaces. The characters of Quadrato had a shorter x-height (fig. 61) and the colour of the letters in text was completely different. Quadrato was a pitch 12 typeface and Cubic pitch 10 (fig. 62).

The type manufacturers used reference codes to classify the designs. They engraved this reference and the initials of the company in the metal type, so that it was easier to identify the typefaces (fig. 63).

The electric typewriter introduced many new designs. Those created for the IBM Selectric were of special importance. They survived in their digital version and are still popular today. Courier (Howard Kettler, 1955), Letter Gothic (Roger Roberson, 1962) and Orator (John Scheppler, 1962) are just a few examples. The three of them were also used by other typewriter companies, among them Olivetti. IBM typefaces became a major source for digital revivals.


**Fig. 64** -Type sample of Foundry Gridnik.

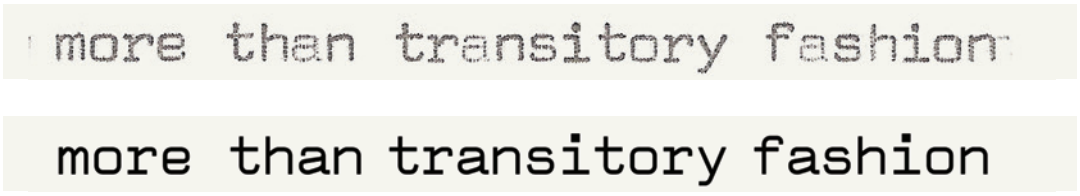



**Fig. 65** - Comparison between Quadrato (200%) and Valentine.

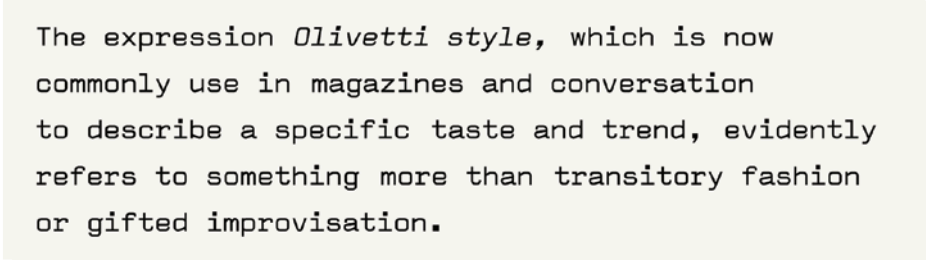



**Fig. 66** - Sample of Valentine.

## -- 6 --

# Digital typewriter typefaces

Typewriter typefaces did not disappear with the machine. Beyond the differences between styles, the particular look of typewritten letters had an aesthetic unity. Many designers today find in typewriter type a source of inspiration.

## 6.1 - Typefaces based on Olivetti models

Olivetti was a leading company in the typewriter industry. The attention paid to the design of the machines and the memorable advertising campaigns have already a place in the history of design. A significant number of designers created digital typefaces based on Olivetti models. With more or less depth, all of them helped to maintain the legacy of Olivetti type design.

### Gridnik

Wim Crouwel and David Quay, 1997

In 1997, Wim Crouwel was approached by David Quay to revive some of his alphabets as digital fonts. The New Alphabet, Fodor, Stedelijk and Gridnik were released in the 90s by The Foundry, based in London.

The design of Gridnik was based on the typeface that Crouwel had made for Olivetti typewriters, which was later used in the design of Dutch post stamps. It was initially offered as a single weight font, and in 2008 the family was expanded. It was published as Foundry Gridnik and it included four weights: light, regular, medium, and bold (fig. 64).

Among the Crouwel alphabets released as digital fonts, Gridnik was the only one created as a text typeface. The design was digitised from the original pen and ink drawings for Olivetti, the letters that had been designed with the width restrictions of the typewriter. The digital design was faithful to the original, and besides the letter 'r', all the letterforms maintained the width of the initial design.[1]

Gridnik was a success in the market. It brought back the work of Wim Crouwel to the design scene. In 2015, the Foundry joined Fontshop, which was later acquired by the Monotype corporation. Because of that, the rights of distribution of Foundry Gridnik belong currently to Monotype.

### Valentine

Stephan Müller, 2002

In 1993, Stephan Müller founded together with Cornel Windlin the digital type foundry Lineto. This company is of especial interest for this research, because the font library includes two typefaces inspired by Olivetti (Valentine and Lettera).

Valentine was based on the typeface designed by Arturo Rolfo for the typewriter with the same name. Müller used a typewritten sample of the typeface and the original drawings supplied by the *Associazione Archivio Storico Olivetti*. The design of Valentine is an accurate version of the original typeface (fig. 65). The proportions and the width of the letters are very similar to Quadrato (fig. 66).

1 davidquaydesign.com/foundry-gridnik (retrieved 29.08.2015).

One morning, when Gregor Samsa woke from troubled dreams, he found himself transformed in his bed into a horrible vermin. He lay on his armour-like back, and if he lifted his head a little he could see his brown belly, slightly domed and divided by arches into stiff sections.

**Fig. 67** - Sample of Lekton.

*Grumpy wizards make toxic brew*

Grumpy wizards make toxic brew

**Grumpy wizards make toxic brew**

**Fig. 68** - Sample of Lekton Italic, Regular and Bold.

abcdefghijklm
nopqrstuvwxyz

abcdefghijklm
nopqrstuvwxyz

**Fig. 69** - Comparison between Candia (top) and Lettera (bottom).

**Fig. 70** - Detail of the joints of the strokes in the letter 'k' of Lettera.

The first electric typewriter was produced by the Blickensderfer Manufacturing Company, of Samford, Connecticut, in 1902. Like the manual *Blickensderfer*

The first electric typewriter was produced by the Blickensderfer Manufacturing Company, of Stamford, Connecticut, in 1902. Like the manual *Blickensderfer*

**Fig. 71** - Comparison between Lettera (top) and Lettera-Txt (bottom).

The main differences are in small details, like the shapes of the counterforms or the joints of the strokes.

Valentine is a typeface family of six weights: Light, Light Italic, Regular, Italic, Bold, and Bold Italic. Quadrato had only one weight, so the extra styles of the family are a personal interpretation of Stephan Müller.

**Lekton**

ISIA Urbino, 2008

Lekton was born at ISIA, the *Istituto Superiore per le Industrie Artistiche* of Urbino (Italy). The typeface was created by six students (Luna Castroni, Stefano Faoro, Emilio Macchia, Elena Papassissa, Michela Povoleri, and Tobias Seemiller) under the supervision of the lecturer Luciano Perondi. The initial typeface was designed in only eight hours, and it was released under a Creative Commons licence.

The design of Lekton was based on Notizia, a typeface created in Olivetti for electronic typewriters. The font is double and triple spaced, maintaining the features of typewriter typefaces designed for the daisy wheel. The name Lekton, which means 'what can be said', was chosen as a reference to the sophisticated names given to Olivetti typewriters, such as Lexicon or Tetractys.

Lekton was a collaborative project opened to contributions for improving and increasing the character set. The list of designers involved in the project grew fast. Daniele Capo, Antonio Cavedoni, Riccardo Lorusso, Marco Comastri, Sabrina Campagna, Elisa Ansuini, Raffaele Flauto, Mariangela Di Pinto, Jan Henrik Arnold, and Paolo Mazzetti participated in the design of the typeface family. (fig. 67)

In 2011, Lekton was published in Google fonts. And now the typeface is only available through this platform. The type family includes three styles, Regular, Italic and Bold (fig. 68).

**Lettera**

Kobi Benezni, 2008

The design of Lettera was based on Candia, designed by Müller-Brockmann for Olivetti (fig. 69). The name of the typeface was chosen by the designer, Kobi Benezni, as a reference to the iconic Olivetti Lettera 22.

Lettera is a monospace typeface created in 2006 and published by Lineto in 2008. The design was inspired by an Olivetti type specimen. The sample had a low resolution and did not show the details of the original design. What Benezni interpreted as 'reversed' inktraps in the joints of the strokes, became one of the main features of Lettera (fig. 70). Later on, he found out that those details were not in the original design, but he decided to keep them in Lettera. The wide countershapes and the large x-height of the letters, make it perform well in small sizes. Lettera includes six weights, Light, Regular, Bold, and the matching italics.

The typeface turned into a big success in the market and users requested a proportional version of the design. As a result of this demand, Lettera-Txt was born. This proportional version of Lettera was released by Kobi Benezni in 2012. The typeface family includes the same six styles as Lettera, and the extended character set for Latin and Cyrillic. The monospace typeface Lettera evolved into a peculiar grotesque sans serif (fig. 71).


**Fig. 72** - Comparison between Olivetti Elite (200%) and Typewriter.

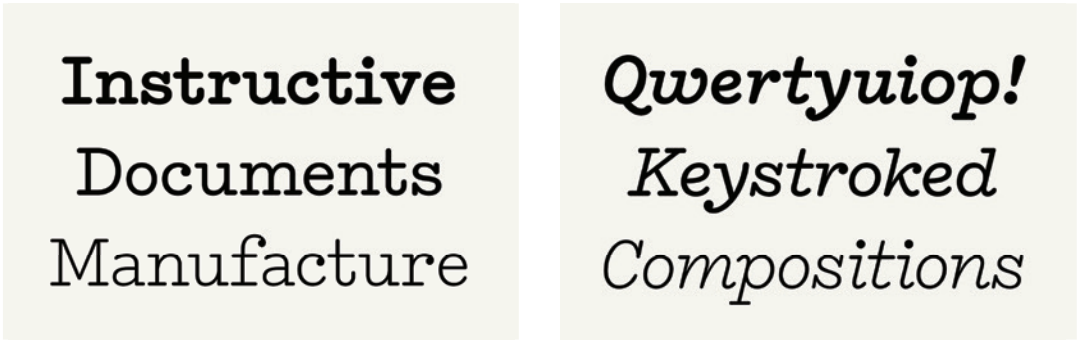



**Fig. 73** - Samples of the typeface family Typewriter.

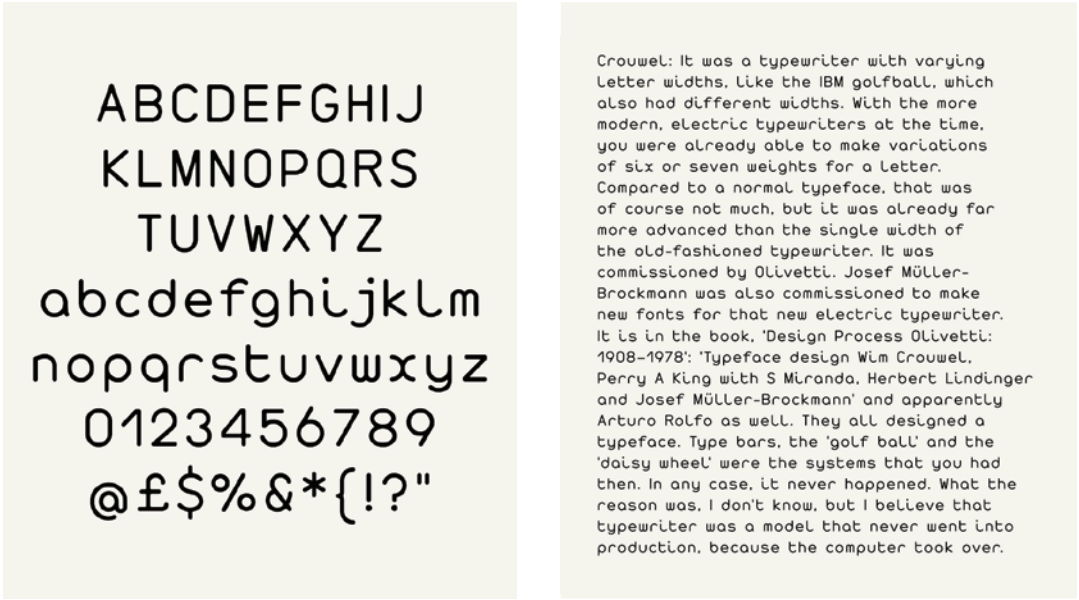



**Fig. 74** - Samples of the typeface Sirio.

**Typewriter**

Henrik Kubel, 2012

Typewriter is a design of Henrik Kubel created in 2000 as a corporate typeface for his studio A2/SW/HK. Typewriter was inspired by the conventional type used in an Olivetti Lettera 22. The main design difference with the Olivetti Pica is that Typewriter is not a monospace typeface. Besides the changes in proportions, there are some other differences in the design of the letters, like the spur of the 'g' or the terminals of the letter 'a' (fig. 72).

When the studio created the type foundry A2-Type in 2010, Typewriter was included in the collection of 15 fonts offered. The typeface family includes three weights (Regular, Medium and Bold) and the italics for the three of them (fig. 73). In the design of the italics, there is also a clear reference to the typewriter Italic typefaces created by Olivetti (see fig. 37, p. 44).

Typewriter is a text typeface that captured the essence of the letterforms created, a long time ago, for the typewriter. In 2012, a group of independent type foundries, among them A2-Type, joined their font libraries in a platform called Village. Since then, Typewriter is also published in their website.

**Sirio**

Josh Young, 2014

Sirio was a project born from the personal interest of Josh Young, a graphic designer based in London.

The inspiration for Sirio was the design, with the same name, that Herbert Lindinger created for Olivetti. Young found an image with a small sample of Sirio in the book *Design Process: Olivetti, 1908–1978*, and decided to create a digital version. Sirio is a monolinear typeface with strokes of round endings (fig. 74).

Even tough Sirio did not start as a commercial project, when Young finished the design, he decided to release it commercially. It is now available through the digital font foundry HypeForType. Young himself points out that 'it is a very quirky typewriter face ( … ) and because of that it has a very limited audience.'[1]

Sirio was one of the last typefaces designed for Olivetti typewriters, a good example of an unconventional design that still attracts the attention of designers.

There are some other examples of digital typefaces inspired by Olivetti. Most of them created by typewriter enthusiasts who created their designs from typewritten samples: Baksheesh (Stuart Brown, 2005), Olivetti Typewriter (Iza W, 2008), Cassandre and Reiner (Richard Polt, 2010), Olivetti Type 2 (Hernan Asorey, 2010) and Ivrea (Íñigo López Vázquez, 2015).

## 5.2 - Other examples of digital typewriter typefaces

Letter Gothic, Courier, and Orator are typefaces widely used today. They were created for typewriters and then digitised for computers. Some other typefaces born later on, were also inspired by the machine. The few examples presented in the next pages, show the role that typewriter typefaces played in the early years of digital type, and the influence that they still have today.

1 Email to the author, 23.08.2015.

something more than transitory fashion or gifted improvisation

something more than transitory fashion or gifted improvisation

**something more than transitory fashion or gifted improvisation**

**Fig. 75** - Samples of American Typewriter. From top to bottom:
– Light
– Regular
– Bold


**Fig. 76** - Logo designed by Milton Glaser for promoting the city of New York.

Courier (IBM typewriters)

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG.
With its feather-light touch, consistently even impression and power-assisted operation, the IBM takes the heavy work out of typing, leaving you fresh at the end of the day. 1234567890

Courier (Bitstream)

With its feather-light touch, consistently even

Courier New (Monotype)

With its feather-light touch, consistently even

Courier Prime (Quote-Unquote Apps)

With its feather-light touch, consistently even

**Fig. 77** - Comparison between a text sample of Courier for IBM typewriters and three digital versions of Courier.

**American Typewriter**

Joel Kaden and Tony Stan, 1974

American Typewriter was a typeface commissioned by ITC (Iternational Typeface Corporation). Originally designed for phototypesetting, it is one of the first typewriter typefaces created for printing.

American Typewriter is a proportional typeface which initially included three weights. The Light and Regular were designed by Joel Kaden, and the Bold weight by Tony Stan (fig. 75). It was released in 1974, the year that the typewriter celebrated its 100th anniversary. The type specimen of ITC described it this way:

> *American Typewriter strikes a happy compromise with its forerunner. The rigid spacing is dispensed with, but the distinctive typewriter flavour is generously enhanced. And there is just enough nostalgia in American Typewriter to give it a top billing in contemporary typography.*
>
> -- 'Specimen of American Typewriter', 1975.

The sources consulted did not mention any particular company, but Underwood, Remington, and later IBM, were the most popular American manufacturers; and they were probably considered in the design process.

In 1977, Milton Glaser used American Typewriter in his logo for the city of New York (fig. 76). This image became a design icon and it increased the popularity of the typeface.

ITC American Typewriter is now part of the libraries of some of important font distributors (Adobe, Apple and Linotype). The typeface family is currently composed by three weights (Light, Medium and Bold) with the matching Italic and Condensed designs, nine in total. Since 2005, the typeface has a Greek version, American Typewriter Hellenic, which includes 12 weights.

**Courier**

Howard Kettler, 1955

The design of Howard Kettler for IBM typewriters is probably one of the most adapted typefaces ever.

When Courier was digitised it became the default system font of many computers and printers. It was used by the US Government as a corporate typeface and it became the industry standard for writing screenplays. It is still today one of the most popular typefaces in computer coding.

In 1995, the operating system Microsoft 3.1. introduced Courier New. This is just an example of the many versions of Courier that one can find in the market. The different Courier typefaces are distributed through private foundries, font libraries, and freeware licenses, by big and small distributors (Monotype, Linotype, Adobe, Pampatype, URW++, Bitstream, etc.). It would be very difficult to point out which one of them is more faithful to the original. (fig. 77)

**Trixie**

Erik van Blokland, 1991

Digital typefaces tried sometimes to emulate the look of the typewritten text, where characters varied greatly in tone and weight. The design of Erik van

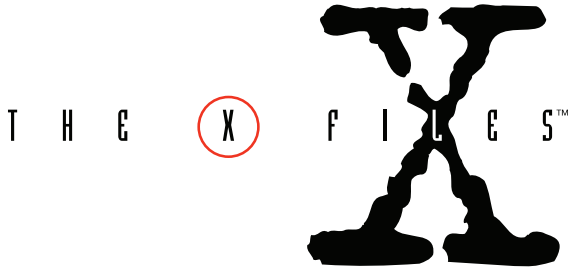



**Fig. 78** - The logo of the *X-files* series uses the letter 'x' of Trixie.

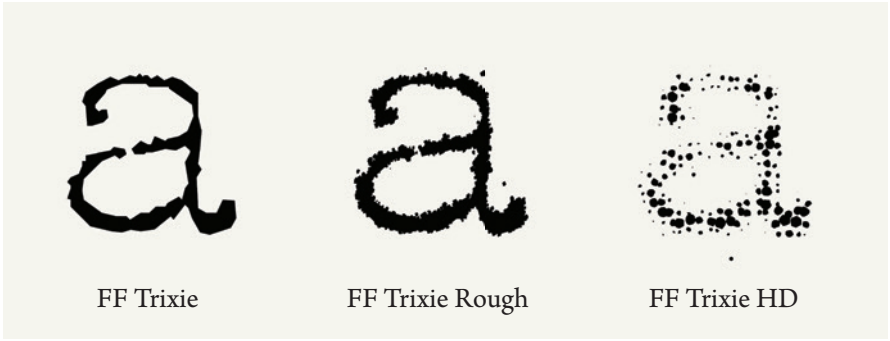



**Fig. 79** - Letter 'a' in the three grades of Trixie, from the lowest to the highest definition.

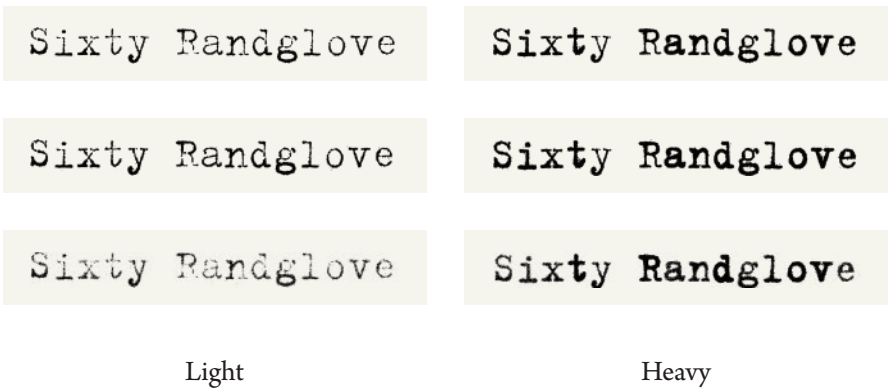



**Fig. 80** - Samples of the six weight/grades of FF Trixie.

Blokland, Trixie, is one of the first examples of this 'realistic' design of a typewriter typeface. Chadler 42 (Steve Mehallo, 1994) and FF Magda (Cornel Windlin, 1995) could be also included in this group.

The typewritten letters of a Triumph Durable were the basis of the design. The characters were digitised trying to maintain the essence of the original. The letters vary in height, some of them are slightly rotated, and there is not a strict baseline.

In the 90s, the printing and operating systems were not prepared for handling fonts with highly defined contours. The design of Trixie was simplified to make the font work properly. This typeface was very popular, it was used for many mystery films and series, among them *X-files* (fig. 78).

In 2008, the typeface family was expanded with new styles for higher resolution. FF Trixie Rough, was a new option for using the typeface in big sizes. The outlines of the characters included more details, so the sharp straight contours of the original Trixie were not visible. FF Trixie HD was an even more detailed design, which included seven alternates for each character. The Opentype features transformed Trixie in a dynamic font that could use alternative lettershapes throughout the text, so the text looked more similar to a typewritten document.

FF Trixie is available trough FontShop, and it contains three grades: Trixie, Trixie Rough, and Trixie HD (fig. 79), with two weights per grade, Light and Heavy, what makes a total of six styles (fig. 80), over 1 million of contours and 17 million points.[1] FF Trixie covers the Latin, Cyrillic, and Greek script.

Although the uniqueness of the typewritten document cannot be faked by digital means, Trixie is probably one of the typefaces that got a better resemblance.

There are many typewriter typefaces available in the digital market. It is not possible to cover all of them in this research. It must be noted though that monospace and typewriter typefaces are not exchangeable terms. A typeface that belongs to the typewriter style is not always monospace, and the other way around, a monospace typeface is not always designed in a typewriter style.

Every year new typewriter typefaces are released. It may be considered as an over-adapted style, but typewriter typefaces are still a trend open to interpretations.

1 trixiefont.com (accessed 31.08.2015).

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## Conclusion

Technology is evolution, it is future. It is the answer of the human beings to a faster pace of life. The typewriter was the result of the search for a faster way of communication, where the printed letters were the vehicle for the message. The first typewriter manufacturers put much effort into improving the mechanics of the machine, but it seems like in the early models they were not much concerned about the design of the letterforms.

This situation was even worse if we consider that early typewriter typefaces were often designed by non-professional designers or by designers who had no experience in this field. The typewriter was a new printing method and needed new designs that fulfilled the particular demands of the machine.

Typewriter type design showed how conventions could change. And what was considered bad typography or illegible documents before, became acquired habits accepted by society. Letterforms change with time, and it is not just a matter of fashion and trends, but also a way of adapting the writing systems to new technologies and social changes.

The importance given in Olivetti to type design was probably above the average of typewriter manufacturers. The company created its own typefaces, invested in design, and used typography as an important element in advertising. After all, the printed letters were the essence of the machine. Type design was part of the identity of the company.

Olivetti created new typefaces that differentiated the machines. The design of proportional typefaces for mechanical typewriters were a big innovation, but the machine was not technically ready for them, and the precious attempt turned into a failure in the market.

The evolution of the typewriter, from the manual to the electronic models, introduced changes in type design, and the number of typewriter typefaces grew quickly. The company mergers in the 60s had negative effects in the industry. The companies lost part of their identity and it was difficult to differentiate one typewriter from another.

The particular style of typewriter typefaces was influenced by the limitations of the machine. The low-quality printing asked for simple shapes that offered optimum results. The monolinear strokes, the wide countershapes, and the constructive serifs became important features of typewriter typefaces.

This particular style of typewriter type was not only in the dimensions of the letters or the thickness of the strokes. Some characters adopted particular forms. Letters like ‘m’, ‘i’, ‘t’, ‘J’ or ‘M’ changed substantially from printing letterforms. These new shapes were adopted as an evolution of the printed letters and they became accepted conventions.

Typewriter typefaces survived the machine. They found their place in the digital market. They are currently a popular style among scriptwriters and programmers. These two professions adopted the type conventions that technology offered them.

The typewriter became also a source of inspiration for new digital typefaces. Every year new type families are released and they often include a typewriter style. It is probably not only the particular look of typewriter typefaces what attracts the attention of designers, but also their historical significance. In an over-connected world people search for the freedom of not being observed. The typewriters are the expression of a primitive technology without the distractions of the internet. It was just the man and the machine.

## APPENDIX 1

Example of the typewritten samples created with Olivetti models of the *Colección Sirvent*.

OLIVETTI VALENTINE
5th of January of 2015
Sirvent Collection

a b c d e f g h i j k l m n o p q r s t u v w x y z

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1 2 3 4 5 6 7 8 9 0 ; " = % ( ) _ § + / : , . - ? ! '

ö Ö ä A ü Ü

& ß

---

The expression "Olivetti style", which is now commonly used in magazines and conversation to describe a specific taste and trend, evidently refers to something more than transitory fashion or gifted improvisation.

SOURCE: AA. VV. "Olivetti, 1908-1958" INg. C. Olivetti, Ivrea (Italy) 1958, p. 145

## APPENDIX 2

Example of the typewritten samples from the Special Collections of the Department of Typography and Graphic Communication, University of Reading.

CORONA 3

the quick brown fox jumps over the lazy dog

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG

the quick brown fox jumps over the lazy dog

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG

qwertyuiop

QWERTYUIOP

1234567890

asdfghjkl

ASDFGHJKL

@½%&:£/?½

zxcvbnm,.

ZXCVBNM".

()¾'_-;=.

qwertyuiop

QWERTYUIOP

1234567890

asdfghjkl

ASDFGHJKL

@½%&:£/?½

zxcvbnm,.

ZXCVBNM".

()¾'_-;=.

## APPENDIX 3

Information about width distribution in proportional typefaces, transcribed from the *Libro Cassinelli.*

The letters with a different width distribution in different typefaces have been hightlighted in the table.

**SOURCE:** ASO, Fondo Archivio Renzo Zorzi / Documentazione tecnica. Faldone 6, fascicolo 19. *Libro Cassinelli*, 120.

| Character | Venezia | Tempo | Kent | Italico | Windsor | Vista | Doricus & Carlyle | Character | Venezia | Tempo | Kent | Italico | Windsor | Vista | Doricus & Carlyle |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 4 | 4 | 4 | 4 | 4 | 4 | 4 | a | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| B | 4 | 4 | 4 | 4 | 4 | 4 | 4 | b | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| C | 4 | 4 | 4 | 4 | 4 | 4 | 4 | c | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| D | 4 | 4 | 4 | 4 | 4 | 4 | 4 | d | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| E | 4 | 4 | 4 | 4 | 4 | 4 | 4 | e | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| F | 4 | 4 | 4 | 4 | 4 | 4 | 4 | f | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| G | 4 | 4 | 4 | 4 | 4 | 4 | 4 | g | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| H | 4 | 4 | 4 | 4 | 4 | 4 | 4 | h | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| I | 2 | 2 | 2 | 3 | 2 | 2 | 3 | i | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| J | 2 | 3 | 3 | 3 | 3 | 3 | 3 | j | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| K | 4 | 4 | 4 | 4 | 4 | 4 | 4 | k | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| L | 4 | 4 | 4 | 4 | 4 | 4 | 3 | l | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| M | 5 | 5 | 4 | 5 | 5 | 5 | 5 | m | 4 | 5 | 4 | 5 | 5 | 5 | 5 |
| N | 4 | 4 | 4 | 4 | 4 | 4 | 4 | n | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| O | 4 | 4 | 4 | 4 | 4 | 4 | 4 | o | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| P | 4 | 4 | 4 | 4 | 4 | 4 | 4 | p | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Q | 4 | 4 | 4 | 4 | 4 | 4 | 4 | q | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| R | 4 | 4 | 4 | 4 | 4 | 4 | 4 | r | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| S | 4 | 4 | 4 | 4 | 4 | 4 | 4 | s | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| T | 4 | 4 | 4 | 4 | 4 | 4 | 4 | t | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| U | 4 | 4 | 4 | 4 | 4 | 4 | 4 | u | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| V | 4 | 4 | 4 | 4 | 4 | 4 | 4 | v | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| W | 5 | 5 | 5 | 5 | 5 | 5 | 5 | w | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| X | 4 | 4 | 4 | 4 | 4 | 4 | 4 | x | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Y | 4 | 4 | 4 | 4 | 4 | 4 | 4 | y | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Z | 4 | 4 | 4 | 4 | 4 | 4 | 4 | z | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

| Basic unit | Width 2 | Width 3 | Width 4 | Width 5 | Typefaces |
|---|---|---|---|---|---|
| 0.7 mm | 1.4 | 2.1 | 2.8 | 3.5 | Doricus and Carlyle |
| 0.8 mm | 1.6 | 2.4 | 3.2 | 4 | All the others |

## APPENDIX 4

Original drawing of letter ‘b’ for the Olivetti typeface Venezia (50:1).

**SOURCE:** ASO, Fondo Archivio Roberto Pieracini/Documentazione Olivetti/Documentazione Tecnica. Faldone 6, fascicolo 38.

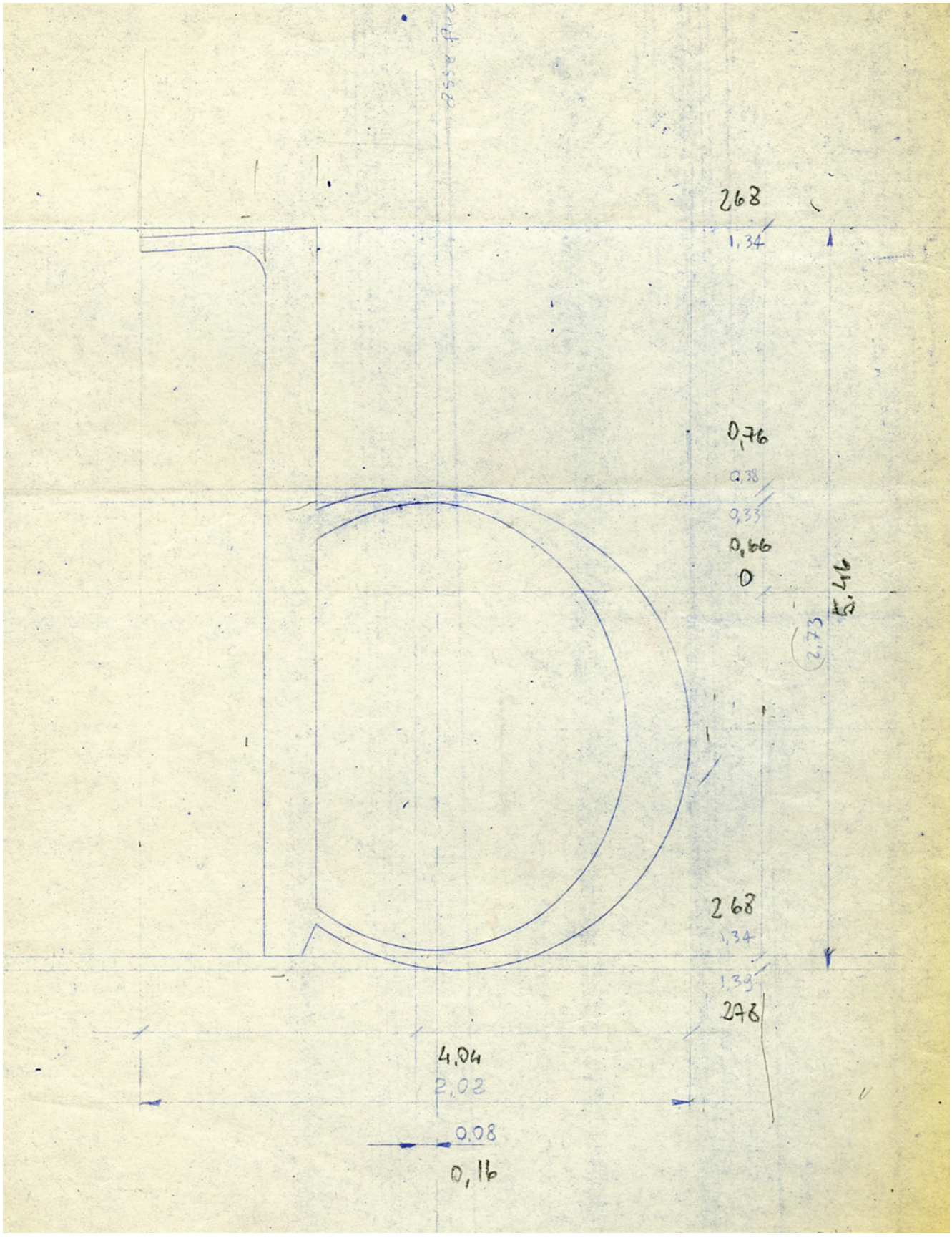
2,68
1,34
0,76
0,38
0,33
0,66
0
5,46
2,73
2,68
1,34
1,39
2,78
4,04
2,02
0,08
0,16

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**Fig. 11** and **fig. 12** - Type sample by the author in an Olivetti Studio 42 and a Italia

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**Fig. 13** - Mackay, *The typewriting dictionary*, 236–238.

**Fig. 14** - Mackay, *The typewriting dictionary*, 49–50.

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**Fig. 22**
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**Fig. 33** and **34** - Type samples by the author in an Olivetti Linea 98 (Pica) and a Studio 46 (Elite), *Colección Sirvent*.

**Fig. 35** - Aso, Fondo Biblioteca/Biblioteca - Sala F/Arte/Arte (Ed. Olivetti). Faldone 15, fascicolo 4.

**Fig. 36** - Type samples by the author in an Olivetti Studio 46 and a Lettera 22, *Colección Sirvent*.

**Fig. 37** - Aso, Fondo Biblioteca/Biblioteca - Sala F/Arte/Arte (Ed. Olivetti). Faldone 15, fascicolo 4.

**Fig. 38** and **39** - Type samples by the author in an Olivetti Studio 46 (Elite) and a Studio 46 (Lettera), *Colección Sirvent*.

**Fig. 40, 41, 42, 43** and **44** - Aso, Fondo Biblioteca/Biblioteca - Sala F/Arte/Arte (Ed. Olivetti). Faldone 15, fascicolo 4.

**Fig. 45** - Design files, courtesy of Gianmaria Capello.

**Fig. 46** - Type sample by the author in an Olivetti Dora.

**Fig. 47** - Eleprint type specimen, courtesy of Gianmaria Capello.

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**Fig. 60** - Type sample of Cubic, by the author in an Olivetti Lettera 22, *Colección Sirvent*. Type sample of Techno Pica, from Beeching, *Century of the typewriter*.

**Fig. 61** - Type samples by the author, Quadrato in an Olivetti Lettera DL and Cubic in a Lettera 22, *Colección Sirvent*.

**Fig. 62** - Type samples by the author, Quadrato in an Olivetti Dora and Cubic in a Lettera 22, *Colección Sirvent*.

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**Fig. 66** - Type sample of Valentine from http://lineto.com (retrieved 29.08.2015)

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**Fig. 72** - Sample of Elite by the author in a Lettera 22, *Colección Sirvent*. Sample of Typewriter from http://vllg.com (retrieved 30.08.2015).

**Fig. 73** - Samples of from http://vllg.com (retrieved 30.08.2015).

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