

Reflections on Type and Typography

Frank E. Blokland [Related Matters]



Dutch Type Library

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Dutch Type Library
's-Hertogenbosch
MMXXII

COLOPHON

This booklet was written especially with the Typography Summer School at the University of Antwerp, in the first week of September 2019, in mind. On this course the value of research for typography was investigated and discussed.

The five keywords of the course were:

Perception, Convention, Legibility, Technology, and History, which are largely covered in this concise publication.

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Old punches coming out of the box.

The image with the comparison of punches from Hendrik van den Keere on page 12 was made by Krassen Kreteev. The photograph of Apple boxes on page 59 was made by Michael Harvey in his backyard, already many years ago.

Note: in this publication a couple of vintage photographs, mostly found footage from the web, are used for memes. Such usage of images is allowed under to the EU's new copyright law still. However, in case of any form of supposed copyright infringement, please contact the author at [<author@dtl.nl>](mailto:author@dtl.nl).

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Foreword

*In questions of science, the authority of a thousand is not worth
the humble reasoning of a single individual.*

Galileo Galilei

The rapid rise of desktop publishing in the second half of the 1980s changed the graphic landscape completely. Within a decade the highly specialized métiers of the typesetter and typographer were merged in that of the computerized graphic designer. Today everyone who uses a computer is practically a typesetter and typography is hardly considered a specialism anymore.

Conventions are automatically maintained: practitioners of typography, irrespective of whether they are professionals or amateurs, base their decisions on what is commonly considered standard. The legibility aspect, for example, seems easy to control or even to circumvent by applying type that is generally accepted. The application of such type does not require knowledge of what legibility exactly comprises or of how to measure this. Consequently, the conventions, with which legibility is intrinsically entangled, and the related conditioning, are to my knowledge rarely questioned by typographers.

Since the introduction of desktop publishing, the métiers of the type designer and font producer have clearly changed. Soft- and hardware have become very affordable in comparison with the early days of digital typography, more than three decades ago. Theoretically, today, everyone who uses a computer can technically produce fonts and type design is hardly considered a specialism anymore. Conventions are automatically maintained: type designers tend to rely on the eye, because for them this is simply the framework with which they were conditioned, and consequently in which things are done.

The conventions that are firmly entrenched in the technical constraints, which Nicolas Jenson (ca.1404–1480) had to deal with, continue to influence our view on type and legibility today. The versatility of digital technology does, however, make it possible to put the emphasis largely on the eye. By extrapolating the current situation and without in-depth insight in the constraints of the Renaissance type production, we tend to think of major Renaissance punchcutters, aside from Jenson: Francesco Griffo (1450–1518), Claude Garamont (ca.1510–1561), and Robert Granjon (1513–ca.1590), *merely*

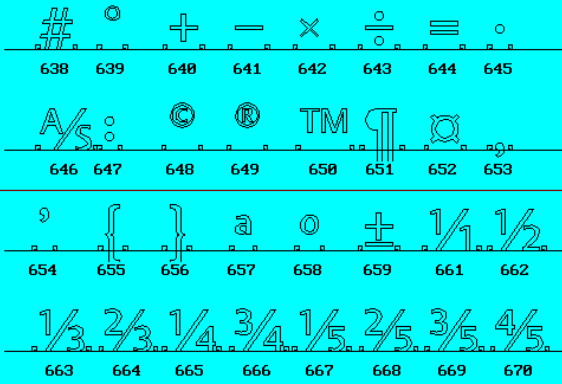

8 as type designers. Therefore, we consider details found in their types the result of particular optical preferences. However, we do not take into account that the early punchcutters were above all craftsmen, who had to balance technical constraints with visual preferences.

Rapid technological developments, globalization, and the related lowering of prices for hard- and software, have not only changed the professions of typographers and type designers, but also the graphic-design practice in general. Before the rise of desktop publishing, graphic design was mainly focused on printed matter. Nowadays, means such as video, web design, interactive media, games, etc., have additionally become part of the profession. Exchange of information has become more volatile and less sustainable. In a similar vein, the focus in graphic design seems to shift more and more towards concept and less on the crystallization of the form. Graphic-design education at art schools and universities is obviously changing accordingly. Specific skills and related insights, such as of the traditional typographer for whom no detail was too small to control, might unfortunately suffer a bit from this shift.

All present-day graphic designers are by definition ‘macro-typographers’, as they control the shape of texts. However, not all of them will have acquired ‘micro-typographic’ skills and insights. They might not know what exactly forms the basis for the patterning in type, or where the current typographic conventions come from. This lack of knowledge is disguised by modern software, which ‘automatically’ solves many typographical issues. In a similar vein, digital typefaces are becoming increasingly sophisticated. OpenType Layout features can adjust all kind of detailed matters: ligature substitutions, the application of contextual alternates, related positioning of diacritics, etc. To utilize these features in the past, the typographer had to write detailed instructions for the typesetter, requiring an in-depth insight into the applied system. To be able to judge the digital outcomes and to become a ‘micro-typographer’, a thorough understanding of typography, remains undoubtedly necessary.

When it comes to the education of typography and type design, it is advisable to continually explore new instruction methods. After all, those who teach graphic design have to deal with short-term developments, besides long-term ones, in a *métier* that is constantly changing. The short-term developments are influenced by factors as, for example, design trends, i.e., *Zeitgeist*, and the current status of

technology. However, students will most probably see their profession even more radically extend in the coming decades, because of further technological developments and, most probably, the related increasing influence of artificial intelligence and neural networks. The question is: how do we prepare them to deal with, and to adapt to, these future changes?

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In the wake of desktop publishing, specialist and hence costly software became affordable and available for personal computers. For example, the IKARUS system for the production of digital typefaces, originally running on DEC VAX computers and Sun Workstations, was ported to DOS.

This booklet contains reflections on (matters related to) type and typography, written down in a highly volatile era. It should be emphasized here that this is nothing more than a collection of personal opinions, meant to form the basis for further discussion. Hence, this is *not* at all a scientific publication. The main reason to collect these reflections was and is to provide students with information that will help them to calibrate their perception and interpretation, in their quest to learn how to approach the investigation and research of matters, with as goal to make up their own minds.

Dr. Frank E. Blokland
's-Hertogenbosch, July 2019



Perception and Opinion

11

The perception of unsuspected relationships is another pleasurable experience old enough to have been built into our mental structure.

György Doczi

Art historian Ernst Gombrich (1909–2001) notes that the stimulus patterns on the retina are not alone in determining our picture of the visual world, and that its messages are modified by what we know about the ‘real’ shape of objects.¹ In other words: ‘One cannot see more than one knows.’ When it comes to type and typography; what exactly do we specifically know and what do we consequently see? What forms the basis of the typographical conventions and how solid is this basis anyway? Could research, whether scientifically based and/or empirically oriented, tell us more about this basis? Furthermore, would the resulting knowledge be useful for the practitioners of typography?

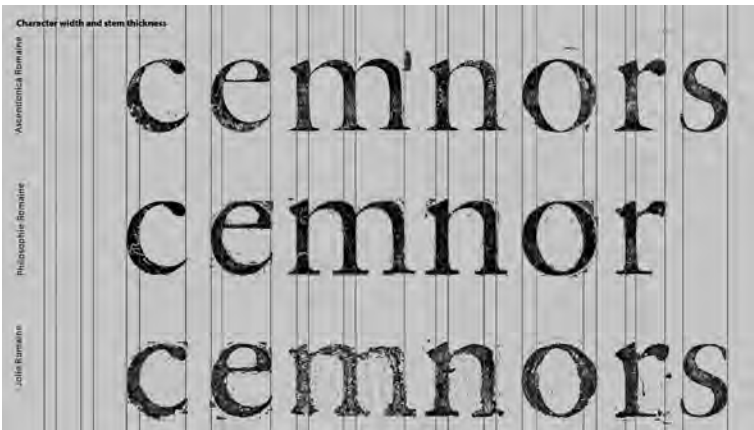


Until the late nineteenth century it was common practice at typographic meetings – for education and enjoyment – to visualize optical aspects of type design on stage.

A highly popular act was the one by the TypoTwins. The two brothers (the delivery interval between them had been less than 15 minutes) shared exactly the same height, but the bolder one looked a bit shorter, due to a lack of some extra vertical overshoot.

¹ Ernst Hans Josef Gombrich, *Art and Illusion: A Study in the Psychology of Pictorial Representation* (Oxford, 1987), p.255

Almost everyone has an opinion about letter forms and the way text is shaped, and today it is especially easy to express one's unfiltered opinion online in front of the whole world. However, although both are often confused with each other, having an opinion is not the same of having knowledge, of course. The métiers of the type designers and typographers are not protected and the necessity of formal education is, not surprisingly, commonly questioned by those in the field who do not have such training, especially on type-related online forums. The role of the 'unspoiled' eye is often emphasized in this case. However, if one cannot see more than one knows, what exactly does one see? Furthermore, if knowledge is lacking, what forms the basis for one's perception, interpretation, and opinion then?



Comparison of (photographs of) punches for different text sizes from the sixteenth-century Flemish punchcutter Hendrik van den Keere.

On the other hand, if knowledge forms the basis for perception and opinion, then how solid is the basis for this knowledge exactly? For example, a commonly embraced theory is that the archetypal punchcutters produced and adapted the different body ('point') sizes independently. This is in line with the idea that they worked solely by the eye. However, my Expert class Type design 2017–2018 students investigated the similarities and differences between two text-sized roman types from the Flemish punchcutter Hendrik van den Keere (ca.1540–1580) and one of his very small roman types. They compared the Reale Romaine (1575) and Ascendonica Romaine (1577)

with the Philosophie Romaine (1578), investigating the supposed differences between patterning, proportions, and details. Evaluations of the approaches of working in metal and standardization in type design at different optical sizes were considered, and then contrasted to methods and tools of digital type design today. The conclusion was that Van den Keere used the *same* underlying model for the different body sizes.

This outcome may be considered surprising, if only because a present-day type designer would lower the contrast, which is the relation between thick and thin parts, for the smaller point-sizes. This is done to prevent the letters becoming vulnerable and to make them optically identical to versions optimized for ‘display’ sizes. In contrast with foundry type, there is no physical limitation when it comes to scaling digital type. During the Renaissance however, contrast was lowered ‘automatically’ by the ink squash, which also made the type bolder at smaller sizes. Hence, punchcutters like Van den Keere could use a single model that fitted all sizes – if they preferred to do this.

The same group of students used their findings for the development of an adaptation of Van den Keere’s type for modern typesetting technology, a so-called ‘type revival’. This is by definition an interpretation, which will show as much of the style period in which the original foundry type was created, as of the time (*Zeitgeist*), in which the revival was made. To illustrate this for students, I like to play and to discuss different interpretations of music from the Baroque, which is by far my favorite style period (especially Bach, of course!). However, there are key differences between making a type revival and interpreting classical music. This is due to the lack of recordings from the Baroque for the latter, but, in contrast, the many prints and type-foundry artifacts of Renaissance punchcutters preserved at, for example, the Museum Plantin-Moretus in Antwerp.

I must emphasize here that I am not *at all* an expert on Baroque music and that consequently my evaluation is not based on thorough knowledge. Hence, if I prefer a certain performance, this is nothing more than a personal opinion: I listen to music in the same way as most people look at type and typography. Most probably I will hear some differences between the interpretations, and perhaps I will even recognize some traces of counterpoint, but my perception remains undoubtedly superfluous. After all, I cannot hear more than I know, in the same way that one cannot see more than one knows.



Scanned printing type cut by Jacques-François Rosart (1714–1777).

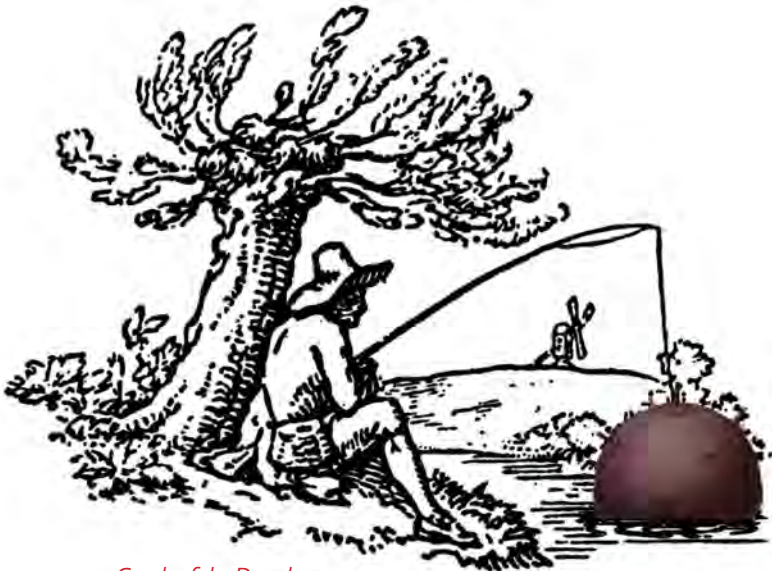
If ‘one cannot see more than one knows’ will be considered plausible, could the argument perhaps not also be reversed into ‘one cannot know more than one sees’? After all, what do we see exactly, and is what we see, perhaps also the result of what we would like to see?

If one takes a photograph with a digital camera or microscope of small-sized text printed from historical foundry type, enlarging the image will inevitably result in a form of pixelation. Due to the ink squash, which is the result of ink being squeezed out of the dent during printing, the enlarged contours will look somewhat blurry. To create a ‘clearer’ representation of the contour, the image could, for example, be converted from grayscale to plain black and white, as shown in the image above. If the resulting image is used for further investigation of the historical printing type, and even for developing a revival, it cannot be excluded that the simplified pixelation will force the perception and subsequent interpretation into a certain direction. After all, *any* interpretation or translation of the information will influence the conclusion –irrespective of whether this conclusion is right or wrong.

Research, whether scientifically based and/or empirically oriented, undeniably will tell us more about type and typography and improve our perception and interpretation. The question remains whether the resulting knowledge will be of any additional practical use for the type designer and typographer, if one also can come to a satisfactory result without this. In the particular case of revivals, one could state that as long as the resulting typefaces conform to conventions, they will be applicable anyway –irrespective of whether they ‘truly’ represent the original historical model.

All in all, we perhaps should honestly accept that for type design and typography rocket science is not really required. However, this definitely not implies that thorough research is meaningless and unnecessary. After all, the experts in type and typography set the standards for the conventions and not the consumers, i.e., the readers. When it comes to experts, I have, for example, no idea what my plumber is doing when he works on the central heating system in my home, and what kind of alloy the pipes he installs are made. I will have to rely on his expertise and to trust that he will not send my house into orbit like a sputnik, which would be very unconventional.

Kaboom!



Catch of the Day dept.

Complete Angler tried to hook the 'bullet' character. However, this catch could seriously undermine *any* form of typography.



Conventions and Conditioning

Type design moves at the pace of the most conservative reader.

Stanley Morison

Few terms are as vaguely described, misused, or even abused as ‘convention’ in relation to typography. The term is used as synonym for tradition, as a fig-leaf for conservatism, but it is above all generalized and commonly undefined. Some consider typographic conventions to be vague by definition.² If this were true, then the typographic concurrences would be arbitrary, and subsequently one could even state that this is the case for the conventions for type design. However, the English typographer and type consultant Stanley Morison (1889–1967) dismissed the latter by stating that the infinity and complexity of today’s reading public makes our alphabet as rigid and irreformable ‘as the very gold standard’.³

It is, of course, tempting to use quotes like Morison’s to dismiss any form of deviation from the conventions. On the other hand, such quotes also provide ammunition for those who want to object to any form of tradition under the motto of modernism. These Dadaists in the type world may rightly argue that the conventions determine the conditioning, and that the conditioning preserves the conventions: hence, conventions could too strongly restrict the type designer who wants to deviate from historically formed templates.

One could state that conventions for typography are relative to the nature, i.e., the structure and properties, of specific type and not per se interchangeable with other forms of type. This implies that, for example, conventions for typefaces meant for setting texts do not have to be identical to those for type meant for display purposes. After all, the criteria and therefore rules for composing a text clearly differ from the criteria of, for example, lettering a book jacket. One could also state that the conventions become proportionally less strict with the increase in point size.

Typographic conventions are defined by their purpose and consequently this determines the nature of the applied typeface. If a serifed typeface is meant for composing text, it is by definition related to

² Gerard Unger, *While You’re Reading* (New York, 2007), p.85

³ Stanley Morison, *Type Designs of the Past and Present* (London, 1926), p.62



On a gray and foggy afternoon the notorious Alphabet Killer made – using a highly unconventional weapon with the surgical precision of a punchcutter – his first victim.

the archetypal models from Jenson and Griffo. Hence, its anatomy and details, which are defined by the proportions, weight, contrast, contrast-sort, contrast-flow, and idiom, can be compared with, and mapped against, the archetypal models. Harmonic and rhythmic effects in typography will always be judged, whether directly or indirectly, against text composed with the Renaissance roman types.

A typeface that widely deviates from the anatomy of the archetypal models is as such not incorrect by definition. Actually, it should be judged against new rules defined by the anatomy of the typeface itself. If the typeface in question is used at a certain scale and the rules are subsequently followed by typographers, these rules may become generally accepted over time and, as a result, will inevitably become conventions. The British calligrapher and renowned author on this subject Edward Johnston (1872–1944) remarks that there are innumerable existing patterns or ‘hands’, which the penman may choose to copy or to modify. The chosen writing pattern becomes the model which he has set himself to follow: it becomes a conditioning model

until that piece of writing is finished.⁴ However, according to Johnston there is no need for a new set of patterns: ‘We do not require new forms [...], though we may hope to better their character, we must accept the symbols of present use.’⁵

It is a undeniable fact that typographic conventions are solidly anchored in history, which alone is proven by today’s use of revivals. It is also a fact that the technical transformation of foundry type into digital type, via hot-metal and photo-composing machines, did not change the nature of type for text purposes the past one and a half centuries. This makes it quite likely that deviations will be mostly reserved for the larger point sizes. The developments since the introduction of desktop publishing in the 1980s, which resulted in an increase of all sorts of display type, seem to underline the restricted usefulness of such deviations.

‘What is the norm?’, Dutch type designer and typographer Dick Dooijes (1909–1998) asks in his contribution to *Dossier A–Z 73*, an ATypI publication on type education. He proceeds with stating that the norm is found in the ‘book types’ deriving from the Renaissance merge of Roman capitals and Carolingian minuscules. He then explains that this became the norm because the model ‘guarantees a recognizability – essential for every booktype’, based on tradition. ‘No matter how far a Bodoni, [...] or a Crouwel may diverge from this norm, each in turn realizing an authentic and legitimate vision, they were and are constantly subject to correction by the eternal and inexorable test of time.’⁶

Although this may sound like a rather conservative opinion by Dooijes, the evolution of roman type over time proves that he is correct. The development of the technologies used for producing type and text (for example, the punchcutting pantograph and the hot-metal composing machines in the nineteenth century, the photo-composing machines around mid-twentieth century, and the introduction of desktop publishing) did not change the rules for type design and typography in general. Overall, for text setting the preference for the Renaissance archetypal models and their derivatives remained.

⁴ Edward Johnston, *Formal Penmanship and Other Papers* (Heather Child, Ed.), (London, 1971), p.98

⁵ *ibid.*, p.47

⁶ Dick Dooijes, *Dossier A–Z 73: Association Typographique Internationale* (Belgium, 1973), pp.78–79 (p.79)

In *Typography as Vehicle of Science* the renowned Dutch type designer and celebrated lecturer Gerard Unger (1942–2018) notes on the developments of type and typography in the final decade of the twentieth century that ‘typography was subjected to wild and daring experiments. [...] After 2000 such design is still done, but much less so, while traditionalism and conventionalism increasingly prevail in typography.’⁷ Sooner or later technology eventually always has been and always will be adapted to reproduce the existing, conventional norm for type and typography. And in turn this norm is inextricably linked with legibility.



Catch of the Day dept.

Complete Angler thought for a moment that he hooked the Incredible Hulk. However, this catch was a more conventional guy from Haarlem.

⁷ Gerard Unger, *Typography as Vehicle of Science* (Amsterdam, 2007), p.28

Legibility and Research

21

You say that you are in the dark because you need a pair of eyeglasses.

Benedetto di Guaspare Spinelli

If one deviates from the conventions, this will come at an inevitable price: one will by definition drift away from what is considered legible. It is, for example, not a coincidence that the default typeface of Adobe InDesign is Minion, which refers in proportions and details strongly to Italian Renaissance roman type, somewhat mixed with sixteenth-century French Renaissance influences. We live in a highly eclectic era, after all.

There is obviously not much exchange of knowledge between scientists who investigate legibility on the one hand, and type designers, who seem to ignore outcomes of legibility research in general, on the other. Not surprisingly, scientists consider this a mistake from the type designers. However, one can apply legibility research on type in use today, but it is very unlikely that Jenson and Griffo in particular, did any legibility research before they developed their archetypal models for roman type. Neither these two leading punchcutters, nor any of their Renaissance peers, seem to have investigated the physiological structure of the human visual system in relation to type. Furthermore, the fact that light falling on the retina excites photoreceptors was unquestionably completely unknown to them.

It was later in the Renaissance that more became known about the functioning of the eye. Universal man Leonardo Da Vinci (1452–1519) researched the subject and his idea that vision ‘is a result of the eye receiving rays of light’ differed from the then generally accepted idea that humans had vision because of tiny particles projected from the eye.⁸ In 1604 German astronomer, astrologer, and mathematician Johannes Kepler (1571–1630), demonstrated the physics behind the optical workings of the eye in a comment in his astronomical work *Supplements to Witelo, On the Optical part of Astronomy*. He considered the retina, and not the lens, as it had been assumed since antiquity, as the organ of vision.⁹ There is no evidence however, nor seems it very likely, that these outcomes were taken into account by

⁸ Barbara O'Connor, *Leonardo da Vinci* (Minneapolis, 2003), p.51

⁹ Saad Shaikh, *Eyes On Ice & No Blind Mice* (Bloomington / Central Milton Keynes, 2007), p.254

- 22 the early seventeenth-century punchcutters. After all, the knowledge of whether the lens or retina was responsible for what they saw, did not practically influence their vision, irrespective of whether they used magnifying glasses. One can retroactively project on the work of archetypal punchcutters that they, one way or another, were aware and took account of, how the eye and optics work. This, however, seems purely speculation as long as there is no evidence for this.



An early prototype of wearable technology with an optical head-mounted display, was the Giggle Glitch Mark II, which was tested in office environments during the 1940s. It was a pair of glasses meant to invisibly communicate over the web. Tests were eventually terminated because of undesired side effects.

Type designers work within a framework fixed by conventions and are also inevitably influenced by work of peers. In his doctoral dissertation on legibility from 1938, typographic advisor and professor in printing history, Gerrit Willem Ovink (1912–1984), states that research, which goes into the causes of the superior legibility of a certain typeface, ends in framing prescriptions for future type design.¹⁰ The famous legibility researcher Miles A. Tinker (1893–1977) notes in line with this that when it comes to legibility, the subjective opin-

10 Gerrit Willem Ovink, *Legibility, Atmosphere-value and Forms of Printing Types* (Leiden, 1938), p.12

ions of type designers and typographers prevailed throughout the nineteenth century up to the present day.¹¹ According to Tinker, type designers actually could and *should* profit from legibility research, because application of the results would lead to ‘marked improvement’ in his opinion.¹²

In an interview with the British editor and critic John L. Walters (1953) from 2001, in which neurological research is brought forward, Unger states that the information, which he wants to move type design ahead and to improve legibility, is not available.¹³ Whatever the reason is, and irrespective of whether this negatively influences the legibility factor, in general type designers do not seem to be helped much by the many research projects exploring legibility. There are quite some publications available, however, ranging from subjects: ‘discrimination of spatially confusable letters by young children’, ‘the influence of concept training on letter discrimination’, ‘phonology and reading’, ‘phase of alpha brain waves, reaction time and visually evoked potentials’, ‘the development of graphemes-phoneme correspondences’, ‘receptive fields, binocular interaction and functional architecture in the cat’s visual cortex’, to ‘studies of eye movements in reading’.

Instead, type designers seem to rely purely on the eye, but, as mentioned, what they see is the result of conditioning. One can simply conclude that conditioning is based on conventions, and conditioning preserves conventions. Thus the snake bites its own tail; to rely on the eye, one has to be trained to look at type in a certain way.

It is quite possible that type designers are unaware of the fact that serifs react with the line detectors of the visual system with the ‘component lines of letters’.¹⁴ However, type designers are commonly educated in a typographical tradition, which is based on serifed letters. Research by renowned scientists, such as Tinker, did, as far as I know, not solidly prove that by definition serifed typefaces are more legible than sans-serif ones. However, there is a general agreement between type designers and readers on the fact that serifed type is more legible. Period.

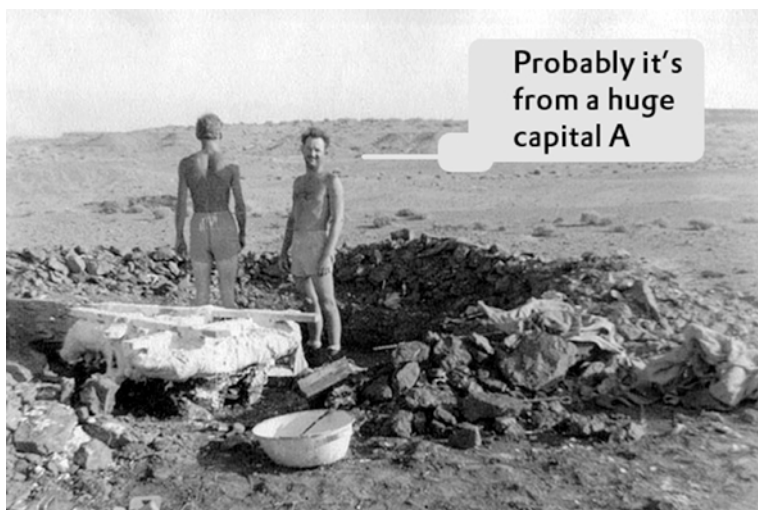
¹¹ Miles A. Tinker, *Bases for Effective Reading* (Minneapolis, 1966), p.125

¹² *ibid*, p.115

¹³ <<http://www.eyemagazine.com/feature/article/reputations-gerard-unger>>

¹⁴ David Owen Robinson, Michael Abbamonte, Selby H. Evans, ‘Why serifs are Important: the Perception of Small Print’, *Visible Language*, Volume v, Number 4, (Cleveland, 1971), pp.353–359 (p.356)

Type designers seem to focus especially on what Ovink coined ‘atmosphere-value’. According to Ovink, design (‘form-giving’) in arts and crafts is governed by two systems of value: beauty versus utility. ‘The latter can be proved objectively, the former cannot [...] the ulterior motives of the artist’s pleading for type as a reading-tool are of æsthetical nature.’ However, the fact that ‘utility’ is more objectively measurable than ‘beauty’, does not imply that it is by definition the more important factor: in Ovink’s opinion the reader clearly notices the ‘atmosphere-value’ of type.¹⁵



A tiny part of a serif from a gigantic, highly legible signage system from around 10,000 BC, was excavated in the Eastern Gobi desert in July 1998.

What exactly comprises legibility? Tinker made a clear distinction between legibility and readability, and in about 1940 the latter came to be regarded as more descriptive and meaningful than ‘legibility’ and it was commonly adopted. However, for measuring the difficulty of reading material, i.e., the content, an entirely different meaning developed for ‘readability’. To avoid confusion, Tinker advises to employ ‘legibility of print’ to designate the effects of typographical factors on the perception in reading.¹⁶ Nevertheless, both terms are often still used in an interchangeable manner.

¹⁵ Ovink, *Legibility, Atmosphere-value and Forms of Printing Types*, p.222

¹⁶ Tinker, *Bases for Effective Reading*, p.115

The fact that type designers generally do not take the outcomes of legibility research into consideration, does not mean that they do not have a strong opinion about the subject. According to Johnston, who designed the well-known sans-serif type for the public transport in London, there are three things constituting legibility: simplicity, distinctiveness, and proportion. Besides these ‘abstract’ qualities Johnston thinks that there are various concrete aspects of legibility, of which ‘the two most important are accustomedness and fitness’.¹⁷

Johnston’s most famous pupil, the English sculptor, letter carver, and type designer Eric Gill (1882–1940), refers to utility and beauty in his somewhat crude definition: ‘legibility is what the *Daily Mail* reader finds readable; good style is what he finds good; the beautiful is what pleases him.’¹⁸

However, according to American printer, type designer, and artist, Frederic William Goudy (1865–1947) the existence of beauty does not by definition guarantee legibility: ‘Pleasing legibility is the great desideratum. Beauty, too, is desirable, but beauty must not be emphasized if it detracts from easy readability. Beauty is an inherent characteristic of simplicity, dignity, harmony, proportion, strength—qualities always found in an easily legible type; yet legibility is seldom achieved by a predetermined effort to produce it.’¹⁹

In line with Goudy, Tinker notes on the detraction factor, i.e., too much ‘atmosphere-value’: ‘Reader judgements of relative legibility and pleasingness must also be considered because it is likely that the criteria of speed and efficiency of performance will be challenged by those inclined to stress æsthetic values in printing.’

As an exception to the rule, Goudy seems to have taken the outcomes of legibility research into account when he mentions that ‘in 1911 an investigation was undertaken at Clark University to ascertain “the relative legibility of different faces of printing types”’, and he subsequently summons that ‘legibility is a product of six factors: [1] the form of the letter; [2] the size of the letters; [3] the heaviness of the face of the letter (the thickness of the lines which constitute the letter); [4] the width of the white margin which surrounds the letter; [5] the position of the letter in the letter group; [6] the shape and size of the adjacent letters.’²⁰

¹⁷ Johnston, *Formal Penmanship and Other Papers*, p.47

¹⁸ Eric Gill, *An Essay on Typography* (London, 1988), p.103

¹⁹ Frederic W. Goudy, *The Alphabet* (New York, 1963), p.91

Jack of all trades, (hydrographer, instrument maker, lexicographer, printer, punchcutter, typefounder, etc.) Joseph Moxon (1627–1691), had his own ideas about what made the seventeenth-century Dutch type legible. Not surprisingly, considering his scientific background, he mentions the mathematical, i.e., geometric, underlying constructions: '[...] the late made Dutch-letters are so generally, and indeed most deservedly accounted the best, as for their Shape, consisting of Mathematical Regular Figures as aforesaid, And for the commodious Fatness they have beyond other Letters, which easing the Eyes in Reading, renders them more Legible [...].'²¹

Gill advises a simple measurement rule for the point size in relation to the eyesight: 'A book held in the hands demands type of about 10 or 12 point on account of the length of the human arm and the normal power of human eyesight, assuming a normally legible type.'²² Researchers such as Tinker use the more scientific 'distant method', which 'measures visibility or perceptibility at a distance.'²³ Other methods include, for example, the measuring of eye-movement and 'threshold visibility, i.e., the apparatus is manipulated until a word, letter, or other symbol can just be recognized.'²⁴

The models from the archetypal punchcutters still remain the reference for what is considered legible. Unger states, after describing the fixation of letter forms due to the establishment of the roman type by Jenson and the Venetian printer Aldus Manutius (1449–1515), that the fact that these forms have since undergone very little fundamental change is not so much due to Morison's most conservative reader, but that it is more probably 'because these forms had already largely crystallized and were adapted to the properties of the human eye and brain, i.e. to the ergonomic need of readers.'²⁵ This is an interesting thought, because it suggests a superiority of roman type over, for example, Gothic type. However, one could argue that the moment in history in which the invention of movable type took place was coincidentally during the Renaissance. Any earlier introduction

²⁰ Frederic W. Goudy, *Typologia: Studies in Type Design & Type Making* (Berkely/London, 1940), p.142

²¹ Joseph Moxon, *Mechanick Exercises* (Herbert Davis and Harry Carter, Eds.) (New York, 1978), p.23

²² Gill, *An Essay on Typography*, pp.106,107

²³ Tinker, *Bases for Effective Reading*, p.117

²⁴ *ibid.*, p.117

²⁵ Unger, *While You're Reading*, p.116



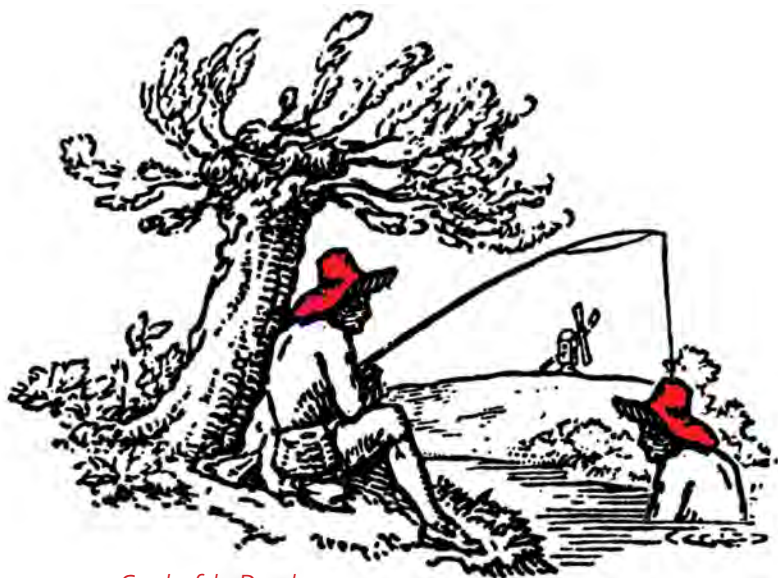
In the 1930s there was a consensus among connoisseurs that the archetypal roman models contained more 'atmosphere value' than Gutenberg's *textura* type.

of letterpress printing in Italy could have perhaps had a different result on the fixation of letter forms. The development of Gothic hands since the Carolingian minuscule took many centuries and therefore one could argue that *textura* in particular was much more crystallized than the Humanistic letter forms.

Tinker may be right stating that although type designers, printers, and publishers have at times achieved fairly satisfactory results, they would gain by applying the results of legibility research. However, Tinker and his peers were and are measuring patterns that are the result of a clear standardization and systematization of the Renaissance type-production process. Legibility researchers seem to look for absolute values, but one could argue that maybe there are only relative ones, which are directly related to the intrinsic patterns and harmonics of scripts.

Legibility research is in general empirical and hence often makes use of testing groups. This seems to be in line with the statement from the American calligrapher and type designer Samuel Winfield (better known as "Tommy") Thompson (1906–1967) that 'the eye re-

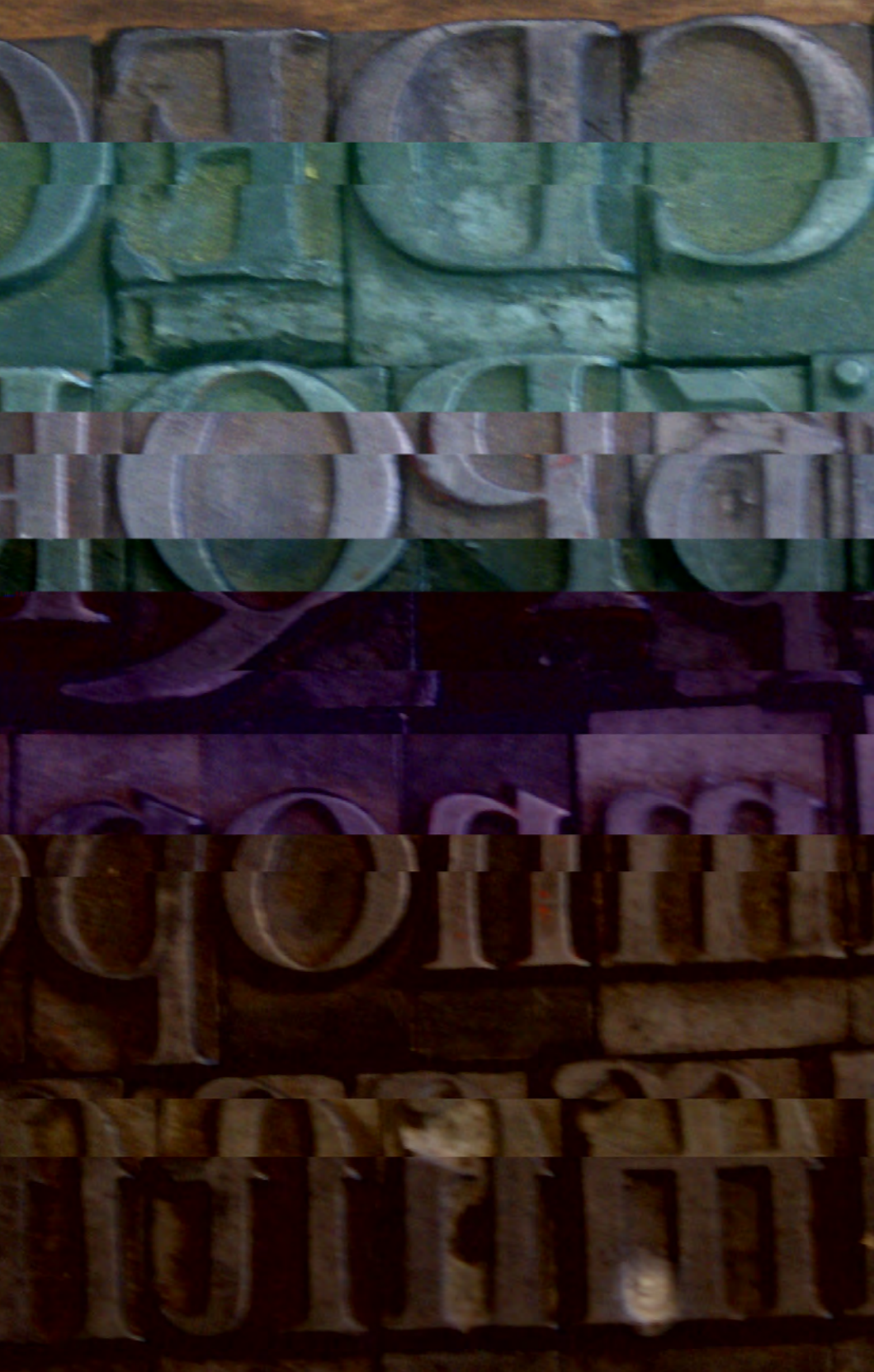
28 mains the only machine that can test the design of letters for it is the only organ that can read them.’²⁵ However, empirical research opens the door to subjectivity: if there are really objective criteria for measuring legibility, perhaps software should do the measurement? This would exclude subjective preferences, for example, taste and perception of beauty. At least it would make it possible to map these factors, described by Ovink as ‘atmosphere value’, against generic models. One could think of using LeMo and the LS Cadencer for this purpose, two applications for the parameterization of type-design processes, which are discussed in the *Modeling Letters* and *Technological Constraints* chapters respectively.



Catch of the Day dept.

Complete Angler wondered whether there was something wrong with his eyes or his brain. After all, this catch was *quite* surreal.

²⁵ Tommy Thompson, *How to Render Roman Letter Forms* (New York, 1946), p.30





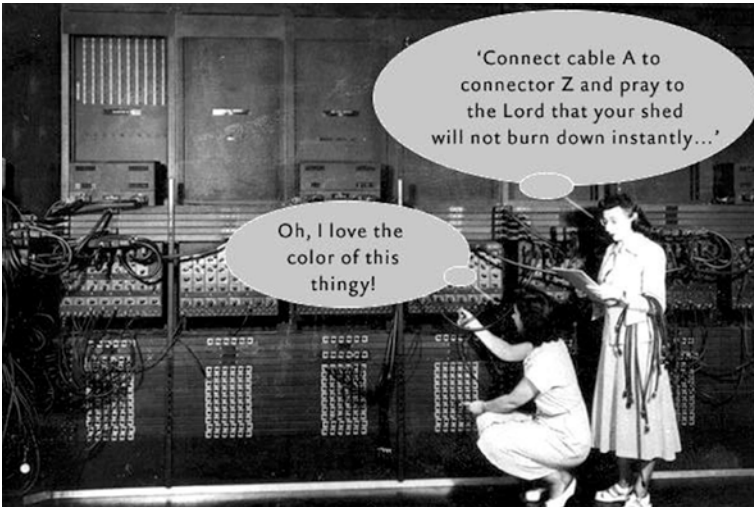
Type-Design Education

31

*But are you not aware that this study is like an immense ocean,
not to be exhausted even in the lifetime of a nestor?*

Johan Joseph Fux

One might wonder what the future of the type-design métier will be, now that it is hardly exclusive anymore: fonts can be developed without much knowledge then published unrestrictedly. In the course of time I have been involved in related discussions on the value and implications of type-design education. I have noticed that the opinions about this subject are diverse. It became clear to me that whether or not one has been educated formally, does largely influence one's own view on the matter. Supposed restrictive effects on the creativity of type designers are emphasized by those who lack formal education.



Ruino, the first Build-It-Yourself Computer kit was offered in December 1937. It was sold together with a Build-It-Yourself Shed kit. No form of education was required to achieve disastrous results.

Before the rise of desktop publishing the manufacturers of typesetting machines, such as Monotype, Linotype, and Berthold, produced a handful of typefaces per year. Consequently, it was not easy to get a new design accepted for production, which I know from experience.

Today there is less filtering: everyone can publish typefaces without a reviewing process. After all, font-production software is extremely affordable or even available for free. Furthermore, hardware is powerful and inexpensive, especially if one compares this with the prices for computers from a couple of decades ago. The result is a rapidly increasing amount of fonts, which are mostly available at very low prices – or even for free in case of open-source fonts. Distributors are eager to release *all* fonts on the market, irrespective of their quality: at the end many small profits make a big one together. Of course, it is also possible to release a typeface by oneself, as one can publish (print-on-demand) books and music directly via the web too.

One would perhaps expect that in a rapidly expanding profession the need for formal education would proportionally increase. That seems not to be the case at all, however. A repetitive argument against formal education I have heard, is that it can potentially stunt the proper development of one's 'original voice'. The easy to acquire software and hardware, in combination with the fact that almost everything made is released on the end-user market, makes this 'original voice' argument against education an attractive one.

Of course, there is always a risk that tutors apply a biased form of conditioning. After all, it is flattering for teachers if students embrace their ideas. Furthermore, conditioning preserves conventions and, conversely, conventions preserve conditioning. This recursiveness, which inevitably implies that students learn to perceive, and consequently interpret, in line with their teachers, contains undoubtedly the risk of restrictiveness. However, the primary task of education is to provide students with a toolbox to calibrate their minds and eyes, and to teach them how to approach the investigation and research of matters to make up their own minds. For type design this means that education should result in technical skills combined with knowledge of the historical developments in the profession, together with insight into (the influence of) technology.

Although I am in favor of formal type-design education, I should emphasize here that being an autodidact is as such not a bad thing, of course. After all, there are quite some famous experts from the past, such as Gill and the renowned Dutch typographer and highly talented type designer Jan van Krimpen (1892–1958), who were self-taught. However, these designers were almost always working together with other experts in the field: for example Gill worked to-

gether with Monotype's Type Drawing Office (TDO) and additionally with the skilled French punchcutter Charles Malin (1883–1955) when he was working on Perpetua. Van Krimpen worked together with the renowned German punchcutter Paul Helmuth Rädisch (1891–1976) and also with Monotype's TDO, although Van Krimpen was not too pleased with what happened with his type designs over there.

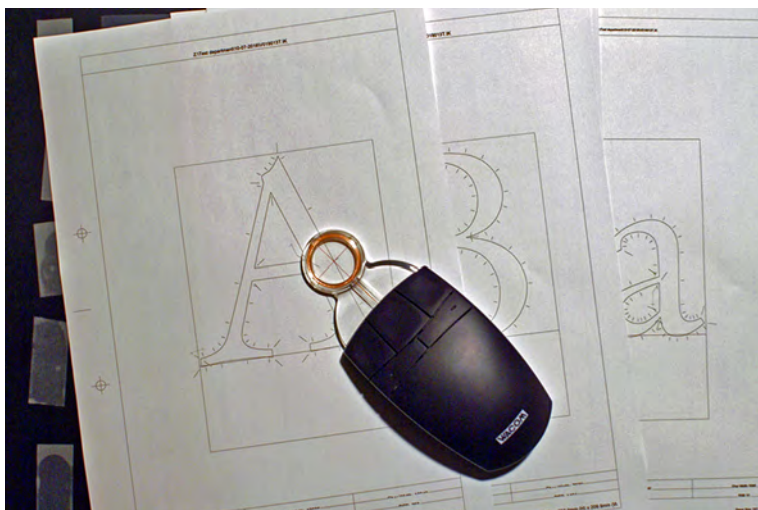


It was after visiting a local bakery on 29 September 1885 that Tolbert Langston reinvented the Renaissance unitization of type.

By marking the historical and technological boundaries of the type designer's *métier*, and by stimulating a critical and analytical way of thinking, students should be able to find their own place in the profession, and to develop their skilled and unique personal 'hand'. Although insight and craftsmanship formed, and still form the basis for the type designers' *métier* and conventions define its boundaries, tutors should always be careful that their training does not suppress the natural desire of designers to trespass.

Without an in-depth knowledge of the history of type design and insight into what was produced in the course of time, it will be hard to prove that a new type design, which has not been hampered by formal education, is introducing an original voice. That being said, I do realize that formal education is not within everyone's possibilities, if only because of the required investment in time and money. Especially if one knows that the diluted font market, in combination with the low pricing, does not by definition guarantee a proper return on investment. Luckily, concise and intensive high-quality courses are offered worldwide outside academies and universities nowadays.

Times are undoubtedly changing and new technologies make other design and production methods possible. Whereas before the rise of desktop publishing (but *after* the times of the punchcutter) typefaces were drawn completely on paper first, today most type designers work directly on screen in Bézier format. Whether this is a deliberate choice or is simply dictated by the digital font editors, remains the question. After all, workflows are in general adapted to the structure of the tools and not vice versa. However, I still tend to believe that there is no better way to learn the tension of curves, the (relation between the) quality of contours and counters, and to understand that a speedy process is not always the best way to preserve the highest quality, than drawing with pencil, pen, and brush.



IKARUS contours with Wacom lens cursor.

The fact that in the *métier* of the type designer drawing on paper has become less and less common, might be the result of a lack of training and accordingly of the specific skills needed for analog drawing. The requirements for a type-design job should define what the best tool for digitizing is, however. In some cases drawing on paper can be more appropriate than sculpting contours on the screen. It is quite easy and therefore tempting, to copy letter parts in Bézier format, but less easy to draw tiny and delicate differences on the screen. For making revivals this could result in the loss of details.

For the conversion of analogue drawings into digital contours the IKARUS system, which marked the start of digital typography in the 1970s, can still be used. The famous type collections of the major companies in the type market, for example, Monotype, Linotype, Berthold, and ITC, were manually ('hand') digitized in this format using a lens cursor in combination with a tablet.

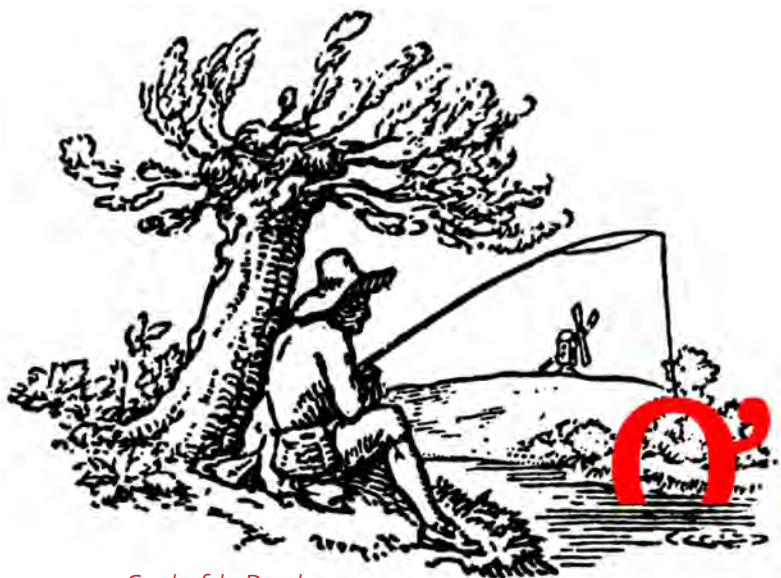


Drawings on paper based on Guyot's Ascendonica Cursive from ca. 1557.

In my opinion, in today's formal type education, the IKARUS system should be demonstrated still and students should have the opportunity to play around with it. If the students decide not to use it and consequently to sculpture directly on the screen, that would be a decision based on experience and knowledge. It also makes sense

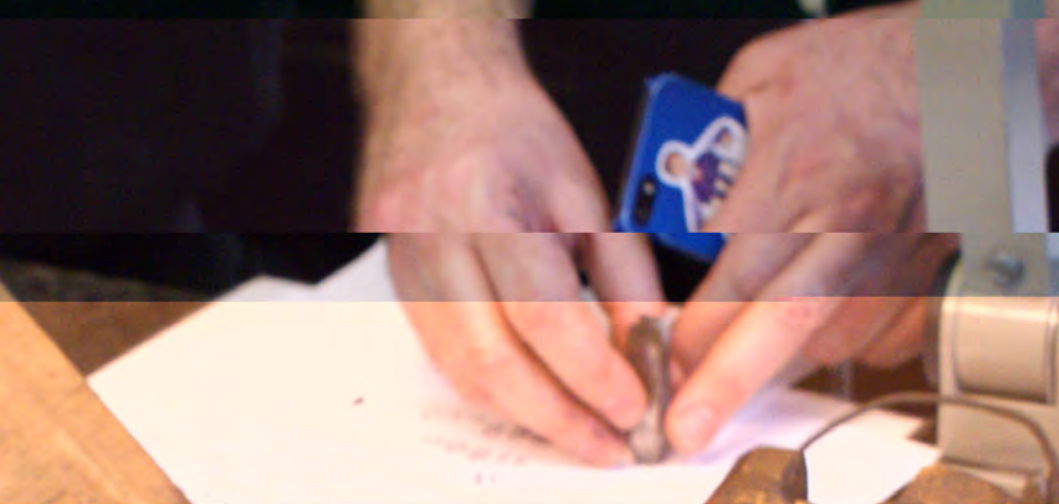
to show the IKARUS system if one wants to place the current digital font technology in a historical context, and to adapt one's tools to the specific requirements for a type-design job.

The drawings shown on the previous page are based on an italic by the sixteenth-century French punchcutter François Guyot (†1570). Almost 25 years ago I created these for DTL VandenKeere in the evening hours. These drawings were made with pencil, pen, and occasionally brush (one can see traces of white paint) and consequently manually digitized in the IKARUS format, utilizing a lens cursor. The latter has, moreover, in contrast with a mouse an absolute position in relation to the accompanying tablet.



Catch of the Day dept.

Complete Angler was, maybe because of a lack of education, not sure yet whether this was just a Vietnamese 'o with horn', or a monstrously large lowercase g.





Modeling Letters

39

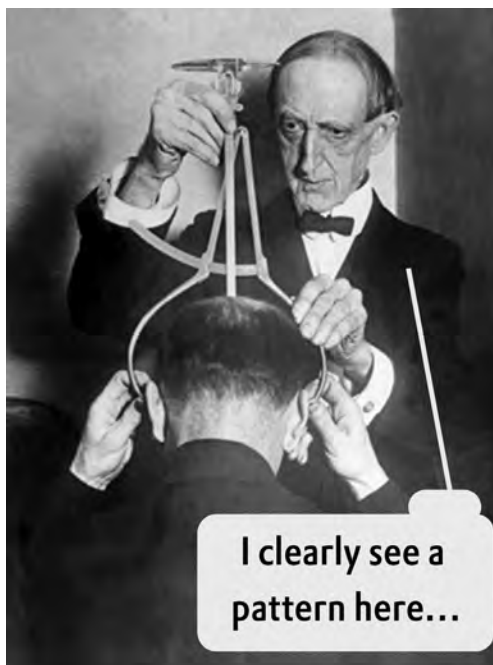
*The main purpose of science is simplicity
and as we understand more things, everything is becoming simpler.*

Edward Teller

Writing with broad nib, flat brush, and flexible-pointed pen is a good starting point for exploring matters like construction, contrast, contrast-sort, and contrast-flow in type design. It is evident that handwritten models formed the basis for movable type, but the quintessential difference between the two forms is that in movable type characters need to be positioned on distinct rectangles. It has become the generally accepted view that the fifteenth-century punchcutters translated handwritten models to these rectangles by eye. However, although there was undeniably a direct relationship between roman type and its handwritten precursor, Renaissance punchcutters had to deal with all kinds of technical aspects unknown to calligraphers.

This raises the question of whether certain details in roman type are the result of technical aspects, rather than of the interpretation of calligraphic models. Taking the technical requirements for the Renaissance type production – besides the calligraphic aspect – into account when investigating the details of roman type, could provide more insight into the origins of the structure of roman type. The main question is whether or not the Renaissance archetypal models from Jenson, Griffo, Garamont, and Granjon were made with the use of patterns. If this is the case, are harmonics and esthetics in type, which are embedded in typographic conventions, not only the result of optical preferences predating the invention of movable type, but also of technically inspired standardization in the Renaissance type production?

The patterning by the archetypal punchcutters was in part determined by prerequisites for the production of type and, consequently, the typographic conventions are not by definition purely the result of optical preferences predating the invention of movable type. By mapping the underlying harmonic and rhythmic aspects that are the result of the prerequisites for the Renaissance type production, we gain more insight into what exactly the creative process in type design comprises, and what the constraints are. Also, it makes the parameterization of digital type-design processes possible.



After an exhausting expedition of more than six months – and at the brink of giving up – the explorers of the World Typelife Fund (WTF) were utterly relieved to trace a type-design teacher whose mind was large enough to be open for different approaches in education.

However, the WTF explorers were eager to drill a hole in the teacher's skull for even more open-mindedness.

Due to the organic-morphologic relationship between the handwritten origins of *textura* and roman type, the production of the latter could be standardized in a similar manner as that of the former. This does not, however, exclude that manuscript models are at the basis of the production of roman type. After all, the influence of the handwritten models is a matter of formal principles (morphology), while the details and final proportions owe more to the exigencies of the translation process to standardized rectangles.²⁶

The regularity of the written *textura quadrata* made it relatively easy for the German printer and punchcutter Johann Gutenberg (ca.1398–1468) and his peers to standardize and systematize movable Gothic type, which was undoubtedly directly based on its written precursor. Once this was accomplished for *textura* type, it was natural to apply the same system to the new roman type and, decades later, to italic type. This was possible because of the intrinsic relationships between this Gothic hand and the Humanistic minuscule, on which roman type was based.

²⁶ Frank E. Blokland, *On the Origin of Patterning in Movable Latin Type* ('s-Hertogenbosch, 2016), p.57

For the exploration of this relationship I developed a geometric letter model. This maps the construction of letters written with a broad nib and supports the idea that handwritten letters contain an intrinsic standardization. This geometric letter model, which visualizes the morphologic relationship between the textura and the Humanistic minuscule, formed the basis for software to digitally reproduce the standardization of the handwritten models for type fitting. DTL LetterModeller (or LeMo) is an application for the exploration and parameterization of type-design processes based on the constraints of the Renaissance type production.²⁷



LeMo with the geometric letter model selected for parameterization.

Whereas the calligrapher divides the white space with black strokes, movable-type letters had to be placed on rectangles preserving an even distribution of space between the letters –irrespective of the sequence of the rectangles. To keep the movable-type system controllable and manageable, this inevitably required a form of standardization of letter widths. However, a system of standardized widths was already an intrinsic part of the written textura model. Hence, the first step from writing to printing type made by Gutenberg was basically a small one: it was almost if textura was made for transferring into movable type. By cleverly using the morphologic relationship between the textura model and the Humanistic minus-

²⁷ <<https://www.lettermodel.org>>



LeMo with a calligraphic model selected for parameterization.

cule (after all, both find their origin in the Carolingian minuscule), the punchcutters could use the same standardized system for roman type. Instead of adapting the spacing to unstandardized letter forms, the Renaissance roman type was adapted to standardized widths.

This fixed-width approach is the opposite to what, in general, the majority of type designers does nowadays, which is to design the letters first and subsequently to space them. One could question why in this case, one would use a tool like LeMo anyway? After all, type designers are so much conditioned with ‘standard’ proportions of type for text purposes, that they basically do not need a tool that more or less dictates the relation between the proportions of the letters and the size of the related widths.

However, to understand the background of what is considered ‘standard’, the investigation of the historical fixed-width approach makes perfect sense. Details, such as the lengths of the serifs, are inseparably related to the patterning. The punchcutter used the lengths of the serifs to fix the spacing: after all, the caster could not position the mould’s registers tighter than then the serifs permitted. Irrespective of technical constraints, if one would like to make the spacing tighter or wider, the overall patterning changes and adaptations of counters and details will be required. This system can be made clearly visible and also fully controllable with LeMo.

The LeMo approach should, on the other hand, not be considered a dogma: fixing the character widths does not by definition

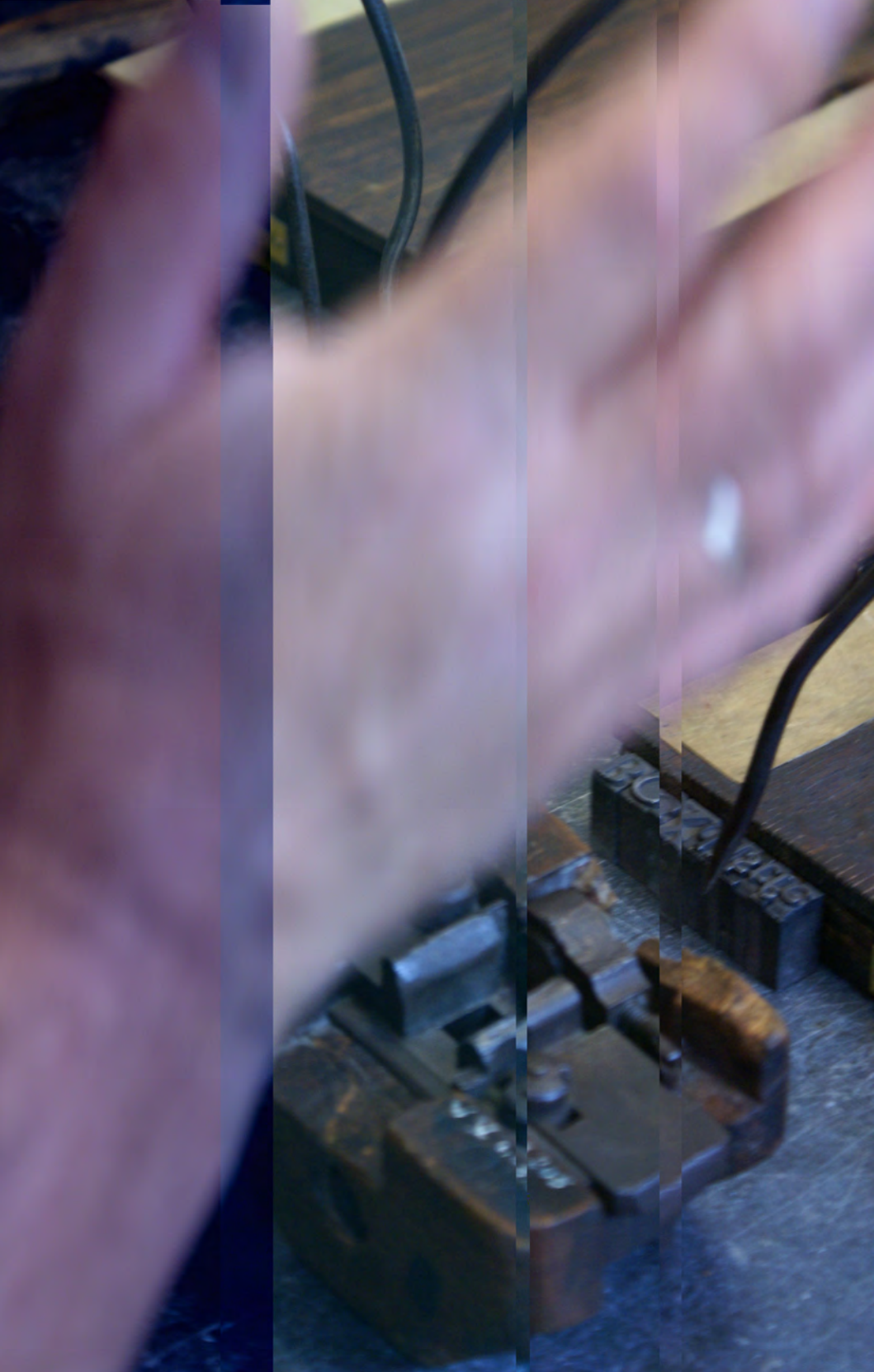
exclude the deviation of certain proportions within these. After all, there is a certain tolerance available within the standardization: it seems completely natural that also the archetypal punchcutters tried to improve the quality of the letter forms within the constraints required to control the many aspects of the type-production process. Hence, it was a matter of balancing, by taking the quality of the letter forms, the patterning, and standardized widths into account.

For students it is quite complex to handle proportions, details, and spacing of letters at the same time. Interestingly, type-design teachers often seem to fall back on old habits, which are mostly optical and manual exercises and conditioning based on ‘the eye’. However, as mentioned in the former chapter, conditioning preserves conventions and, conversely, conventions preserve conditioning. The DTL LetterModeller application and its related method, as described in my doctoral dissertation *On the Origin of Patterning in Movable Latin Type: Renaissance Standardisation, Systematisation, and Unitisation of Textura and Roman Type* from 2016, offer a refined alternative option to explore and discuss this recursiveness. It presents a research-based different view point and approach.



Catch of the Day dept.

Complete Angler did not understand one iota of what he had hooked: it was all Greek to him.



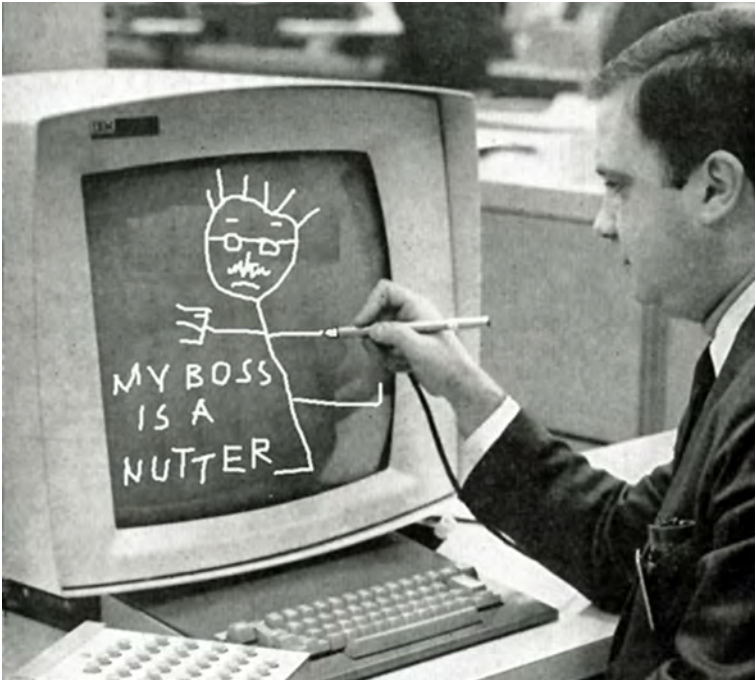
Technological Constraints

45

Instead of imagining that our main task is to instruct a computer what to do, let us concentrate rather on explaining to human beings what we want a computer to do.

Donald Knuth

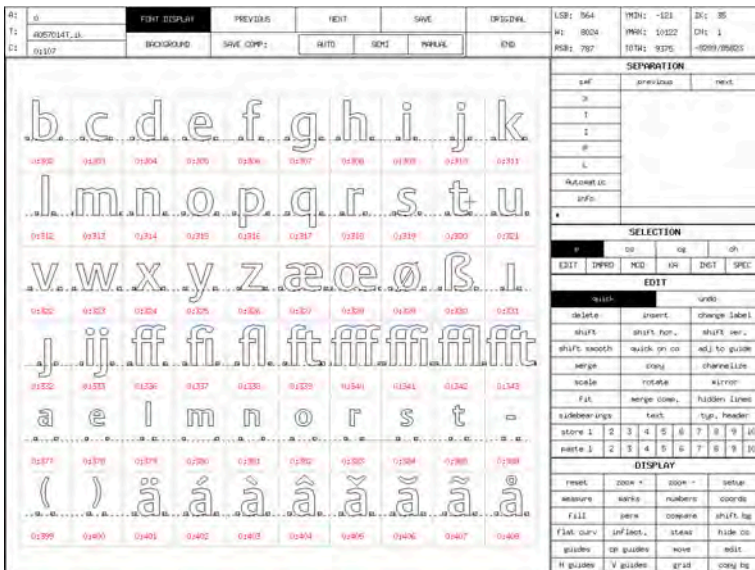
In the longer term, when details of the technical production process have mostly been forgotten – after all, not everything is documented – what matter above all for the preservation of a typeface, are the quality of the design in general and, to a lesser extent, the quality of the contour descriptions. After all, letters can be adapted to modern technology, as, for example, is done with revivals of historical type. However, typefaces will only be revived if the design has quality.



In 1964 someone found out that it was possible to directly draw on the IBM 2250 Graphics Display Unit with a morsel of removable chalk mounted on the end of a piece of wood, which was secured to a table with a cord to prevent theft.

In comparison to punchcutters, present-day digital-type designers have the almost unlimited freedom to define the proportions and widths of characters. This also makes it possible to emphasize optical matters. However, this freedom was not available in the early days of typography and should therefore not be used to explain the proportions of letter forms. These have formed an intrinsic and salient characteristic of typography since the second half of the fifteenth century.

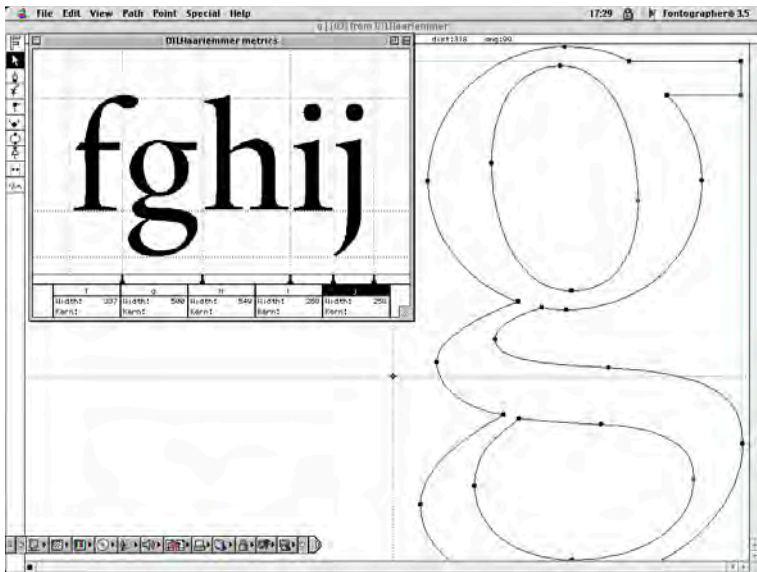
A closer look at artifacts from, for example, the rich collection of the Museum Plantin-Moretus, could provide more information on historical technical constraints. After all, for understanding the historical developments of type and typography, and related optical preferences, insight in these technical constraints is a prerequisite.



From origin old UNIX version of IKARUS, which runs under macOS still.

During my doctoral research at Leiden University I investigated whether certain details in roman type are the result of technical aspects rather than of the interpretation of calligraphic models, with as main hypothesis that the creation of roman type was influenced at least as much by technical as by esthetic considerations. After all, even today there are technical constraints, despite the fact that the designers of digital type have an almost unlimited freedom to define the proportions and widths of characters.

Automation and, in particular, batch-processing of font data have been elementary and intrinsic parts of the digital-type production since its early days. The IKARUS system, which was invented by Dr. Peter Karow (1940) and developed at URW in Hamburg in the 1970s, was the first font-production tool that made the digitization of resolution-independent contours possible. The IKARUS file structure was developed with the handling of large amounts of font data in mind. Therefore, it was *highly* suitable for batch-processing, which was controlled via a command language. The sophisticated tools that are developed together with DTL under the guidance of Dr. Jürgen Willrodt (1950) at URW Type Foundry, lead by Peter Rosenfeld (1957), often still have the IKARUS system under the hood.^{28 | 29}



Fontographer 3.5 was the favorite of many type designers around 1990.

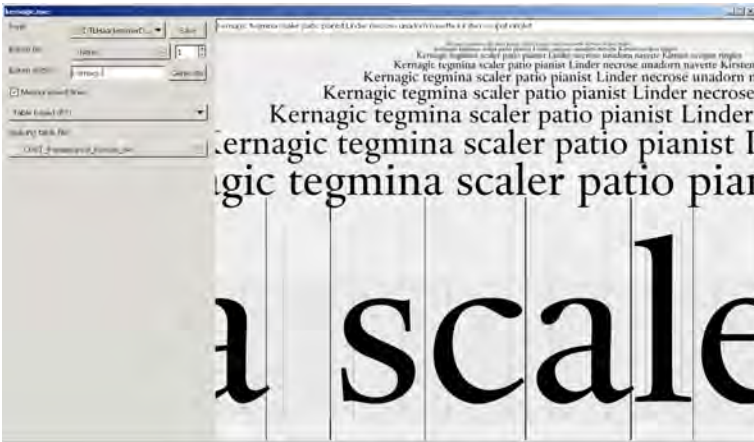
Together with the rapid rise of desktop publishing came new low-priced font-editing tools, for example Fontographer and Fontlab Studio. As a result, the focus shifted from the manual conversion of analogue models (with a lens cursor and tablet) into IKARUS contours, to directly drawing cubic Bézier curves on the computer's

²⁸ <<https://www.urwtype.com>>

²⁹ <<https://www.fontmaster.nl>>

screen. The new font tools were developed with an emphasis on the needs of the type *designer* and consequently the generation of font data became the final step in the type-design process, instead of type design being the initial step in the font-production process.

Furthermore, the emphasis was not anymore on the handling of large amounts of font data. After all, the new font tools made it possible for type designers to develop their own typefaces. Although the new storage formats, which came with the tools, made it much simpler to handle small-scale font production than the IKARUS file format, scripting and batch processing had to be built on top when this became needed again for dealing with larger amounts of font data.

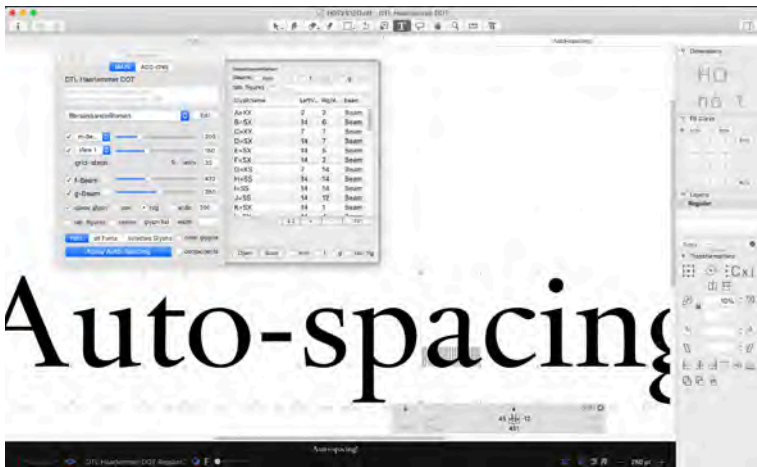


Auto spacing in Kernagic under Windows.

Python scripting provided the basis for enhancing the relatively limited functionality of the new font tools. Since 1995, when it first showed up in RoboFog (a customized version of Fontographer 3.5), Python scripting became more and more a standard in the font production. Nowadays most of the commonly used font editors, for example Glyphs, RoboFont, and FontLab vi, contain a Python-programming interface, which simplifies the process of accessing data in font files – even for those who are not experienced with scripting. Consequently, the type designer can control, customize, and enhance the functionality of existing tools – or even can create new ones. This optional, additional functionality completely changed the mindset of many in the type profession.

Interestingly, the introduction of, and increasing emphasis on, scripting in both practice and education, did not lead to an automatization of type-*design* processes. Although there are processes, such as spacing and kerning, which can be automated quite well, there is a tendency among type designers to consider this part of the artistic process, which has to be done solely by eye.

During my research I was involved in the development of two applications, for which I created the algorithms based on my measurements of Renaissance type. The Kernagic and LS Cadencer are both (batch) auto-spacing tools. Kernagic was developed in C++ by the Norwegian programmer Øyvind 'Pippin' Kolås.³⁰ LS Cadencer was written in Python by the very talented German type designer Lukas Schneider (1973).³¹ The latter tool can be used as an extension in the Glyphs and RoboFont applications.



The LS Cadencer extension in Glyphs app.

Auto spacing can replace optical spacing completely or it can be used to supplement spacing by eye. In case of the latter it can form the basis for the spacing process or just provide a second opinion. Together with the option to adapt a type design to its intrinsic underlying patterning, Kernagic and LS Cadencer provide greater control over the harmonic and rhythmic aspects in type design.

³⁰ <<https://github.com/hodefoting/kernagic>>

³¹ <<https://revolvertype.com/tools/>>

My auto-spacing algorithm is based on archetypal patterning, which actually also forms the basis for the conditioning of the type designer's eye. Hence, the results of auto spacing based on my algorithm and of optical spacing, will by definition be close. However, auto spacing is much less time consuming and far more consistent, because it excludes arbitrary deviations. Furthermore, the parameters can be adapted and the whole process reproduced fast and easily.

Despite these advantages, I notice quite some hesitance by type designers *and* teachers to embrace parameterized spacing, even after proofing that results are as good or even better as what is done by eye. The constraints are in this case not technical but mental, which undoubtedly is interesting fodder for further investigation.

There is unquestionably an inseparable relationship between the applied technology and workflow efficiency. If, for example, the font-production process is more manual-labor intensive, it inevitably will be more costly than if certain processes can be automated. However, it is quite well possible that more manual labor will enhance the quality of the product. Costs and quality have to be balanced at the end.

It is no secret that the Jaguar Mk2 is my all-time favorite car, owning one from 1961, and that Jaguar's founder Sir William Lyons (1901–1985) is one of my design heroes. Although most of the now classic cars are truly beautiful, the production workflow at the Jaguar factory was actually a bit archaic. However, I reckon that no one will care about this when it comes to the cars produced at the Browns Lane Plant in Coventry during the 1950s and early 1960s. The saloons and sports cars were and are renowned for their quality, and in particular for the luxury they offered for a relatively low price.

There was quite some specialized manual labor involved at Browns Lane, if only for the application of the famous veneer. Although this may look somewhat inefficient in comparison with the highly automated production at the major car manufacturers of that time, obviously it added to the atmospheric value of the cars. Nevertheless, despite the extensive manual labor, Lyons kept the overall production costs surprisingly low: it was *real* value for money.

At the Dutch Type Library handwork and automation is balanced a bit in the way that Lyons did. For this DTL uses its own proprietary software, developed at URW in Hamburg. DTL is not particularly renowned for its speed of the font production: it just takes as long as is necessary to achieve the best value-for-money result.



at

in

Licensing Exclusivity

53

As a matter of fact, real scientists have very open minds.

Xi Hu

Dutch Type Library (DTL), the type foundry I set up in the second half of the 1980s as a reaction to the rapid rise of desktop publishing, develops and publishes exclusive, high-quality, digital typefaces, and produces software for the professional font production. Established officially in the spring of 1990, it was the very first of its kind in the Low Countries. I am pleased that over the years the company has become quite successful, with customers in more than 60 countries. In the course of time DTL has produced corporate identity typefaces for the world's largest companies and institutes, including the New York Stock Exchange and the European Union.³²

However, an unfortunate, obviously inevitable, and undesired side-effect of DTL's success, in combination with the fact that digital typefaces are so easy to duplicate and to transfer, is that DTL's fonts are widely distributed without DTL's consent. This happens via websites that do not have any permission for this, but, more surprisingly, also there is an ongoing exchange of DTL fonts between graphic designers, who should know *much* better, of course.



Renowned experts in the field consider some established typefaces like, for example, Comic Sans dead horses that have been beaten for decades, and think it is *really* time to move on now.

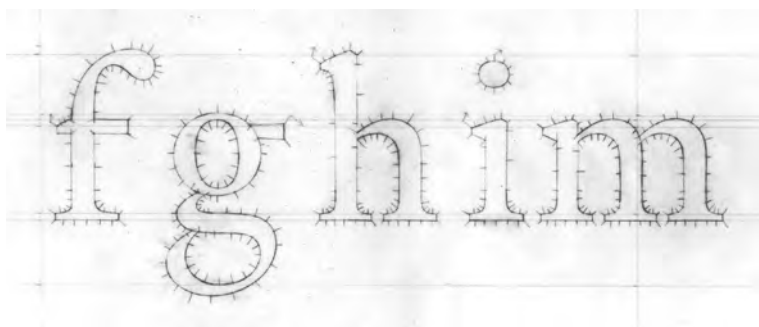
Tracing fonts that are applied without a license and contacting the graphic designers responsible for this, has, unfortunately, almost become a day job at DTL. The reactions from the contacted people vary from unknowing ('what do you mean exactly?') to a friendly ac-

³² <<https://www.dtl.nl>>

knowledge that it all was a mistake ('sorry'), and from uninterested ('so what?') to considering the matter completely insignificant ('everyone is doing this anyway').

These reactions are reasons enough to go somewhat more deeply into the matter here, and to list what the consequences of such licence infringements are for the type designers and font developers on the one hand, and for the fonts' users, i.e., the typographers and graphic designers, on the other.

Developing fonts from scratch is a time-consuming and consequently expensive enterprise. It requires intensive research, originality, sophisticated drawing skills, insight, knowledge of the applied technology, and a *lot* of patience. Not surprisingly, the resulting data is very costly in all aspects. Such a development is only possible when there is enough return on investment: the distribution of free copies does not really help to cover the costs, of course.



Small initial pencil drawings by the author for DTL Fell dating from 1997.

Sometimes unregistered users of DTL fonts more or less suggest that we should be happy to see our fonts applied by them. Although I could consider the application as such as a compliment, the reality is that I simply cannot be happy with this. After all, at DTL we have to make a living from the production of fonts and, for example, the grocery and bakery will also not be happy, nor will see it as a compliment, if we consume their products without paying.

One of the reasons that we do sell DTL fonts, despite the fact that they are in general somewhat more expensive than those of other foundries on the market, is their exclusivity. This exclusivity, i.e., the niche they form, is as such preserved by the relatively high price

tag. The application of our fonts on a larger scale is therefore counter-productive: the more they are used, the less exclusive the fonts will be. Actually, we like to see our fonts applied as often as one can see a car like our company Jaguar Mk2 from 1961 on the road. After all, that is what exclusivity is all about. If one considers the DTL fonts too expensive, one simply should not want to use them.

Already in the 1990s the Dutch Type Library quite successfully joined the World Wide Web. A problem introduced by the web, is the unauthorized, *widespread* distribution of DTL fonts. These fonts can be the original ones, but often they are badly converted and incomplete versions. The application of these hampered fonts not infrequently leads to design agencies contacting DTL about problems encountered when, for example, they embed these fonts in PDF files.



It was on a happy morning in April 1939 that Jeremy W. Frecklewreckle from the fine city of Dorchester managed – after 21 years of intensively copying Donald Duck – to draw his first lowercase a.

No doubt, if the fonts were not downloaded ‘for free’ from the websites that have no right to offer them, there would be no problem at all. I try to stop this distribution of our fonts, but despite the many disclaimers and statements that copyright will be protected and in-

56 fringement not tolerated, contacting these websites does generally not result in any actions or reactions. Getting the servers from where they act blocked, is unfortunately basically impossible.

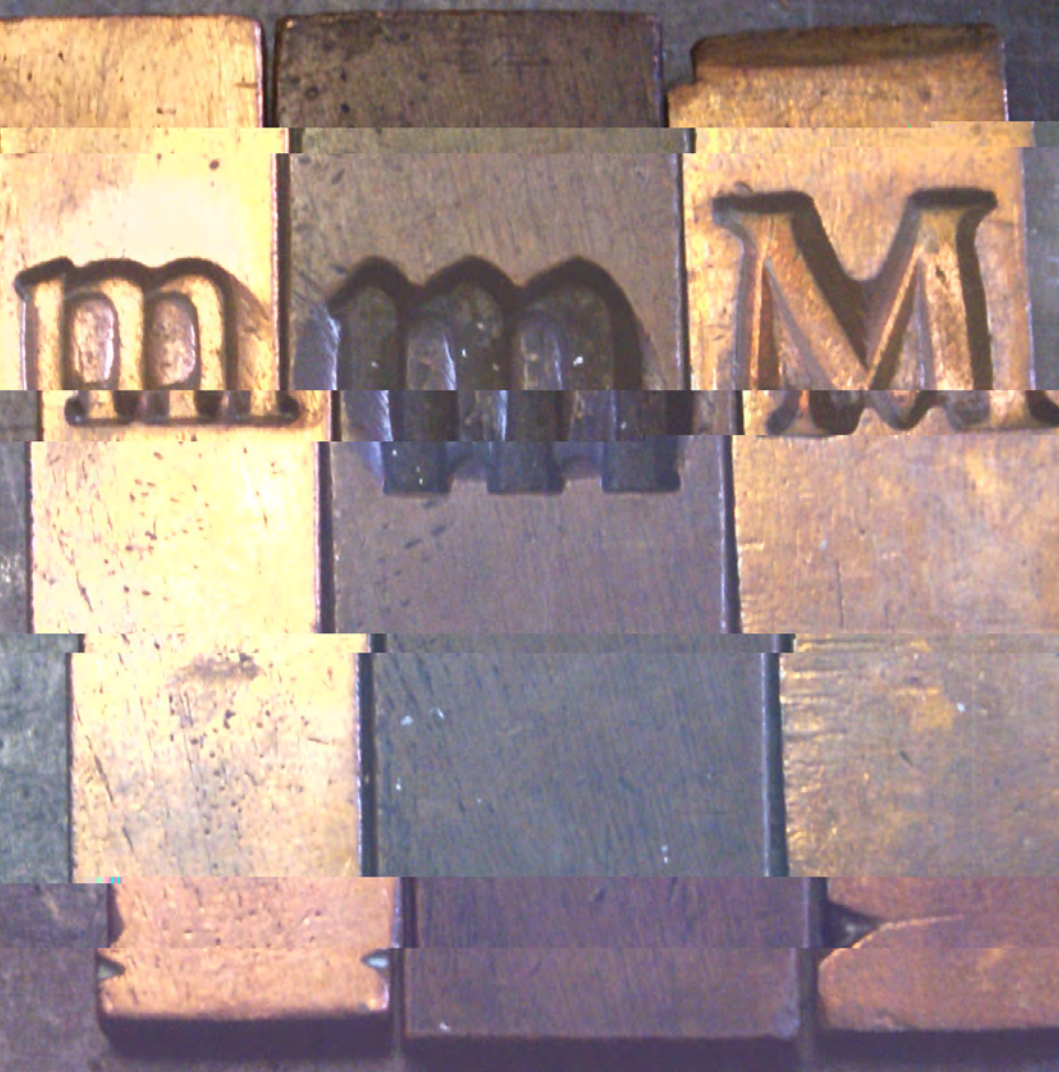
Besides the unauthorized distribution via third-party websites, DTL fonts are, as mentioned, also distributed freely between graphic designers. In this context one really wonders how these designers view their own copyright notices, if they themselves do not fully acknowledge the rights of their peers. Obviously there seems to be a bit of a change of mores, because I did not see such infringement so strongly previously in the past 30 years. Perhaps this attitude is caused by the fact that there are more fonts available than ever before, and that this has undoubtedly put pressure on their status and consequently pricing in general.

On top of that, today fonts are also offered for ‘free’, by some big players in the software industry. Of course, nothing is for free in the real world, and one of the explanations I have heard for such ‘charity’, is that first-generation search-engine bots could not read text in images. The amount of such unreadable images could be reduced by offering web fonts: the data-crawling process would clearly benefit from this.

As mentioned, designers should respect, protect, and maintain each other’s copyright and, of course, *never* use fonts or any other software without a license. After all, if they infringe copyright deliberately, why should the rest of the world bother about this anyway? Interestingly, when the Dutch Type Library contacts design agencies to point at the unlicensed usage of its fonts, this is sometimes considered ‘unfriendly’. However, it is DTL’s obligation to protect those customers who actually license *exclusivity*.

To be very clear, fighting the unregistered use of DTL fonts is not really my or any of my colleagues’ favorite hobby: I create typefaces because I love my *métier* with its illustrious history. Hence, I prefer to spend my time fully on designing and producing exquisite fonts. After all, it is a wonderful and fascinating profession.

That’s all folks!





Frank E. Blokland (Leiden, 1959) is the designer of, among other exquisite typefaces, DTL Documenta, DTL Haarlemmer, and DTL VandenKeere, Senior Lecturer in type design at the Royal Academy of Art (KABK) in The Hague since 1987, and Senior Lecturer and Research Fellow at the Plantin Institute of Typography in Antwerp, since 1995.

Blokland founded Dutch Type Library (DTL), the iconic digital-type pioneering and proudly independent high-quality type foundry, in 1990. It was the first of its kind in the Low Countries. A couple of years later he initiated and supervised the still ongoing development of tools for the professional font production, produced together with the German company URW Type Foundry GmbH.

October 2016 Blokland successfully defended his PhD dissertation at Leiden University, which was the outcome of a research conducted in order to test the hypothesis that Gutenberg and his peers developed a standardized and even unitized system for the production of textura type, and that this system was extrapolated for the production of roman type in Renaissance Italy.³³



³³ <<https://www.lettermodel.org>>





C'est ma belle chariot
de l'ostriche turbeaux!



In mid-1920s France, the same group of people who considered Fournier's typographical point system superior to Didot's one, preferred the use of Ostrich Power (OP) to Horse Power (HP) as a unit of measurement of power. Initially one OP was 0.375 971 51 HP, but a growing number of dissidents argued that if the ostrich kept his head in the ground, one Ostrich Power equalled zero Horse Power. Eventually the disagreement got out of hand and this resulted in the famous riot at Merde-sur-Roi-du-Romain near the coast of Normandy on 30 March 1929. This culminated in the official ban by the French government on the use of Ostrich Power on 14 July 1929.



Also starring:
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