

Ingeborg

Reflection on Practice

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Typeset in *Premiéra* (by Thomas Gabriel)

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1 Introduction

This essay describes the development of Ingeborg, a type family produced from October 2007 to July 2008 for the practical component of the MA Typeface Design program at the University of Reading.

As this was my first text typeface, it being a learning exercise was my main intention. Spending so much time and effort in design and research of it was as well a very intensive, enriching process as a great opportunity for me. The following pages are intended to document and analyse this process with all its successes and mistakes.

Bodoni
Caledonia
Centennial
Didot
Filosofia
Ingeborg
Madison
Melior
Miller
Paperback
Ruse
Walbaum

2 Defining a modern typeface

German typographers call it Klassizistische Antiqua. An other word is di-done, coming from the Didot family, who was famous for this certain kind of style, whereas *The Elements of Typographic Style* refers to the modern faces as Romantic letters. The term ‘modern’ might nowadays lead to misinterpretation. However, since it seems to be the most common term, it is used throughout this essay.

Moderns are closely related to copperplate engraving. Their look rather seems to be drawn than written, which gives them a slow, solid feeling. The classic characteristics of a modern face are a (relatively) high contrast between thick and thin, their axis is vertical, the serifs are assessed horizontal. In many cases the angle between serif and stem, respectively vertical hairlines. Samples of their kind are Bodoni, Caledonia, Centennial, Didot, Filosofia, Melior, and Walbaum.

These clear characteristics and make modern faces rigorous and highly recognisable. Faces like Didot or Bodoni are associated with high quality or luxury and therefore used in such coherence as to perfumes, jewellers, banks, or fashion magazines. Moderns often work fine for headings but loose their charm when it comes to copy text setting.

Robert Bringhurst writes in *The Elements of Typographic Style*:

*Romantic letters can be extraordinary beautiful, but they lack the following and steady rhythm of Renaissance forms. It is that rhythm which invites the reader to enter the text and read. The statuesque forms of Romantic letters invite the reader to stand outside and look at the letters.*¹

This describes the discourse quite accurate, but is not necessarily true, like Mathiew Carter’s Miller and Gerrit Noordzij’s Ruse prove. They are good examples of readable moderns. Carter managed this by decreased the contrast for its text weights. The same is true for House Industry’s Paperback. Noordzij played with the – classically very strict and even – proportions and reinterpreted transitions and forms calligraphically.

However, it is hard to draw a line, when it comes to typeface classification. Some people argue about whether or not typefaces like Ruse still merit the title ‘modern’. This discourse will not be part of this document.

¹ Bringhurst, R. (1991), *The Elements of Typographic Style*, third edition, Hartley and Marks, Vancouver, p. 130

3 The brief



Ingeborg should be my personal approach on a modern face. It should have all the classical characteristics of the modern or didone model, like the vertical stroke and the high contrast, without losing its readability.

To achieve that, the counters should be opened and the transition between horizontal and vertical strokes should be smoothed out.

Ingeborg is not meant to be a space saving typeface, but its proportions should be in rational ranges compared to other modern or oldstyle faces. Ingeborg is intended to be a multipurpose typeface and should work for magazines as well as for advertisements or wedding invitations. In the end the Ingeborg family should have enough weights to be used and combined with each other for all upcoming purposes from copy to heading to POS.

Ingeborg shall include display versions, historically based on Fat Faces of the nineteenth century, but modernised and adjusted to topical needs.

The whole family is intended to be PostScript OpenType, build with FontLab and the Adobe Font Development Kit. It shall include an extended character set with support for all Baltic, Slavic, Germanic and Nordic languages. All members will be kerned and OpenType features will ensure the support of decent typographic needs.

an 11/11/07

an 15/11/07

an 18/11/07

an 30/11/07

an 15/01/08

an 07/03/08

an 08/05/08

an 08/05/08

an 10/05/08

an 04/07/08

4 Designing Ingeborg

4.1 First steps of Ingeborg Regular

My idea of how my Roman should look like was very predefined and clear from the beginning. The plan was to express my own personality in the typeface rather through my own conception of proportion and way of drawing curves, than by adding wacky corners or chopping things off (which can be very nice too!). The final typeface should look 'normal' but be my own approach to a modern face.



Figure 1 First sketches of the lowercase *a*.

Since the lowercase *a* is said to be the DNA carrier of a typeface, it was the first character to be drawn. On the left you can see the evolution of the character as well as the changes made on form and length of the serifs on an example of the lowercase *n* throughout the design process (FIGURE 3).

Starting with Reading's own *adhesion*, the forms and proportions were to be defined. When, after a few months, this target was reached, the character set was expanded. This again led to surprising discoveries and other changes to the basic forms.



Figure 2 Trying to find the right *g*.

One of the final lowercase characters to be drawn was the *g*. After some sketches (FIGURE 2) the glyph got more and more unusual, which was very well received by the magnificent Gerard Unger. After many tries, discussions and considerations the decision was made to get back to a rather conventional form, which in fact was not that conventional for a didone typeface, but borrowed its roots from the Baskerville model (FIGURE 4).



Figure 4 Left to right: Bauer Bodoni, HTF Didot, Miller, Ingeborg, Monotype Baskerville.

Figure 3

An overview showing a few examples of the design evolution during the 9 months of work, from the first to the last digital version.

4.2 Trying some Greek

At the end of January it was time for Gerry Leonidas Greek workshop. As a first step the class was shown examples of early Greek printing type. This was followed by writing exercises, drawing of some letter forms on paper (FIGURE 6) and ended up with the digitalization of some characters in FontLab (FIGURE 5).

The Greek ductus and form language was surprisingly different from the Latin ones since the stroke angle is turned 90°. Getting weight and width in the right balance was a challenging but inspiring experience and will certainly not be the last personal try.

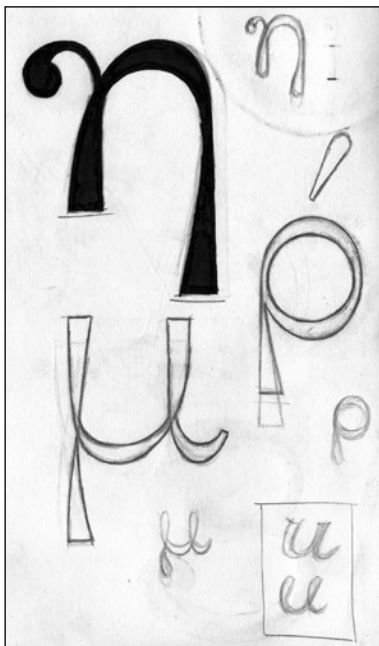
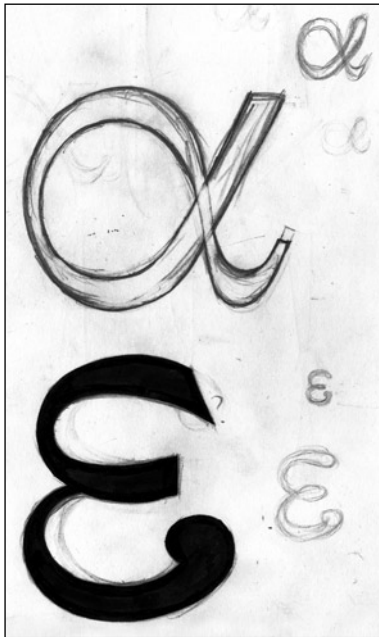


Figure 6
First Greek sketches with the intent to fit the „modern“ design of Ingeborg.



Figure 5 First digitalization of the characters.

At the date of writing this, Ingeborg ended up with two Greek characters – pi and alpha (FIGURE 7) –, since they casually appear in the context of Latin text. However, a complete Greek extension of Ingeborg will certainly be considered for the future.

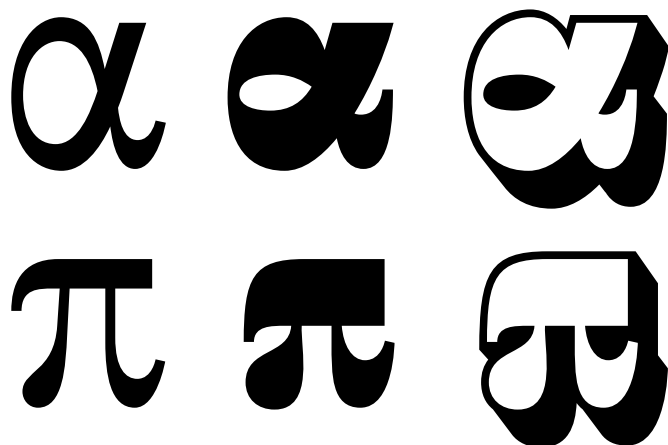


Figure 7 Greek characters in the final typeface.



Figure 10

An overview showing a few examples of the design evolution during the 9 months of work, from the first to the last digital version.

4.3 Ingeborg Italic

The Fat Italic was meant to be a decisive part of the family from the beginning. Even though it was a kind of upside-down-approach, its form were crucial for the design of the Regular. Since the family had to fit together as a whole, its forms had to work in the Italic too. In a thinner, less contrast version of course.



Figure 8 Figuring out how the design of Italic Regular and Fat would affect each other.

The first versions were simple tries to adopt the rather rigorous design rules of the Roman. The transitions from thin to thick were smooth and slow, which should bring the same evenness to the Italic texture that it brought to the Roman. After further testing of the Italic and the Roman in combination, it became clear that the Italic did not have enough contrast to the Roman. Since the Regular Italic's foremost intent is the emphasis of single words or passages in text, this contrast ratio had to be increased. To achieve that, the Italic should be more dynamic in its appearance and be a bit lighter, as well as 'sharper' than the Regular. Changes to angle, width, contrast and weight were made, as well as faster transitions from thin to thick. These changes are illustrated on the left (FIGURE 10) and bottom (FIGURE 9).

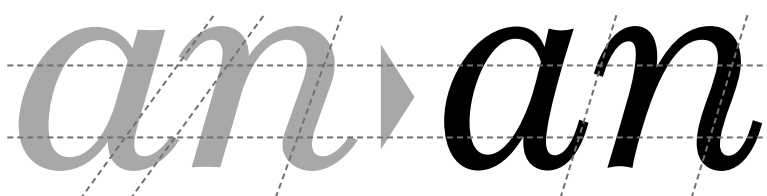


Figure 9 The direct comparison between the first and the last digital version illustrates how angles, width and conjunction points changed during the design process.

4.4 Proportion and contrast

As soon as some important letters were created, the typeface proportions had to be checked. Ingeborg has a rather big x-height for a didone. This decision is based on two reasons. At first, decreasing the ascender and descender height increases the room between the lines, as well as it keeps diacritics from running into descenders, when the type is set with rather small leading. The second aspect is connected to the decision for a small cap height, which was based on my experience with setting text for the German language.

German uses much more capitalisation than most other Latin script based languages, like English or French. Therefore there is a reasonable amount of capitals sticking out of the text in the middle of a line. In order to avoid these caps being too disruptive to the overall texture, their overall size is quite compact (FIGURE 11).

Überkorrupter Fuchs Überkorrupter Fuchs
bespringt Ödien mit bespringt Ödien mit
grober Übersicht. grober Übersicht.

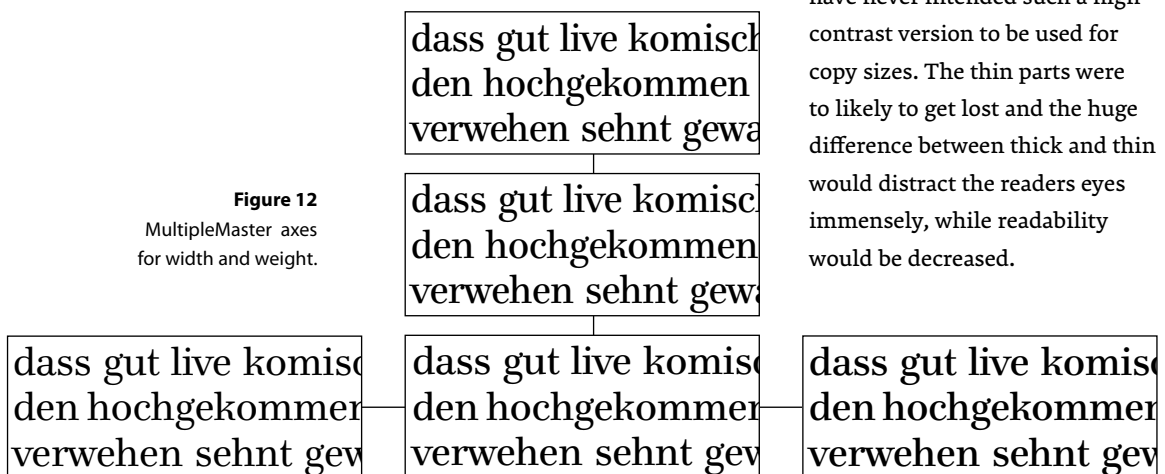
Figure 11 Text set at 15/17 pt Bodoni, on the left, clearly has bigger capitals, which causes the accents to clash in this tight settings. Ingeborg, on the right, with its compact designed capitals, leaves more space between the lines, as well as they are less interrupting for the overall texture and readability.

Besides the vertical, the horizontal proportions were the next decision to be made. Unlike typefaces for news print etc., Ingeborg does not have the intent of saving as much space as possible. Ingeborg wants to be calm and readable, leaving enough room for its curves and form language.

To test out the appropriate width, a MultipleMaster file was produced, to be able to in- or decrease the width without changing the stem width. The same thing was done for the weight and the contrast. As can be seen in FIGURE 11, Ingeborg Regular's contrast is much smaller, than of Bodoni's digital version. This is the case, because designers like Bodoni would

have never intended such a high contrast version to be used for copy sizes. The thin parts were to likely to get lost and the huge difference between thick and thin would distract the readers eyes immensely, while readability would be decreased.

Figure 12
MultipleMaster axes
for width and weight.



4.6 Getting Fat

Ingeborg’s heaviest versions were inspired by modern Fat Faces of the nineteenth century (FIGURE 17). Their intention was to bring as much ink on the paper as possible without losing readability or character.

The first necessary step was to find out how fat one can go. To do so, the best way seemed to be, taking the one character which forms are most likely to close up because of its complexity. In Ingeborg’s and most other cases this was the lowercase *g*.



Figure 17

Samples of Fat Faces by Cason (1821),
Figgins (1832),
Stephenson Blake (1821),
Caslon (1821).

out of
Gray, N. (1976), *Nineteenth Century
Ornamented Typefaces*, first US edition,
University of California Press, Berkeley,
pp. 16, – 18, 40



Figure 16 Using the lowercase *g* to find out how fat Ingeborg can be.

Ingeborg Fat’s intended use is for display purposes. Although it is not meant to be used under a certain size, it will stand harsh conditions, since the thickness of the thin strokes doesn’t go below those of the Regular.

It is also designed to work as the second extreme for the Multiple-Master weight axis. Therefore it had to be built the same way as the Regular (which is the first extreme of the MultipleMaster), with the same amount of vector points in the same order. This applies to every character of the set but the figures, which are different for the Bold sizes. However, this will be mentioned later on.

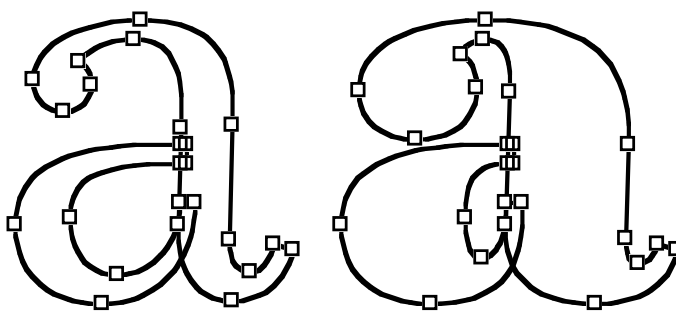


Figure 18 Ingeborg Fat was build the same way as the Regular to ensure compatibility for a working MultipleMaster axis, which was used to interpolate intermediate weights.

4.7 Figures

01234
56789

01234
56789

01234
56789

01234
56789

01234
56789

01234
56789

Since figures, unlike our alphabet, do not have Latin roots, they speak a very different form language. Figures hardly have long straights and their outstrokes are completely different. Due to this unfamiliarity, there are luckily also less conventions to keep alive, which leaves room for new interpretations. Their design was pleasure and challenge likewise.

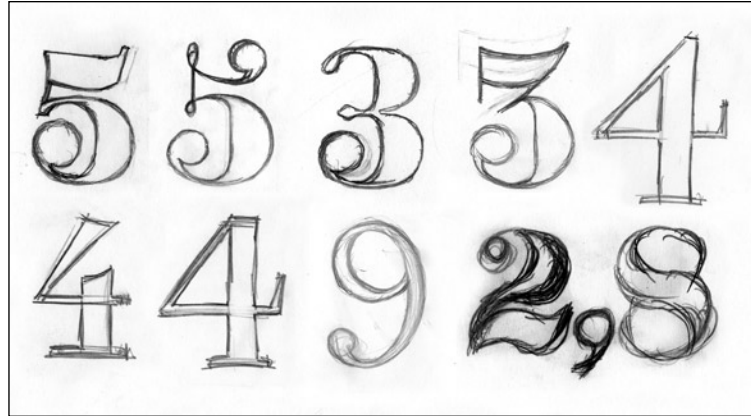


Figure 19 First sketches for Ingeborg's numbers.

Modern faces originally use lining figures. Oldstyle figures were – as the name already tells – more related to oldstyle typefaces. Ingeborg doesn't provide oldstyle figures neither, but follows the example of typefaces like Mathiew Carter's Miller, as well as Gerard Unger's Capitolium News, and includes a so called 'semi-ranging' case for its figures. Additionally Ingeborg includes proportional lining, tabular lining and tabular semi-ranging numerals.

As a matter of fact, the bold versions of Ingeborg's Roman have a different set of figures including an alternative 'swashier' version of the numbers two, three and seven. This, of course, had to be considered in foresight to the interpolation of intermediate weights.

0123456789
0123456789

Figure 20 The figures 2, 3 and 7 in comparison between Ingeborg Regular and Heavy.

Figure 21
An overview showing a the figures of Ingeborg Italic, Regular, Bold, Heavy and Fat.

4.8 Additional weights



Figure 22
Relation between the stem widths of Regular, Bold, Heavy and Fat weight. The horizontal strokes roughly stay the same, whereas the verticals increase the same amount in both directions. This happens to keep counter and outer space in balance.

The MultipleMaster functions in FontLab were useful for different aspects of Ingeborg’s design process. To build the final versions of Ingeborg the *weight axis* was the most important.

As mentioned earlier, the Regular and Fat versions of Ingeborg are build the same way, so they can interpolate seamlessly. To ensure this, the Fat version was kept and build together in one file with the Regular. Since the Fat version had less counter space it was also spaced tighter.



Figure 23 the Italic letter *k* in interpolation from Regular to Fat. The black character in the middle was considered as the Bold weight for the Italic.

After having revised and extended the character sets of Regular and Fat weight, both weights were kerned, using the help of kerning pairs. Next step was to decide on the weight of a Bold for emphasis, as well as a Heavy for headlines. Several interpolations were made and printed out in a test sheet showing the contrast from Regular to attended Bold respectively Heavy weight (FIGURE 24).

Thorne’s death in 1820 the foundry was purchased at **au**ction by **William** Thoro**g**ood using money he had won in a lottery.

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Figure 24 Test documents to compare the contrast between Regular and Bold were printed. In the end on a scale of Regular (0) – Fat (1000) the decision came down to an interpolation of 330 for Ingeborg Bold and 550 for Ingeborg Heavy.

5 Technical Issues

5.1 Fitting and Kerning

Throughout the whole process of designing the typeface, fitting was a very important part. It became clear, that it is not possible to design the typeface without constantly adjusting the fitting. Weight and proportions of the typeface cannot be assessed without the implication of the surrounding space between the letters and words.

Fitting tests were made mostly on screen and printed out on the available laser printers for further, more accurate checkup. The on-screen fitting procedure was initiated with the symmetrical character lowercase *o* in combination to the lowercase *n*. Once inner- and outer-space had been produced an even rhythm, the other letters were fitted in between. Gerard Unger was introducing to the process of spacing and fitting, as well as to his own fitting-word-combinations, which was very salutary.



minimum
minimum

Figure 25 Exemplification of bad and good fitting by means of one of Gerard Unger's standard fitting words. It is very obvious that the counter space of the top line is uneven.

Kerning, on the other hand, was applied at a much later state. Since the fitting and spacing was constantly adjusted throughout the workflow, as well as the width and weight of the letters themselves, changed, there was no sense in applying kerning at an early stage. Another reason was, that Regular and Fat version were kerned at the same time, with the support of created kerning pairs. The most important combinations to be kerned were the ones with diagonal characters, as well as the capital *T*, *F*, *P* and *J* and some of the punctuation.



VAT.V.*P.F,
g's.v,r'ktv

Figure 26 Demonstration of some of the biggest kerning issues in most typefaces.

5.2 OpenType Features

Ingeborg's OpenType features were built all along with the expansion of the character set. The first ones to be included were the *f* ligatures. As soon as the first small caps were built, the *smcp* feature was included, and the same happened with superiors/inferiors and fractions.

Oftflieger › Oftflieger
aufbäumen › *aufbäumen*
Schiffahrt › *Schiffahrt*

Figure 27 Ingeborg's ligatures in action.

One of the last features to be included was the *g* substitution. The idea was born, when I realised, that I don't like the image of the word 'Ingeborg' very much, due to the two *gs*. During the design process the *g* already changed a couple of times, and one of the toughest decisions to be made, was whether its ear should turn up or down. The *g* substitution provided the possibility to use both, and works as follows: If a word has two or more *gs* in it, they get substituted in alternating order. That two *gs* of the same kind never appear close, or next each other (FIGURE 28).

Ingeborg › *Ingeborg*
goggles › *goggles*

Figure 28 The up-sticking ears of Ingeborg's *gs* are alternated with the help of an OpenType contextual substitution feature.

Ingeborg's Italics additionally provide swash capitals. Most of them – like the *N* or the *V* – also have two alternatives each. One applies if they are followed by a 'low character' like *a*, *o*, *n*, *s*, the other one applies if they are followed by lowercase *i* or *j*.

MOYA › *MOYA*
Volley › *Volley* › *Volley*
Nice › *Nicer* › *Nicest*

Figure 29 Ingeborg's swash capitals get substituted automatically, depended on the context they are used in.

For Ingeborg's figures proportional non-ranging, tabular non-ranging, proportional ranging and tabular ranging features where applied. Ingeborg's features also includes 'real' superiors, inferiors and fractions.

superior¹²³⁴⁵
inferior₆₇₈₉₀
123/650 › ¹²³/₆₅₀

Figure 30 Superior numbers of the Fat, inferior numbers of the Regular, as well as the fraction feature demonstrated on Ingeborg Bold.

Ingeborg also supports the *unicase* feature, which basically sets the selected text small cap and substitutes *a*, *e* and *n* (plus their accented appendix) with lowercase character, that have the same x-height as the small caps. The user can write normally and also combine the feature with capitals in one go. If this is typographically worth supporting remains – like the tabular non-ranging numerals – to be seen.

INGEBORG
UNICase
VIENNA
ROCK THE DONAU WITH THIS TYPEFACE

Figure 31 Demonstration of the unicase feature implemented in Ingeborg.

6 Conclusion

Ingeborg is not yet finished. Its Regular has already grown-up, and with some refined kerning touch-ups, will be good to go. The character sets of Ingeborg's other weights partly lack of small caps and additional figure sets. At the end of this 10 months and after further testing, I think that I can see now how the family will have to grown even further. It is, for example, a considerably handy feature to have alternate fonts for different sizes with modern faces.

However, I am very happy with what I have achieved in one year. The basis for Ingeborg is stabile and will be the kernel for future typeface projects. Getting feedback from some of the best designers of our time, as well as sharing this year with such talented classmates was very enriching!

Typefaces and typography have appealed to me for a long time. However, it was surprising how many facets there are to this theme. I am glad I had the chance to get involved that much and I will certainly not loose interest in the foreseeable future.

References

- Bringhurst, R. (1991)**, *The Elements of Typographic Style*, third edition, Hartley and Marks, Vancouver
- Cheng, K. (2006)**, *Anatomie der Buchstaben*, Hermann Schmidt, Mainz
- Gray, N. (1976)**, *Nineteenth Century Ornamented Typefaces*, first US edition, University of California Press, Berkeley
- Hlavka, O. (1960)**, *A book about type and design*, SNTL, Prague
- Noordzij, G. (2005)**, *The stroke: theory of writing*, Hyphen Press, London
- Sauthoff, D. & Wendt, G. & Willberg, H. P. (1998)**, *Schriften erkennen*, seventh edition, Hermann Schmidt, Mainz
- Tracy, W. (1987)**, *Letters of Credit*, David R. Godine, Jaffrey
- Tschichold, J. (1992)**, *Treasury of Alphabets and Lettering*, Lund Humphries, London
- Twardoch, A. (1997–1998)**, *Polish Diacritics – how to?*, retrieved July 20, 2008 from: <http://www.twardoch.com/download/polishhowto/index.html>
- Typo.cz (2006)**, *Diacritics – all you need to design a font with correct accents*, retrieved July 20, 2008 from: <http://diacritics.typo.cz/index.php>
- Willberg, H. P. & Forssmann, F. (1997)**, *Lesetypographie*, Hermann Schmidt, Mainz

