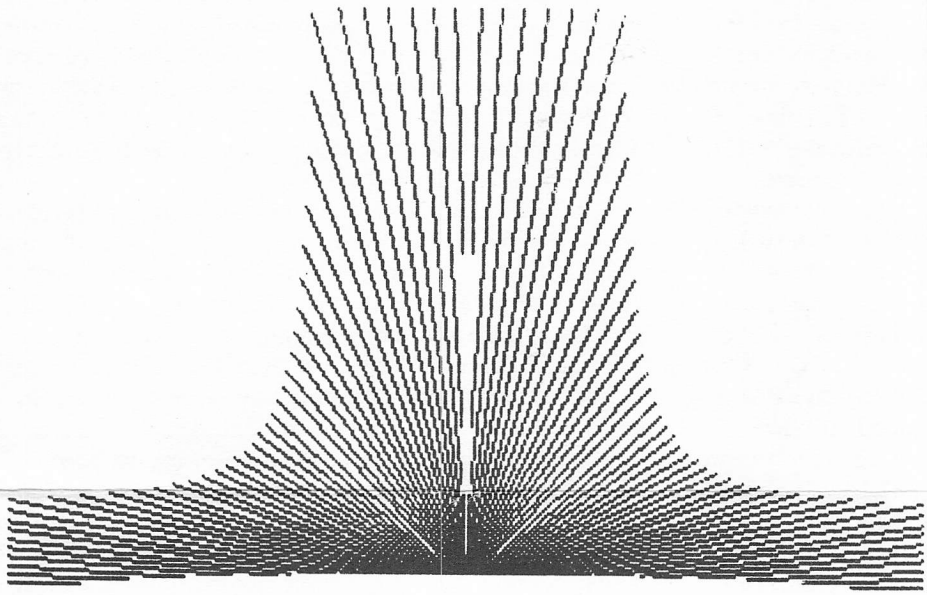
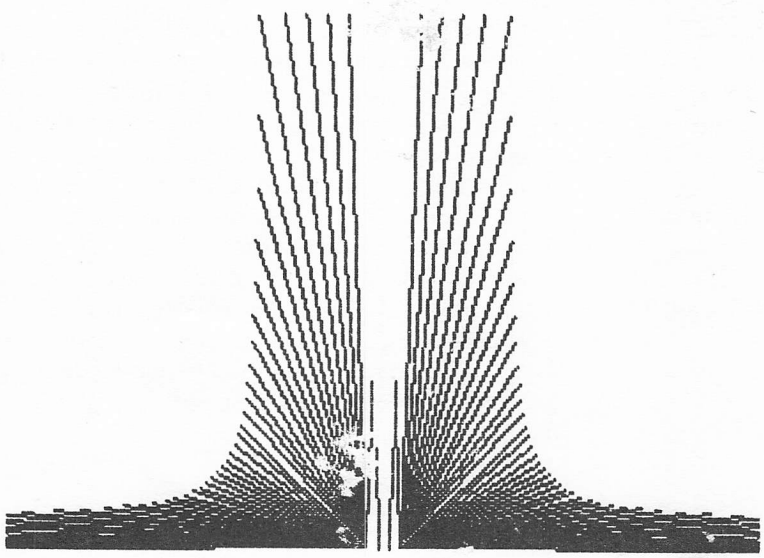
Letterletter 5

Spring 1987



Correspondence on research in writing



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Editorial

We met in Basel with the intention to agree on a terminology of writing. The result was that we did not even agree about the subject of our discussion. This might be looked at as a disaster but I took the chance to invite everybody to explain his point of view in *Letterletter*. The response is this issue. At first Fernand Baudin contributed an attempt 'to list a few key phrases and their agreed meanings' whereas Nicolete Gray concentrated on the approach of a general public. Both of them made considerable changes in their final contributions. Our discussion of terminology moved to the background where it lingers. My position seems to be somewhere between these great champions of writing.

Unlike Nicolete I am not much interested in the agreed meaning of simple terms. There is probably a general agreement that typography is not writing and that writing is boring, but I do not see a suitable starting point in such simplicity. My purpose is the destruction of the general agreement on writing and design and to make clear that writing is as complicated as everybody might expect of the first condition of our civilizations. On the other hand I feel that Nicolete is ahead of us on the road of effective P.R. For a new attitude towards new ideas we depend on a new audiance of new people. Together with Nicolete I want to go to the children. For my feeling that new ideas require a new coining of our terminology I might have more in common with Fernand. Little is left of our Swiss disagreements. The most impressive aspect of our different opinions is agreement on the approach of P.R. I conclude that the three of us realize that the propaganda of writing will bring us decades of work and will require much patience.

You are reading these lines in prefabricated writing. This first appearance of typography in Letterletter *is a gift of the distinguished Dutch printing firm Thieme, Nijmegen. Thieme offered me to compose the typescript from the floppy disk on Monotype Lasercomp. For the computer freak: the different drawings of the rotating front have been made with the same little programme written in Macintosh Pascal. And for the reproduction freak: the original illustrations for this issue of* Letterletter *have been produced on a simple matrix printer.*

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Send contributions camera ready to the editor.

Fernand Baudin Typography and visual editing

The developing technologies have disrupted the traditional and professional training in typography so-called. To a large extent they have even unduly undermined our confidence in handwriting as the very essence of a full literacy. It also looks very much as if they even further obscured the meaning of deceptively familiar words such as *calligraphy* and *typography*. These pseudo Greek phrases have never been the simpler way to express beautiful handwriting and writing with type (or writing without a pen on the press as Plantin put it, Characterizare sine penna, as the prototypographers used to say in Latin).

Just how far A.Typ.I. should allow itself to be involved in the teaching of handwriting, typewriting and lettering, as distinct from typedesign and graphic design, is a moot question. But there can be no question that A.Typ.I. is very much concerned with typographic communication i.e. communication with type as distinct from handwriting, etc.

While the typographic know-how is on the wane, one more result of the current technological reveolution is that typography as writing-with-type or writing-without-a-pen, is no longer the preserve of specialists and that the typographic tools, namely the typefaces, are currently available for everyman. When typefaces are thus delivered as part and parcel of composing systems what is left for users to do is the visual editing i.e. the choice of a constellation of typefaces and typesizes, as well as the design of a variety of texts (title-page, contents, preface, index, etc.). The differences between typographic design and visual editing are to be seen on the page and on the screen; in the people and the processes they use as well as in the formats and the designs of the printed matter they currently produce.

Then also arises the fundamental difference between the format of documents and books. The difference lies in the distribution of space in and around the text. As we know, the visual unit of a document is the recto of a single leaf and a single left margin per page; while the visual unit in a book (codex) is a quire of 8 pages (or other multiples of 4) and a balanced sequence of double spreads, all of them with a system of 4 duly proportioned margins.

This aspect of 'a critical knowledge of typography' has been ignored by most educators in the past. It is the appointed task of A.Typ.I. to make them aware of the fact that however important they may be typefaces are only half of visual editing. This is a task which A.Typ.I. cannot hope to fulfil all by itself. It is also a task which should not be fulfilled by anyone else without any contribution of A.Typ.I.

a

Is this a word? According to Dutch or German orthography it is not but it is within the scope of Italian, French or English orthography.

notaword

This is one graphic word containing two or three orthographic words.

not a word

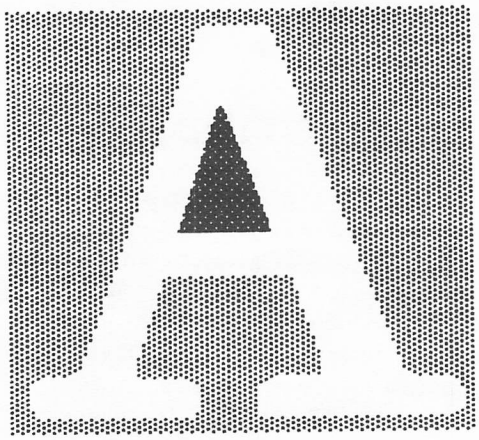
In this writing each graphic word is a symbol of an English word.

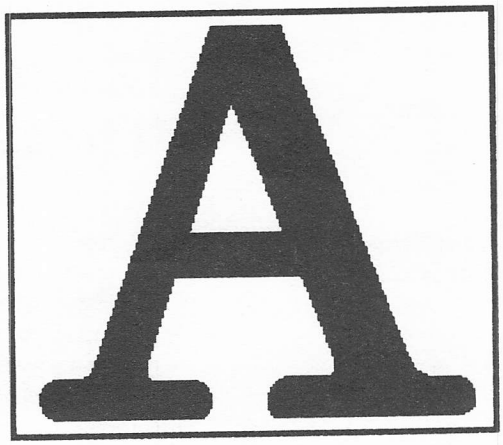
Gerrit Noordzij
The nature of writing

Writing is graphic design. As any graphic design it has a graphic and a symbolic quality. The graphic qualities such as form, rhythm, colour, shade and composition are aspects of visual perception. The symbolic qualities are submitted to orthographic rules. Orthography determines the connection between the conventions of writing and language. Orthography is not language. The Japanese language, for instance, disposes of an orthography which links the language with Chinese writing and of another one linking Japanese language with western writing.

The basis of western writing is a derivation of the semitic alphabet but its vigour depends on a more modern feature, the word, which was developed in medieval handwriting. This graphic word is a rhythmic structure of 'white' and 'black' shapes. This structure is made with a sequence of letters in a rhythmic juxtaposition. A sequence of letters which is too tight or too loose does not make a word. It depends on our knowledge of the orthography of a language whether we can recognize a graphic word as the symbol of a linguistic word.

The letter does not have an unambiguous symbolic meaning. As I have shown a letter can be the symbol of a word but it could symbolize a number as well. Everybody seems to believe that letters represent sounds. This belief assumes that orthographies are phonetic but I do not know such an orthography. The current English orthography is far less phonetic than Dutch orthography but also in Dutch phonetics is not more than an underlying principle. In many cases phonetics is submitted to grammatical and etymological considerations. A consistent phonetic orthography would be inconsistent from a morphologic point of view. The diminutive of *hand* (hand), for instance, is written as *handje* (small hand) which is not phonetic. A phonetic spelling of *handje* might be something like *hañdje* but this would not be an improvement of Dutch orthography. In this example the letter *n* is not the symbol of a sound but an indication of morphologic relationship. Whether a letter is a symbol of a sound depends entirely on orthographic rules. It are the same rules which define the symbols. Take for instance the letter *u*. German orthography assigns a sound to this letter which is written *oe* in Dutch and *w* in Welsh. The Dutch version assigns the sound to a combination of letters. Other examples of such combinations are *th*, *ng*, and the German triplet *sch*. As the number of possible combinations is far greater than the most extensive collection of phonemes the alphabet could meet the phonetic needs of any orthography. This is the common practice in our application of numerals; only ten of them are sufficient to symbolize any number. We cannot but conclude that there does not exist something like *the* meaning of letters. A discussion about meaning is



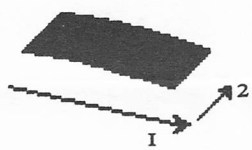


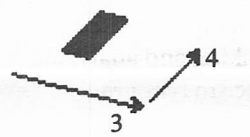
not a discussion of writing but of orthography. When writing is my subject a letter is not a sound, a number or a morphologic identifyer but only a complex of shapes. My concern, writing, is the making and the perception of these shapes. First of all we have to realize that a shape can only be perceived in its interaction with a background. A black shape on a black background cannot be perceived; it cannot be a letter.

A letter is two shapes, a 'black' shape and a 'white' one. 'White' and 'black' can be any other pair of shades or colours and they can take turns as well. The *form* of the letter is the quality of the interaction of both shapes. The solid shape in the background of the first picture is a *counter* in the terminology of the punchcutter. A counter is a part of the shape which might be called countershape. In the second picture the countershape is white. The black background of this white counter is the lettershape. In punchcutting the lettershape is left open by the strokes of the graver, in handwriting the countershape is left open by the strokes of the tool.

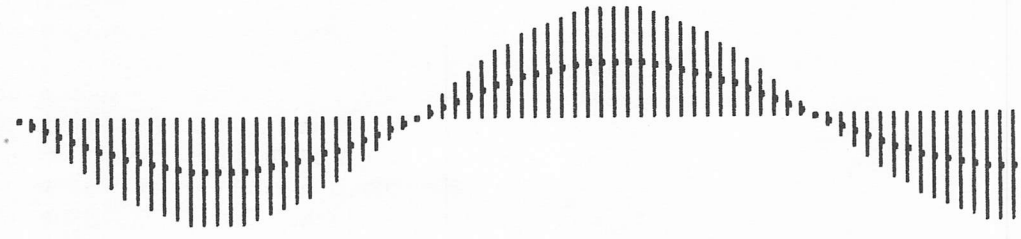
Punchcutting is not a very usual method of making letters. It is only one method in the field which is called lettering. In lettering the letterform is made with overlapping strokes. In handwriting the letterform is made with single strokes. A stroke is, of course, a shape, otherwise it could not be perceived. A stroke has a direction.

The direction of a stroke cannot be recognized in its shape. It might seem to be obvious that the first stroke in the picture has been made with a movement of a broad pen in direction 1 but it is less obvious that 3 and not 4 is the direction of the second stroke. Nevertheless the simple translation of both strokes makes their interpretation rather easy. (*Translation* is the conventional geometric expression for the characteristics of a vector.) In the next picture the shape of the stroke is much more complicated. A geometric description of its *expansion* might require a threedimensional model such as I have described in *The stroke of the pen*.





In expansion the direction of a stroke is not parallel to its outlines; it follows a path as indicated by the dotted line. This and other complications of the stroke have their origin in the nature of the tool and in the movements of the hand. This justifies the role of tools and movements in any discussion of handwriting and it would justify some reflection of these subjects as well. The stroke contains more than a track of a movement and the movement contains more than the strokes: the writing movement is threedimensional and only a part of it is registrated in the twodimensional stroke. In handwriting strokes can be interrupted, the movement cannot. When the movement is interrupted handwriting stops.



Such aspects of the stroke do not appear in lettering where the overlapping strokes cannot show their pecularities. The influence of the tool can be neglected in lettering. The influence that has been attributed by some authors to the chisel and the graver cannot be demonstrated in the letterforms of inscriptions and engravings. In these cases the strokes might be found back in the structure of the letterforms but the impression of a typeface that has been cast from the stroke of a punch in a matrix reveals absolutely nothing of the strokes of the graver. These overlapping strokes created the white shape of the letterform which is just white on a white background.

Generally typefaces have their origin in lettering. In that case they are different from handwriting with its single strokes. This difference, however, is not essential. After all it would be possible to reproduce handwritten letterforms in type. The essential difference between handwriting and typography is that in handwriting the words and the letters are made simultaneously whereas typographic letters are made in advance. Typography is writing with prefabricated letters; of the white shape of the typographic word the counters have been made in advance whereas the counterspace of lettercombinations is composed on the keyboard. A good typographer will be able to compose rhythmic word images with good typefaces but in this respect handwriting is fundamentally superior to typography. For the rhythm of the words handwriting is the standard of typography. The study of handwriting (study is not looking at handwriting but making and analyzing handwriting) is the main entrance to typographic design.

On the other hand typedesign allows a higher degree of articulation than handwriting because typedesign is infinitely slower than the slowest handwriting. Handwriting is made at some speed (otherwise nothing would appear on the paper) and with some articulation (otherwise the product could not be recognized as writing). Formal writing accentuates articulation at the cost of speed and informal writing sacrifies articulation to speed but formal and informal writing cannot be distinguished clearly as different things. Writing always moves between articulation and speed as the extremes of a continuous scale. A piece of handwriting can only be considered as formal in comparison with a less formal document; the same piece will appear as informal when it is compared with extreme articulation (with a typeface, for instance). There is no escape from this continuous scale between speed and articulation. We might try to consider formal writing as controlled handwriting against automatical handwriting in informal writing but this would make little difference; what could be else under my control than automatic articulation or what else would there be to automatize than controlled speed?

The phenoma in this introduction could give an indication for the criteria of writing. The first question is whether a specimen of writing has to be considered from a symbolic point of view (can it be read?) or from a graphic point of view (is it beautiful?). The symbolic point of view always includes the graphic criterium: good reading depends on a strong rhythm which is a graphic quality. The graphic point of view allows more freedom; it will insist on the rhythmic quality which is a first condition of all design but it does not care about symbolic conventions. These criteria are once more the extremes of a continuous scale: the symbolic tolerance of a poster or a decorative specimen of lettering is far greater than the symbolic margins of bookdesign and in this field a book for continuous reading is more critical than a reference book etc. but again there is no escape from the rules of the game without leaving the playground likewise.

At our meeting in Basel we discussed our answers to the question what writing is. My point of view is a designers' point of view: Any instance of writing is an unstable equilibrium between a complex of forces. I do not care for past, present or future unstabilities. Rather than the instances of writing (scripts, styles, trends, manuscripts, typefaces etc.) it are the forces of writing (translation, expansion, rotation, articulation, speed, friction etc.) which are essential for any introduction to writing. The main problem of the terminology of writing is that it has been devised by people who did not have the faintest notion of the essential forces of writing. When we want to consider these essentials we have to invent our own terminology.

Nicolete Gray On P.R.

At the A.Typ.I. meeting in Basel it was agreed that we should have a P.R. officer and undertake an initiative to educate the public.

There are two considerations about this project on which I should like to comment. The first is what are the areas of letter-design with which we are dealing? The second is the question of the sort of action envisaged.

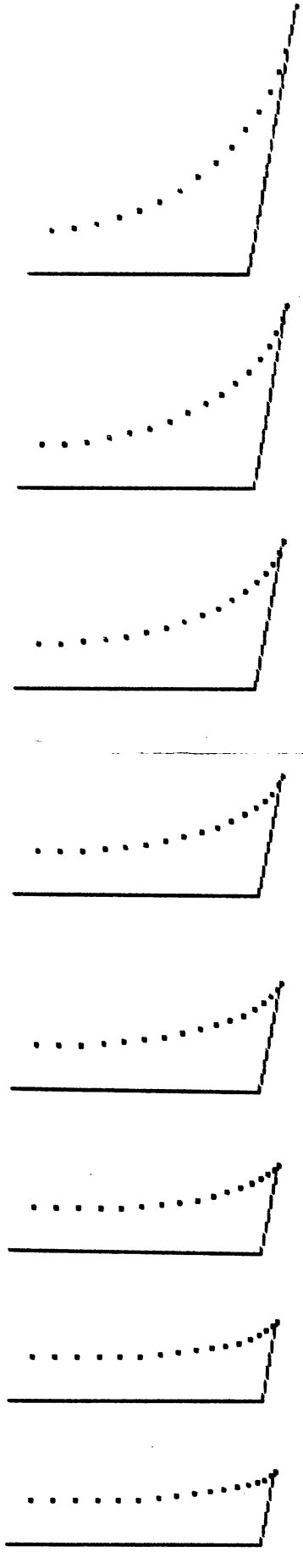
A.Typ.I. is an association of type-manufacturers and book typographers, but it also includes type designers and teachers of lettering. In some meetings handwriting has also been discussed. Are these fields of interest to be included in the new initiative?

If the general public is to be influenced, I think that these areas are important. When people read books they note whether the type is legible, possibly also whether the page has a pleasing appearance, they then pass on to the subject matter. But in the street on shop fascias, in advertisements, on book jackets, with their correspondence, on the TV screen people register an impression; letters may be attractive or repellent or amusing, we may recognise a friend, or something we are looking for. Here I think is a field for propaganda in the judgement of letter-forms. Finally there is the use of letters by artists as a medium of creative design, a long way perhaps from typography, but the sort of lettering which is shown at exhibitions, looked at and published; there are a series of books in English which reproduce not only original work on stone and metal as well as calligraphy, but also examples of commercial work.

If such work is to be included we need to widen our criteria for judging lettering. This spring I had the pleasure of taking a holiday with John Dreyfus. Of course we looked at examples of lettering (though this was not the pupose of the journey), and I became aware that we saw different qualities in the examples at which we looked. We tended to judge by different criteria and to cut out examples to which these did not apply. It was not that we disagreed as that we both tended to underestimate the potential diversity of lettering and to go off too soon on our own lines of thought. There are vital questions of legibility, of lay-out and choice of type, but there are also questions of effective expression, of material and technique of different sorts, of colour, and on the TV screen of dynamic movement.

Finally what action can be taken yo make the public more aware, to educate them to distinguish between good and bad? The most impressionable and accessible section of the public are children. And here we have to take into account the educational systems of different countries. In Britain the individual teacher has a great deal of autonomy, we need to start not at the top with ministries, but at the bottom with teachers. The teacher mostly knows little about lettering and typography, and often has misguided ideas about handwriting. So we need to contact Teacher Training colleges, and Art Schools. Many secondary schools have computers and computer studies are an examination subject. We need not only to promote school projects involving lettering; much teaching is done today in the form of projects. We need also to demonstrate how the computer can be used to design and judge letter-forms and lay-out. To do this I suggest that A.Typ.I. promotes the publication of suitable computer programmes and the publication of one or more simple, short, elementary books designed for teachers and sixth form undergraduate students. The young are interested in new technology and in experiment.

May I make a caveat. In English the word *typography* means the art of printing. It does not cover *lettering* produced in other ways; maybe it will eventually, but at present for the ordinary person it does not have this meaning. To use it therefore as aword covering all sorts of letter-usage is to promote serious misunderstanding.



Gerrit Noordzij
Rotation of the front

The analysis of the stroke in *Letterletter 1* and *2* seems to be abstract theoretical stuff of little practical value. A discussion of theory, however, is always a discussion of practice because practice is always governed by theory. The theory may be obscure or confused but if there is a point of view or a method, then there is a theory and if there is not a point of view or a method there is no practice either. The current practice in the production of typefaces considers letters as outlines. This is far removed from design. Writing is shape. Shape is an absolute condition for the sheer perception of writing. Unless an outline is a shape as well it cannot be perceived but then we are not aware of the second dimension of outlines. Here already we loose our control of the outline which makés control of the enclosed shape to an illusion. Typedesign depends on an approach that allows complete control of the lettershape itself. The designer relies on the interaction of black and white shapes only. We can imagine a line separating black and white shapes but such a line will always invisible. Otherwise we should be able to say whether this line is black or white, which we cannot.

In the manufacturing of typefaces the invisible outline is used to define the shapes of the design. All existing methods of digitizing type are founded on this principle of definition. In his new book *Digitale Speicherung von Schriften*, URW Verlag, Hamburg, Peter Karow gives an extensive survey of these methods. Karow makes clear that digitizing starts when the design is finished. His subject is not computer aided design (cad) but computer aided manufacturing (cam). The book is indispensable for manufacturers of typefaces, but it is very important for designers as well because the designer should understand the conditions of the production of his design. Moreover, production begins already when the designer starts with the finished drawings of his typeface. For this time consuming part of his work he could take much profit of the cam-methods explained so clearly by Peter Karow. The only weak point of this excellent book is the faint suggestion that the quality of a shape could be something like the smoothness of its outline. This is not a mistake from a designers point of view only: in all fields of knowledge it is impossible to compare the first dimension (lines) with the second dimension (shapes). It is a very common mistake, even among designers, to mix up dimensions. It would not be fair to blame Peter Karow for a suggestion that is not at least important for his subject.

It is much more important for my subject. The parameters resulting from my description of the stroke as a front of a progressing counterpoint will be of little help for cam-methods aiming at the reproduction of existing designs. My parameters support computer aided instruction which eventually might yield something like cad. The actual advantage of the computer is that it allows me to increase the counterpoint and the angle of its direction continuously.

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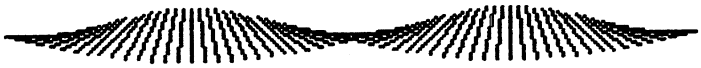

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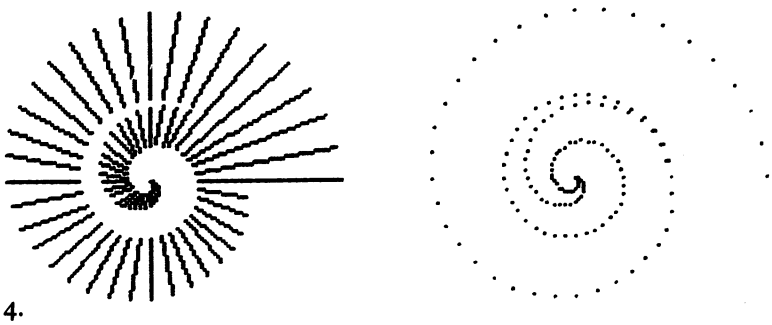

4.

The first picture shows the mannerist trick of rotating the pen *(Letterletter 1)* in a theoretical model. The next pictures illustrates the problem of the professional palaeographic literature: because our scholars neglect the movement of the front they cannot distinguish the mannerist stroke of a broad nib (fig. 2) from the classicist stroke of a pointed nib (fig. 3). For a historian this is rather serious.

When the frontlines are not parallel as in pure translation, they must intersect somewhere. This point of intersection is the centre of rotation. In actual handwriting this centre of the stroke is generally far away from the counterpoint. In the stroke of my computer I can elongate the counterpoint to include the centre of rotation. This abstract theoretical movement could result in such a familiar picture as that of fig. 4.

The spirals could make us aware of some fundamental laws of perception. As designers of type and of typography but also as manufacturers of type we are making our living of perception. The laws of perception are the first condition of our position, let us have a look at them. The second spiral suggests a line. There is not a line but just a collection of small shapes. It is the arrangement of these dots which persuades us to see them as dotted lines. The dots have been drawn with exactly the same parameters as the shape of lines. The distance of the dots increases along the outline of the shape. Nevertheless they describe the shape everywhere with the same definition. Peter Karow's problem, how to find equivalent positions for his marker points, has here been solved before it could arise. This might turn out to be the essential difference between cad and cam.

The pattern of dots digitizes exactly the same spiral as the sequence of counterpoint lines and for a blind machine there is no difference between their definition. For the evaluation of the definition however, there could be no greater difference. The pattern of lines evokes the impression of shapes, a white shape and a black one. These shapes are meaningful for design whereas the dotted lines are not. This explains why it is almost impossible to evaluate the quality of a typeface in outline drawings. The spiral forces me to realize the interaction of the white and the black shape: they can only increase at the cost of each other. A good designer is always aware of his defining white shapes with his black strokes. Many bold typefounts lack this balance. Times bold is an example of such non-design.

More from the front in *Letterletter 6*.