One cannot take pictures or pieces of pictures and put them together to produce new statements as easily as one can combine words or ideographs. Pictorial montages show their seams, whereas the images produced by words fuse into unified wholes. The shapes and color patterns of visual art form the particular image that constitutes the statement. The shapes of verbal language are tooled for the mass evocation of images, whose individuality is induced indirectly by the combination of the standardized labels.

1. *Language* (New York: Harcourt Brace, 1921), p. 15.
2. *Words and Things* (New York: Free Press, 1958), p. 268.
3. *Philosophische Untersuchungen* (Frankfurt a.M.: Suhrkamp, 1967) (*Philosophical Investigations*, Oxford: Blackwell, 1953), Part I, 650.
4. Immanuel Kant, *Kritik der reinen Vernunft*, Introduction, section 4.
5. "The Metaphor: A Psychological Inquiry," in Mary Henle (ed.), *Documents of Gestalt Psychology* (Berkeley and Los Angeles: University of California Press, 1961), pp. 324–333.
6. *Language, Thought, and Reality* (Cambridge: M.I.T. Press, 1956), p. 146.
7. Sigmund Freud, *Die Traumdeutunf* (Leipzig and Vienna: Deuticke, 1922) (*The Interpretation of Dreams*, London: Allen and Unwin, 1954), Chapter 6, Section c.
8. Raphael, *The School of Athens* and *Parnassus* (1508–11) are in the Stanza della Segnatura in the Vatican.
9. A. Michotte, *La Perception de la Causalite* (Louvain: Institut Superieur de Philosophie, 1946) (*The Perception of Causality*, New York: Basic Books, 1963).
10. *Philosophy in a New Key* (Cambridge: Harvard University Press, 1960), Chapter 5.
11. *Language*, p. 17.
12. *Biological Foundations of Language* (New York: Wiley, 1967), p. 334.
13. *Philosophy in a New Key*, p. 80.
14. Gotthold Lessing, *Laokoon oder Ueber die Grenzen der Malerei und Poesie*, Lessings Werke, Volume V (Leipzig: Goschen, 1887(*Laocoon*, Boston: Little Brown, 1910), esp. section 16.
15. *Briefe aus England*, letter to Heinrich Christian Boie, dated October 1, 1775.
16. In *L'exil et le Royaume* (Paris: Gallimard, 1957) (*Exile and the Kingdom*, New York: Knopf, 1958).
17. Rudolf Arnheim, *Radio* (London: Faber and Faber, 1936), Chapter 7.
18. Honoré Daumier's painting, *Un Wagon de Troisienne Classe* (*ca.* 1861), is in the Metropolitan Museum of Art, New York.

This article has been excerpted from Dr. Rudolf Arnheim's book *Visual Thinking* (Berkeley & Los Angeles: University of California Press, 1969) and is reprinted by kind permission of the author and publisher.

Broken Scripts and the Classification of Typefaces

Gerrit Noordzij

Current systems of typeface classification are fundamentally useless as they isolate type from other renderings of handwriting. Typeface design can only be understood in its relation to handwriting. The German classification system (DIN 16 518) is analyzed, and a binary classification system is suggested—not of type only, but of writing generally. Broken type is not more German than other derivatives of the roman alphabet; its isolation has done much damage to German type design and typography.

This article has its original cause in Walter Plata, *Schätze der Typographie, gebrochene Schriften* (Frankfurt on Main: Polygraph Verlag, 1968, 96 pages). Three articles by Walter Plata and the reactions of seventeen other German authors are collected in this book on broken type and its application. The contributors differ in their evaluation of broken type, but they agree in the presumption that broken type should be German heritage and that it could be regarded as opposed to roman type according to the German classification of typefaces DIN 16 518.

The book shows about twenty typefaces of the discussed class in text and display, and there are lists with many other typefaces available for hand- and machine-composition. These features alone make the book a valuable source of information on the subject of broken type.

Rather than entering the discussion, it will be my concern here to examine the said presumption, which is generally accepted—and not only in Germany as we can learn from the following quotations:

"It was the penetration of western Europe by the spirit of humanism that brought about the victory of 'roman' and 'italic' types; and it was the resistance to the spirit of humanism that made the Germans, Russians, and Turks cling to the isolationalism of Fraktur, Cyrillic,

and Arabic types. The recent transition to the 'Latin' alphabet by the Germans and the Turks is a major step to the unity of world civilization" (S. H. Steinberg, *Five Hundred Years of Printing*).

". . . the Germans assumed too great a freedom in a field not naturally their own—theirs being Gothic and its several derivatives—having at the same time the presumption that they could and would teach the world at large what roman type ought to be" (Jan van Krimpen, *On Designing and Devising Type*).

Steinberg goes as far as to range fraktur among exotic scripts such as Cyrillic and Arabic. But where he applaudes the abolition of fraktur, Van Krimpen wants to confine the Germans to it and so to save the roman hand from the disgusting exhibitionism in contemporary German calligraphy. This is fallacy, of course; fraktur originated in the same spirit of humanism which Steinberg wants to call to arms against it. And fraktur is as genuine a descendant of the "Latin" alphabet as italic. If we were restricted to what is "naturally our own," we would have very little to boast of: even Jan van Krimpen was born an illiterate.

The German discussion is of the same alloy: fraktur should be preserved because it is the best vehicle for German text, or it should be abolished because it is abused for nationalistic propaganda. The first is humbug and the second argument could serve as well to fight the telephone, newspapers, speech, and education. Hardly anything is said of the merits of fraktur.

Classification of Typefaces

The DIN classification is given much authority. It must be considered as a representative of the current opinion on the classification of type (Fig. 1).

1. *Purpose.* The classification proposes to unify the nomenclature of type, to help printers in choosing type and schools with instruction.

2. *Groups of Type*

I. Venezianische Renaissance-Antiqua [Venetian Old Style]

II. Französische Renaissance-Antiqua [Old Face]

I take these two groups together, as the explanation fails to indicate a difference: the first group contains the imitations of the Jenson roman, provided that they have little contrast between thick and

1. Zweck

Durch die Klassifikation soll erreicht werden, daß die bisherige Unsicherheit in der Benennung der Schriftgruppen beseitigt und damit die Grundlage für eine einheitliche Schriftenordnung geschaffen wird. Den Druckereien und ihren Kunden wird die Auswahl der Schriften erleichtert und den Schulen eine Unterstützung für den Unterricht gegeben.

2. Schriftgruppen

Gruppe I

Venezianische Renaissance-Antiqua

Beispiel:

Momberg

gesetzt aus der Schrift „Antiqua der Bremer Presse"

Zu der Gruppe gehören u. a. Trajanus, Schneidler-Mediäval und Golden Type von William Morris.

Die Venezianische Renaissance-Antiqua ist hervorgegangen aus der humanistischen Minuskel des 15. Jahrhunderts, die mit der schräg angesetzten Breitfeder im Wechselzug geschrieben worden ist. Der Querstrich des Kleinbuchstabens e liegt schräg. Die Achse der Rundungen ist nach links geneigt. Haar- und Grundstriche sind in der Dicke nicht sehr verschieden. Die Serifen (An- und Abstriche) sind ein wenig ausgerundet. In der Regel sind die oberen Serifen der Großbuchstaben (Versalien) M und N nach beiden Seiten ausgebildet.

Gruppe II

Französische Renaissance-Antiqua

Beispiel:

Momberg

gesetzt aus der Schrift „Garamond"

Zu der Gruppe gehören u. a. Weiß-Antiqua, Palatino und Trump-Mediäval.

Die Französische Renaissance-Antiqua gleicht ihrer Herkunft nach wie auch in ihren Eigenschaften der Venezianischen Renaissance-Antiqua. Sie weist jedoch größere Unterschiede in der Strichdicke auf. Der Querstrich des Kleinbuchstabens e liegt waagerecht.

Gruppe III

Barock-Antiqua (Vorklassizistische Antiqua)

Beispiel:

Momberg

gesetzt aus der Schrift „Janson"

Zu der Gruppe gehören u. a. Fournier, Baskerville und Imprimatur.

Die Barock-Antiqua steht unter dem Einfluß der Kupferstecher-Schriften. Sie weist größere Unterschiede in der Strichdicke auf als die Renaissance-Antiqua. Die Achse der Rundungen ist fast senkrecht. Die Serifen sind wenig oder gar nicht ausgerundet. In der Regel sind die Serifen der Kleinbuchstaben oben schräg, unten aber waagerecht angesetzt.

Gruppe IV

Klassizistische Antiqua

Beispiel:

Momberg

gesetzt aus der Schrift „Walbaum"

Zu der Gruppe gehören u. a. Bodoni, Didot und Corvinus.

Die klassizistische Antiqua steht den Kupferstecher-Schriften besonders nahe. Die Serifen sind waagerecht angesetzt. Die Winkel zwischen den Serifen und den Grundstrichen oder schrägen Haarstrichen sind kaum merklich oder gar nicht ausgerundet. Haar- und Grundstriche unterscheiden sich kräftig. Die Achse der Rundungen steht senkrecht.

Figure 1. Excerpted from "Klassifikation der Schriften" (DIN 16 518), Fachnormenausschuß Graphisches Gewerbe im Deutschen Normenausschuß (DNA), August 1964. Copies are available from Beuth-Vertrieb GmbH, Berlin 30, Germany, $1.20 (10 shillings) when purchased from abroad; DM4,40 inland.

Gruppe V
Serifenbetonte Linear-Antiqua

Beispiel:

Momberg

gesetzt aus der Schrift „Memphis"

Zu der Gruppe gehören u. a. Clarendon, Volta, Schadow und Pro Arte.

Die Haar- und Grundstriche der serifenbetonten Linear-Antiqua unterscheiden sich wenig in der Dicke oder sind sogar, einschließlich der Serifen, optisch einheitlich (linear). Allen Schriften dieser Gruppe ist die mehr oder weniger starke, aber immer auffallende Betonung der Serifen gemeinsam.

Gruppe VI
Serifenlose Linear-Antiqua

Beispiel:

Momberg

gesetzt aus der Schrift „Futura"

Zu der Gruppe gehören u. a. Akzidenz-Grotesk, Erbar-Grotesk, Folio, Helvetica, Univers und Optima.

Ein Teil der zur serifenlosen Linear-Antiqua zählenden Schriften ist in der Strichdicke vorwiegend oder sogar optisch ganz einheitlich. Bei einem anderen Teil dieser Schriftgruppe unterscheiden sich die Strichdicken erheblich.

Gruppe VII
Antiqua-Varianten

Beispiel:

MOMBERG

gesetzt aus der Schrift „Weiß-Lapidar"

Zu der Gruppe gehören u. a. Codex, Columna, Hammer-Unziale, Largo, Neuland und Profil.

Zu den Antiqua-Varianten gehören alle Antiqua-Schriften, die den Gruppen I bis VI, VIII und IX nicht zugeordnet werden können, weil ihre Strichführung vom Charakter der genannten Gruppen abweicht. Den Kern der Gruppe bilden Versalschriften für dekorative und monumentale Zwecke.

Gruppe VIII
Schreibschriften

Beispiel:

Momberg

gesetzt aus der Schrift „Lithographia"

Zu der Gruppe gehören u. a. Künstler-Schreibschrift, Bernhard-Schönschrift, Virtuosa, Charme, Mistral, Ariston, Forelle und Legende.

Schreibschriften nennt man die zur Drucktype ‚gewordenen „lateinischen" Schul- und Kanzleischriften.

Gruppe IX
Handschriftliche Antiqua

Beispiel:

Momberg

gesetzt aus der Schrift „Time-Script"

Zu der Gruppe gehören u. a. Post-Antiqua, Polka und Hyperion.

Handschriftliche Antiqua werden die Schriften benannt, die — von der Antiqua oder deren Kursiv herkommend — das Alphabet in einer persönlichen Weise handschriftlich abwandeln.

Gruppe X
Gebrochene Schriften
Xa Gotisch

Beispiel:

Momberg

gesetzt aus der Schrift „Weiß-Gotisch"

Zu dieser Untergruppe gehören u. a. Wilhelm-Klingspor-Schrift, Hupp-Gotisch, Trump-Deutsch, Manuskript-Gotisch und Caslon-Gotisch.

Mit „Gotisch" werden die nach dem Vorbild der schmallaufenden Textur des 15. Jahrhunderts geschnittenen Schriften benannt, desgleichen deren breitere Formen aus späterer Zeit. Die gotische Schrift ist eng und hochstrebend. Die Grundstriche der Kleinbuchstaben sind gebrochen; Anfänge und Endungen zeigen Würfelform.

Xb Rundgotisch

Beispiel:

Momberg

gesetzt aus der Schrift „Wallau"

Zu dieser Untergruppe gehört auch die Weiß-Rundgotisch.

Die Rundgotisch beruht auf der Rotunda der Frühdruckzeit. Die gebrochenen Formen der Gotisch sind hier in herben Rundungen abgefangen; Anfänge und Endungen zeigen keine Würfelform.

Xc Schwabacher

Beispiel:

Momberg

gesetzt aus der Schrift „Alte Schwabacher"

Zu dieser Untergruppe gehören u. a. Renata, Ehmcke-Schwabacher und Nürnberger Schwabacher.

Die im 15. Jahrhundert entstandenen breitlaufenden volkstümlichen Schriften erhielten später den Sammelnamen Schwabacher. Typisch ist der kräftige Querstrich des Kleinbuchstabens g.

Xd Fraktur

Beispiel:

Momberg

gesetzt aus der Schrift „Breitkopf-Fraktur"

Zu dieser Untergruppe gehören u. a. Unger-Fraktur, Dürer-Fraktur, Gilgengart, Fichte-Fraktur und Zentenar-Fraktur.

Diese aus dem Kulturkreis Maximilians I. hervorgegangene gebrochene Werkschrift hat schwungvolle Großbuchstaben sowie — überwiegend schmale — Kleinbuchstaben mit gegabelten Oberlängen bei b, h, h und l.

Xe Fraktur-Varianten

Beispiel:

Momburg

gesetzt aus der Schrift „Koch-Kurrent"

Zu dieser Untergruppe gehören alle gebrochenen Schriften, die Xa) bis d) nicht zugeordnet werden können, weil ihre Strichführung vom Charakter der genannten Untergruppen abweicht, z. B. Claudius, Weiß-Fraktur-Kursiv und Heinrichsen-Kanzlei.

Gruppe XI
Fremde Schriften

Diese Gruppe umfaßt die Schriften, die nicht römischen Ursprungs sind.

Dazu gehören u. a. Bilderschriften, griechische und kyrillische Schriften sowie außereuropäische Alphabetschriften, z. B. hebräische und arabische.

thin strokes; which excludes the most faithful copy of this roman, Bruce Rogers' Centaur. The second group has been derived from the Aldine roman (Venetian as well) and should show more contrast and a horizontal bar in lower case e. Hermann Zapf's Palatino, which does not realize these conditions, is nevertheless mentioned as a typical example of the second group.

III. Barock-Antiqua (Vorklassizistische Antiqua) [Transitional]
The term baroque roman seems to need explication (pre-classicist roman), but my understanding is not more augmented by it than it would have been by the addition of, for instance, post-renaissance roman. The illustration (Janson) resembles the Garamont imitation which illustrates group II and, indeed, Garamont is a good representative of baroque type design.

This group of typefaces is said to have been influenced by copperplate engraving. (This information is repeated for group IV.) If this could be true, I might ask what kind of copper engraving is meant; probably not the superb engraved lettering by Ortellius. Very different typefaces (Janson, Fournier, Baskerville) are mentioned as examples of "baroque roman." Van Dijck, Grandjean, Caslon, and Austin might be added too, but then Bodoni and Didot (who worked exactly according to the principles of Baskerville) have to be included as well.

IV. Klassizistische Antiqua [Modern face]

V. Serifenbetonte Linear-Antiqua [Slab serif]
Every typeface belongs to this group provided that its serifs are thick enough. Modern face with reduced contrast (Clarendon), type "designed" by engineers (Rockwell), and even our common typewriter script are unified here. The classification is restricted to type, otherwise the arch of Constantin would also be unified with my typewriter.

VI. Serifenlose Linear-Antiqua [Sans-serif]
Every typeface belongs to this group provided that its serifs do not protrude too conspicuously. Further, these typefaces have not much in common. If a typographer cannot get Helvetica, he might accept Univers or Akzidenz Grotesk, but not Gill or Futura. If a classification wants to be of any use, it should make clear the fundamental differences between at least three groups of sans-serif typefaces.

VII. Antiqua-Varianten [Roman variants]
Roman type which does not belong to another group belongs to this group. Uncials are also supposed to be romans. Among the examples is Koch's Neuland, which is much more a "Serifenlose Linear-Antiqua" than Zapf's Optima, which is among the examples of group VI.

VIII. Schreibschriften [Scripts]
These are school and chancery hands transferred into type. This must give rise to difficulties, as the description says exactly what the greater part of our italics are. Bembo, Palatino, Baskerville, Bodoni, and Lutetia have in their italics almost perfect renderings of school and chancery hands. Instead of these we find rubbish in this group as, for instance, Mistral; but also Schneidler's Legende, which as a gothic bastarda should have been classified in group Xe.

IX. Handschriftliche Antiqua [Handwriting-like roman]
If a typeface looks as if it is not a typeface and if the conventional letterform shows some personal variation, the typeface fits in this group. Among the examples is Post-Antiqua, which has much akin with Optima of group VI and which for that reason should be classified in VII.

X. Gebrochene Schriften [Broken type]
Without saying a word on broken type the classification continues with a subdivision of this group.
Xa. Gotisch [Textura]
Xb. Rundgotisch [Rotunda]
Xc. Schwabacher
Xd. Fraktur
There is no reason to quote the "explanation" to this group; fraktur, for instance, is said to be characterized by curled majuscules and pronged ascenders. Without these embellishments, a fraktur is found no longer a fraktur.
Xe. Fraktur-Varianten [Fraktur variants]
The illustration is not a fraktur (Koch Kurrent) but a school hand transferred into type.

XI. Fremde Schriften [Exotic scripts]
These scripts have only in common that they are not derived from the Latin alphabet.

The classification of type DIN 16 518 is chaotic and contains a lot of blunders. At least three different systems are used in this document: typefaces are grouped according to construction, historical style, and treatment of details. Roman type is related to historical forms, but sans-serif and slab-serif typefaces are excluded. Differences in construction are not regarded in roman type, but broken type has been classified only from this point of view. This arbitrary approach is inexcusable.

Classification of Broken Scripts
Though type classification might suggest this, the field of broken scripts is not clearly demarcated. There exist definitely broken scripts which can be easily distinguished as such from roman and italic, but there are many scripts for which any decision would be a matter of taste. The rotunda in Gutenberg's *Catholicon* (1460) is in some respects much more a roman than the typeface of *De oratore* by Sweynheym & Pannartz (1465) which is called roman by Stanley Morison. As, moreover, every broken script has its equivalent outside this field, there is no reason to give roman and broken type a different treatment in classification.

Schrift ist ein Gestaltungsmittel, kein nationales Symbol. Man gönne den Fraktur-Liebhabern ihre Freude und ihr Vergnügen an dem barocken Formenreichtum, aber man sollte nicht Vergangenes künstlich zu neuem Leben erwecken wollen oder gar nationale Reminiscenzen damit verbinden.

Wie in den anderen Ländern, so endet auch das deutsche Sprachgebiet schon lange nicht mehr an den Landesgrenzen. Allein der wissenschaftliche Austausch in Zeitschriften und Büchern im Zeitalter der Technik verlangt von uns, daß keine zusätzlichen Erschwernisse beim Lesen – wie es durch die Verwendung der Fraktur der Fall wäre – eine rasche Verbreitung behindern.

Wer die Entwicklung in den zwanziger Jahren unvoreingenommen studiert, wird feststellen, daß auch ohne jenen unsinnigen Regierungserlaß im Januar 1941 die Antiqua früher oder später die Frakturschriften abgelöst hätte.

Allzuoft wurden mit der Fraktur nationalistische Parolen verknüpft, und gerade die Vergangenheit lehrte uns, daß wir lernen sollten, nüchtern und unvoreingenommen die Gegebenheiten von heute zu sehen.

Das Wort „Schriftkultur" sollte man bei uns stets in Anführungszeichen stellen. Man betrachte sich einmal die amtlichen Beschriftungen hier in Deutschland an Gebäuden, Flugplätzen, Autobahnen etc. und vergleiche sie mit den Beschriftungen in England und in den Niederlanden. Der Unterschied zu unserer „Schriftkultur" wird nur zu deutlich.

Wir wollen froh sein, daß das Denken in nationalen Grenzen endlich weitsichtigeren Gedanken Platz zu machen beginnt.
Die Zukunft gehört eindeutig der Antiqua, genauso wie die Zukunft der Wissenschaft und dem übernationalen Denken gehören wird.

Ich glaube heute nicht mehr daran, daß die Frakturschriften jemals wieder eine praktische Bedeutung erlangen werden.
Sie waren eine wichtige historische Entwicklungsphase in der Schriftgeschichte unseres Landes, wie beispielsweise die Unziale, ehe die karolingische Minuskel sie ablöste.

Hermann Zapf

Figure 2. Gilgengart by Hermann Zapf. The only available fraktur which preserved the upstroke.

Broken scripts show a great variety in construction, but they have in common that the transition of constructional elements is accentuated. The effect of this stress is favored by a broad stroke in relation to the height of the letter (black letter). A twelfth-century gotico antiqua needs only to be written with a narrower pen to become a perfect humanistic minuscule, and it only needs some more accent on the transition of curves and stems to be a perfect rotunda. In teaching, where emphasis on construction is necessary, a round hand tends to get features of broken script as can be observed in Edward Johnston's "foundational hand."

Rotunda and textura are characterized as broken scripts by the sharp junction of the oblique part and the vertical part of the downstroke. This oblique part is curved in rotunda and straight in textura.

Fraktur has this sharp junction between the downstroke and the upstroke. The upstroke superseded the oblique part of the downstroke to a great extent. There remains only a curved part which transits fluently in the straight part of the downstroke.

Punch cutters, who did not understand the construction of fraktur, reduced the upstroke and accentuated again the oblique part in the downstroke. The resulting typefaces are, in fact, mixtures of fraktur and textura. All available typefaces I know are such bastards but for Gilgengart by Hermann Zapf (Fig. 2).

In the same sense, Schwabacher is a mixture of textura and bastarda. For someone who is trained to exploit the difference of roman and italic (cursive), it is extremely difficult to appreciate type that has been knocked together of repelling materials.

Figure 3.

Geographics

In Germany printing began in textura. This script was soon accompanied by the originally-Italian rotunda and roman. Since fraktur got its splendid formal form in Nuremberg about 1510, this script became predominant.

Latin texts were the main output of the presses. Karl Brandi suggested (*Unsere Schrift*, Göttingen, 1911) that printers of dictionaries and grammarbooks introduced the custom to reserve fraktur for the vernacular. This custom justifies the expression "German type" for fraktur. For the same reason textura is still called "Dutch" (oud Hollands) in the Netherlands. Finally, Plata says, the expression covered the whole range of broken type, but he does not say how Germany came to its annexation of French and Italian hands. This question deserves some consideration.

We reserve the word fraktur for a defined script. Others may, however, think of the fractures which characterize every broken script. When we say that fraktur may be called German script, it could be understood as if broken type would be German type. In the discussed book the context sometimes shows what is meant by German script, but often it does not. Plata himself seems to be not always aware of the confusion. For one of the contributions he choose Manuscript-Gotisch, a textura of the Bauer Foundry, which is an imitation of the typical Flemish and Dutch printing types of the sixteenth and seventeenth centuries. The font has very black majuscules, which make it unfit for the composition of German text, since German orthography still requires a majuscule at the beginning of every noun. Before Plata, the type founder misinterpreted the Dutch textura: the fitting of the German font, which is too wide for such a black letter, gives the page a speckled look. Even the name expresses misunderstanding, Manuscript-Gotisch being not a very adequate indication for *baroque printing* type.

No available German textura font is nearly as good as the textura's by Henric Lettersnider, Christoffel Van Dijck, Johann Michael Fleischmann, and others, which still can be had from the Enschedé foundry in the Netherlands. Nevertheless, these typefaces are not mentioned in the compilation of available type; the German authors must have been preoccupied by the erroneous conviction that broken type is German type. Textura flourished in the Netherlands and in England, but not in Germany. There is no reason to call this pre-eminently broken type German, neither to call it (as the German classification does) gothic. If the classification would have been consequently arranged according to historical style, we might now enjoy the group of baroque gothic.

ſpiritus. Perverſi difficile corrigun=
tur/et ſtultorũ infinitus eſt numerus.
Locutus ſum in corde meo/dicens:
Ecce magnus effectus ſum/et prae=
ceſſi omnes ſapientia/qui fuerunt ante
me in Jeruſalẽ: et mens mea contem=
plata eſt multa ſapienter/et didici.
Dedique cor meum ut ſcirem pruden=
tiam/atque doctrinam/errores que et
ſtultitiã: et agnovi quod in his quoque
eſſet labor/et afflictio ſpiritus/eo quod
in multa ſapientia multa ſit indigna=
tio: et qui addit ſcientiã/addit et labore.

ij. Vanitas oblectamentorum

ij. Dixi ego in corde meo: Vadam/et
affluã deliciis/et fruar bonis. Et vidi
quod hoc quoque eſſet vanitas. Riſum

Figure 4. Original fifteenth-century textura by an unknown punch-cutter. Figures 1, 2, 3, and 4 show a selection of the broken typefaces which are available from Enschedé, Haarlem, Holland. The typographic arrangement is by Jan van Krimpen (N.B.).

hominem in opere suo/ et hanc esse partem illius. Quis enim eum adducet/ ut post se futura cognoscat.

5. Vanitas conditionum humanarum

4. Verti me ad alia/ et vidi calumnias/ quae sub sole geruntur/ et lacrymas innocentium/ et neminem consolatorem: nec posse resistere eorum violentiae/ cunctorum auxilio destitutos. Et laudavi magis mortuos/ quam viventes: et feliciorem utroque iudicavi/ qui nondum natus est/ nec vidit mala quae sub sole fiunt. Rursum contemplatus sum omnes labores hominum/ et industrias animadverti patere invidiae proximi: et in hoc ergo vanitas/ et cura superflua est. Stultus complicat manus suas/ et comedit carnes suas/ dicens: Melior est pugillus cum requie/ quam plena utraque manus cum labore/ et afflictione animi.
Considerans reperi et aliam vanitatem sub sole: unus est/ et secundum non habet/ non filium/ non fratrem/ et tamen laborare non cessat/ nec satiantur oculi eius divitiis: nec recogitat/ dicens: Cui laboro/ et fraudo animam meam bonis? in hoc quoque vanitas est/ et afflictio pessima. Melius est ergo duos esse simul/ quam unum: habent enim emolumentum societatis suae: si unus ceciderit/ ab altero fulcietur. vae soli: quia cum ceciderit/ non habet sublevantem se. Et si dormierint duo/ fovebuntur mutuo: unus quomodo calefiet? Et si quispiam

Figure 5. Civilité by Henri de la Tour, sixteenth century. Civilité is a class of broken type which has been completely forgotten in the DIN Classification and in Plata's book. It was used in France and in The Netherlands. Civilité should not exist for the convenience of authors who identify broken script with German script.

enim spiritus sapientiae/ et non liberabit maledicum a labiis suis: quoniam renum illius testis est Deus/ et cordis illius scrutator est verus/ et linguae eius auditor. Quoniam spiritus Domini replevit orbem terrarum: et hoc/ quod continet omnia/ scientiam habet vocis. Propter hoc qui loquitur iniqua/ non potest latere/ nec praeteriet illum corripiens iudicium. In cogitationibus enim impii interrogatio erit: sermonum autem illius auditio ad Deum veniet/ ad correptionem iniquitatum illius. Quoniam auris zeli audit omnia/ et tumultus murmurationum non abscondetur. Custodite ergo vos a murmuratione/ quae nihil prodest/ et a detractione parcite linguae/ quoniam sermo obscurus in vacuum non ibit: os autem/ quod mentitur/ occidit animam. Nolite zelare mortem in errore vitae vestrae/ neque acquiratis perditionem in operibus manuum vestrarum. Quoniam Deus mortem non fecit/ nec laetatur in perditione vivorum. Creavit enim/ ut essent omnia: et sanabiles fecit nationes orbis terrarum: et non est in illis medicamentum exterminii/ nec inferorum regnum in terra. Iustitia enim perpetua est/ et immortalis. Impii autem manibus et verbis accersierunt illam: et aesti-

Figure 6. Textura by Johann Michael Fleischmann, eighteenth century.

aetatis habuerit/et anima illius non utatur bonis substantiae suae/sepulturaque careat: de hoc ego pronuncio quod melior illo sit abortivus. Frustra enim venit/ et pergit ad tenebras/ et oblivione delebitur nomen eius. Non vidit solem/ neque cognovit distantiam boni et mali: etiam si duobus millibus annis vixerit/ et non fuerit perfruitus bonis: nonne ad unum locum properant omnia? Omnis labor hominis in ore eius: sed anima eius non implebitur. Quid habet amplius sapiens a stulto? et quid pauper nisi ut pergat illuc/ ubi est vita? Melius est videre quod cupias/ quam desiderare quod nescias. sed et hoc vanitas est/ et praesumptio spiritus. Qui futurus est/ iam vocatum est nomen eius: et scitur quod homo sit/ et non possit contra fortiorem se in iudicio contendere. Verba sunt plurima/ multamque in disputando habentia vanitatem. vij. Quid necesse est homini maiora sequaerere/ cum ignoret quid conducat sibi in vita sua numero dierum peregrinationis suae/ et tempore/ quod velut umbra praeterit? Aut quis ei poterit indicare quid post eum futurum sub sole sit?

Figure 7. Textura by Christoffel van Dijck, seventeenth century. This style dominated Dutch baroque typography (which was neither gothic nor German).

Durch Umfrage auf Grund von Leseproben bei Studenten in Seminaren habe ich festgestellt, daß die alten Buchstabentypen, wie sie in „Schätze der Typographie: Gebrochene Schriften", Beilagen und Aufsätze von Walter Plata, aus Der Polygraph, Hefte 7, 8, 10 Jahrgang 1966, Frankfurt am Main, mir vorgelegt wurden, samt und sonders gelesen werden konnten.

Die handgeschriebene deutsche Fraktur – wie ich sie als Schüler noch gelernt hatte – wird weder geschrieben noch gelesen. Selbst meine Kinder – mit Ausnahme meiner ältesten Tochter [30 Jahre], die die Sütterlinschrift noch gelernt hatte – können die Schrift nicht entziffern.

Obwohl ich vor dem Kriege nur in Fraktur schrieb und lediglich fremdsprachliche Briefe in lateinischen Buchstaben verfaßte, schreibe ich jetzt als Lehrer nur in lateinischen Buchstaben, aber auch nicht stilrein. Ich bin durch die französische Gefangenschaft zu dieser Schrift gezwungen worden [4 Jahre], habe aber die alte Fraktur nicht vergessen. Sie wird freilich nicht mehr so geläufig geschrieben wie früher.

Ich kenne eine ganze Reihe älterer Leute, die nur Fraktur schreiben, deren Briefe jedoch den Kindern vorgelesen werden müssen. Ich bedauere es, daß in unseren Schulen diese Schrift nicht auch gelehrt wird, da sie altes Kulturgut ist. Wenn in Gymnasien noch die griechische Schrift gelehrt wird – ohne sie kann es keinen Unterricht

Figure 8. Manuskript Gotisch (Bauer Foundry). A modern German imitation of the old Dutch textura (Fig. 7). The numerals are a German invention. The many majuscules are too conspicuous because they are too heavy. Van Dijck made a descending S; for the same amount of black he had more space at his disposal. But the main fault is not in the majuscules; they would behave much more harmoniously if the lower-case had been fitted closer.

Rotunda was favorite in Spain, long after it had lost its position in Italy to the humanistic minuscule. Spanish printers imported type from the Netherlands, but the design of these rotundas kept close to the handwriting models of Juan de Yciar and Francisco Lucas. Excellent rotundas were cut in Germany 300 years ago, but if this would be a reason to call rotunda German, every script (but for the humanistic cursive) could be regarded as German, as even the first roman font was cast in Germany. Of all these different hands, only fraktur became a tradition in German typography.

There is a widespread belief that fraktur should be the ideal script to represent German language. The fraktur tradition was broken by the arbitrary and violent decree of the Nazi government in 1941. We cannot but loathe this measure, but we should keep in mind that the tradition came into being by just as arbitrary a decision by sixteenth-century printers. Fraktur is not necessarily at its best in German text (which would be a remarkable coincidence: fraktur is not likely to be an exception of the rule that a script, derived from the Latin alphabet and developed in the writing of Latin text, is consequently at its best in Latin text). In *Natural Writing* (London, 1709) Shelley shows English text in a fraktur which we find one century earlier in Jan van den Velde, *De spiegel der schrijfconste* (Rotterdam, 1605). This Anglo-Dutch fraktur is superior to its German contemporaries.

A Binary Classification System

Faktur is a script which is distinguished from textura by its curved elements, from rotunda by its narrowness, from the gothic bastarda by its tallness and from the humanistic cursive by its stress on the joints of the structural elements. These accents, accomplished by interruptions in the movement of the pen, explain the name fraktur (Fig. 10).

The breaks, evident in the comparison of fraktur and italic, are meaningless in the comparison of fraktur and textura. In this confrontation textura, and not fraktur, is the script with the fractures. This might have seduced typefounders to accentuate the breaks in

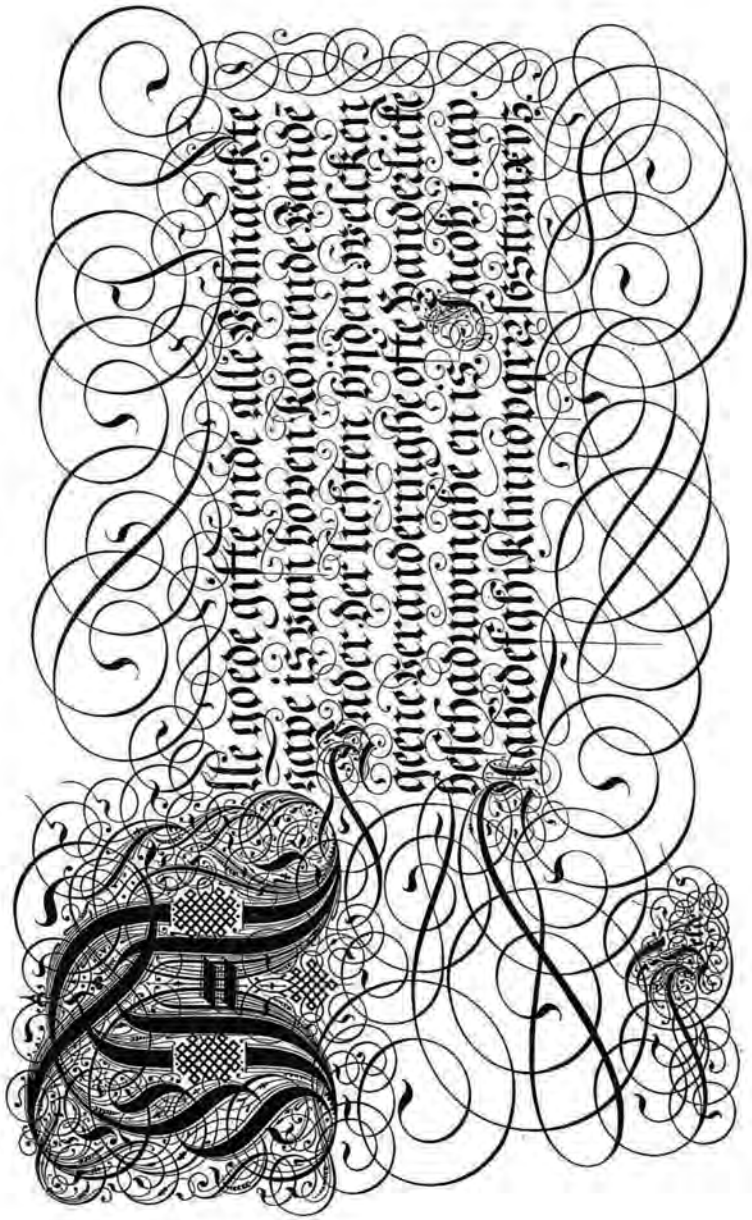

Figure 9. The splendid Dutch fraktur. Jan van den Velde, *Spieghel der Schrijfconste*, 1605 (reduced).

Figure 10.

fraktur. The well-known Unger fraktur looks like an attempt to justify the word fraktur at too high a price. It was not necessary that German type design abandonned substance for a mere cry, as every broken script has at least as many fractures as fraktur; fraktur deserves its name only when it is compared with the humanistic cursive. This should have been done.

Only when fraktur may be regarded as the North-Alpine counterpiece of the humanistic cursive, it becomes clear why just this elegant, curved script got the name fraktur. Germany never adopted the Roman chancery hand; in its contemporary fraktur, Germany had its imperial chancery hand.

Related scripts are kept apart by the actual classification. If this barrier to understanding should be crossed by investigation, we must look for a more relevant classification. I have tried to find its measures at the root of all type design, in the technique of handwriting.
We can distinguish cursive and interrupted writing. *Interrupted writing* consists of dashes, which are all downstrokes. During the movement from the end of a downstroke to the beginning of the next one, the pen is lifted from the paper, the linking upstroke does not appear in the letterform.

In *cursive writing* downstrokes are linked by upstrokes, which are essential parts of the letterform.

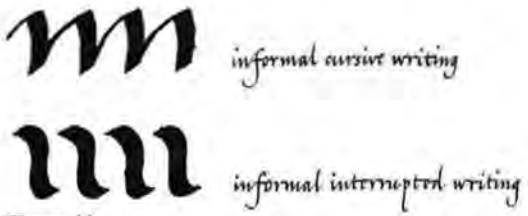

Figure 11.

(In paleography the word cursive is, with some historical right, used for informal writing, even for informal interrupted writing. The paleographer cannot *say* formal cursive, which would mean a contradiction for him, and consequently he cannot *see* a formal cursive. This may be the reason why the purest cursives are called bastarda. The difference between formal and informal writing needs not to be considered in printing type. Type is always formalized handwriting; what looks like a flick is the result of wanton accuracy and not of speed.)

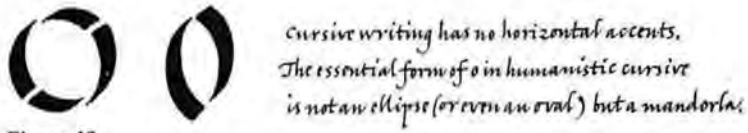

Figure 12.

Next to structural differences we can regard differences in contrast according to their origin.

The contrast of thin and thick parts in a letter depends on the shape of the pen and on varying pressure on the pen. The latter only becomes obvious when the pen is pointed and flexible. In a script written with a stiff, broad-nibbed pen, the influence of pressure on the pen may be neglected.

When a figure is translated, its moving points cover an area, showing the same contrast as a stroke with a broad-nibbed pen. To

Quint — contrast governed by the shape of the pen (translation)

New York — contrast governed by the pressure on the pen (expansion)

Figure 13.

detach this phenomena from the writing pen, we could call it *translation*. Similarly, the effect of pressure might be called *expansion*.

According to these four categories each script and each typeface can be classified. Such a classification is easy to handle for anyone who has a basic knowledge of writing. This binary classification gives the essential information on the behavior of type, because it keeps handwriting and type design together. Leading, length of line, and choice of paper—important factors of legibility—are related to structure and contrast of the typeface. Structure, contrast, writing-technique, and reading-technique developed in correlation. It is extremely difficult to isolate letterform or legibility from handwriting without producing nonsense. This might result in theories such as that of the influence of copperplate engraving on type design, which is generally believed but which cannot stand the slightest criticism.

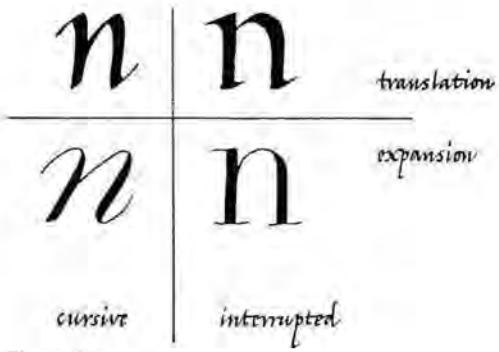

Figure 14.

Reality has not the comfortable simplicity of the system. The system is not a substitute for reality but a key to understanding. Simplification is the first purpose of classification. Disturbing features may be neglected or—when they are too obvious—we can introduce a transitional group. Fournier, for instance, clung to typefaces which were designed on the principle of translation, but he could understand contrast only as the consequence of pressure on a pointed pen. His misinterpretation of old typefaces was the basis of his designs, which do not fit in the system. Van Dijck however, still shows enough translation to justify its place among Gutenberg, Jenson, etc. Baskerville has nothing that reminds of translation; his designs have their origin in expansion and not elsewhere. To call Baskerville transitional would be sheer nonsense.

Similar observations can be made in the construction of script and type. The carolingian minuscule has an oblique part in the downstroke which characterizes interrupted scripts, but it also has the linking upstroke which is typical for a cursive. The structure of the

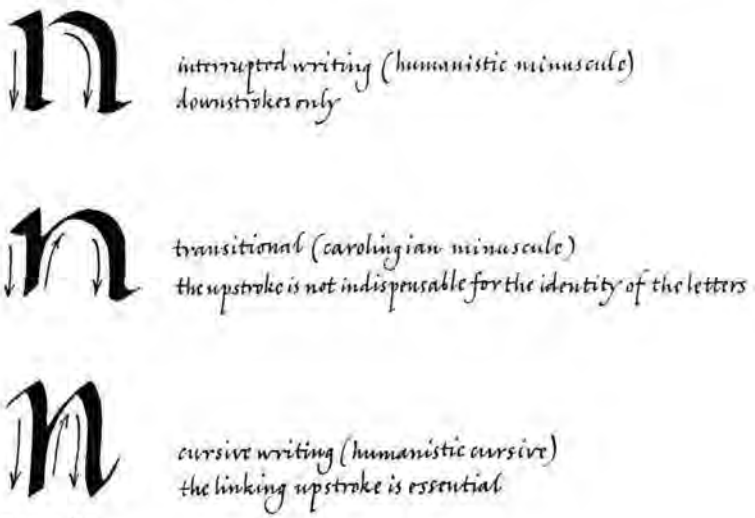

Figure 15.

Figure 16.

carolingian minuscule is transitional between the cursive chancery hands and interrupted text hands, broken or not.

From this point of view the class of the broken scripts looses its coherence. Textura, humanistic minuscule (roman type), and rotunda are interrupted scripts; fraktur, humanistic cursive (italic), and the gothic bastarda's are cursives (Fig. 16).

In the course of time ignorant punchcutters got the opportunity to copy successful typefaces without understanding their underlying principles. This even resulted in a theory that type design should be independent of handwriting. Finally only great designers—Baskerville, Bodoni, Van Krimpen, Dwiggins—kept their typefaces close to handwriting. The majority of our typefaces have a second-hand relation to handwriting. This is the main cause of difficulties in the classification of type. The fraktur-proof issued by Unger about 1790 is an interesting example of such ignorance. The grades cut by Unger show an interrupted script, whilst the font by Didot is definitely cursive. Unger understood nothing of fraktur as a cursive. If there is a relation between the preference for Unger Fraktur among German printers and the spread of discutable opinions in German typography, we could readily understand the rash identification of fraktur and textura as "German type" and puristic abuses such as letterspacing.

Wenn wir einen Grund ſuchen, und wir ſollten das tun, warum die Fraktur mit den jüngeren Typographen nicht per Du iſt, ſo gelangen wir zu einem einfachen Ergebnis. Wer von uns ſucht die Nähe deſſen, den er nicht verſteht? Verſteht in zweifachem Sinne, denn zunächſt iſt ihm alles fremd, was zur Fraktur gehört. Das beginnt beim langen ſ, und das endet bei den Ligaturen. Dazwiſchen liegt die ganze Klaviatur der Verſalien, die ihm etwa ſo vertraut iſt, wie das griechiſche Alphabet. Der zweite Grund liegt in der Tatſache, daß die Fraktur in vielen Betrieben nicht mehr vorhanden iſt, vielleicht noch im Kaſten, aber nicht mehr im Bewußtſein der Kollegen.

Figure 17. Unger Fraktur (Linotype). Ignorance.

German Problems

Returning to the German discussion: we know that if there should exist a problem of German type, it is the problem of a peculiar cursive script. The peculiarity of fraktur has some consequences, but they do not affect legibility. Each script can be rendered more or less legible; if somebody calls a typeface legible, he says perhaps more of his own habituation than of the qualities of a design. A bad typeface could be the best one for people with the worst habits. Illegibility might be an objection against certain fonts, but not against fraktur as such. (This can be reversed. Stanley Morison says that fraktur is more legible than roman type because fraktur has shorter ascenders and descenders. With that kind of argument one could praise the legibility of bad press-work; you get so much more black on your paper.)

According to some German authors, the long s should survive in fraktur. With this premise they argue against fraktur, since nobody still knows where this long s should be placed correctly. The long s should be used when it is prescribed by orthography (but then also in roman type) and if not, it should be used nowhere. Germans do not learn to use the long s correctly because it seems to have been abolished by German orthography. But then it would not be orthographically correct to use the long s at all. If German orthography would change with the typeface, it would be the funniest orthography of the world. The German discussion could suggest that the tradition of the long s should be restricted to broken type. On the development of this tradition in roman type Ronald B. McKerrow gives some information in Paul A. Bennet, *Books and Printing* (New York: World Publishing, 1953). That this same long s makes fraktur difficult to read for outsiders would be a strange argument against the use of fraktur by insiders. This argument can, however, be found in the German book.

We are accustomed to the arbitrary and anachronistic combination of roman, italic, and capital. Fraktur has no accompanying capitals but majuscules which are adapted uncials. This may be as anachronistic, but the cursive aspect of the uncial has been fully exploited in the adaption for fraktur. This harmonious combination permits the use of many majuscules without disturbing the page. Calligraphic practice gave rise to the German habit of beginning each noun with a majuscule, which would have given difficulties in the combination of

Figure 18.

roman and capital. The abolition of this custom has been discussed, since roman type is generally used in German printing, but it seems to be possible still to find arguments for the conservation of sixteenth-century calligraphic abundance in contemporary typography. Anyhow, as this custom depends wholly on the absence of capitals in fraktur, it is a mistake to apply it to roman type. In the integrated majuscules, fraktur has an advantage over roman and italic which depend on capitals for majuscules. On the other hand, a fraktur font offers no possibilities for accentuation of passages and headings: headings composed in majuscules would be absolutely illegible, and the alternative letterspacing has spoiled much German printing. If fraktur has to be used in a sound typographic concept, its use will be limited to plain texts (novels and poetry).

This restriction is used as another argument against fraktur; in fact, it does not condemn fraktur, but typographic purism—which could make roman and italic as difficult to handle as fraktur.

There is a better way than letterspacing: the contribution of Albert Kapr (composed in Zentenar-Fraktur) required some capitals. Plata choose Times New Roman which works very well (Fig. 19).

Der Streitigkeiten und Zänkereien wegen der lateinischen oder „deutschen" Schrift waren zu Luthers, zu Goethes und Bismarcks Zeiten so viele, daß es geraten scheint, sich vom Tonfall der Eiferer zu distanzieren. Im Nachsatz der Lutherbibel des Adam Lufft, Wittenberg 1545, steht folgender Nachsatz von Röver [Rovarius] „... sind zweyerlei Buchstaben der ABC und ABC Gestalt gesetzt, dem unerfarenen Leser Unterschied anzuzeigen. Das so in dieser ABC stehen, die Schrift rede von Gnade, Trost usw., die ABC von Straffe". Diese Verteufelung der Antiqua deutet schon an, in welch starkem Maße die Schriftspaltung mit der Kirchenspaltung verbunden war. Aber noch wichtiger mag uns heute die Frage sein, mit welchen Assoziationen und Bedeutungen die Fraktur befrachtet war und noch ist. Manchen der älteren Generation ist sie eine liebenswerte heimatliche Form; der Jugend erscheint sie verschnörkelt und altmodisch; der Liebhaber deutscher Literatur schätzt sie als die Schrift für die Sprache von Möricke und Stifter; der Weltmann verurteilt sie als deutschtümelnd und provinziell. Leider ist nicht ganz ausgeschlossen, daß sie von einer nationalistischen Welle erneut hochgespült werden könnte, wie dies in den Jahren nach 1933 der Fall war.

Für mich gehören die Formen der Fraktur, der Schwabacher, der Rundgotisch, der Gotisch und vor allem die vielen Abwandlungen der gotischen Bastarda zum Schönsten und Prächtigsten der Schriftkunst überhaupt. Wer das Schriftschreiben richtig erlernen will, darf an diesen historischen Formen nicht vorübergehen, ihre vielen Varianten mehren seinen Figurenreichtum und regen seine Phantasie an, auch wenn er später durch seine Aufgaben zur strengeren und kälteren Antiqua verpflichtet wird.

Figure 19. Zentenar Fraktur by Ernst Schneidler. The result of this mixture with Times New Roman should encourage more experiments.

Fraktur and CAPITAL

Fraktur in combination with roman

The combination of different scripts (roman, italic, capital) makes a fount of roman type fit for very different purposes.

Fraktur should be integrated in such combinations if it should have a chance to survive. These illustrations may show that fraktur tolerates such combinations.

Figure 20.

Curls and pronged ascenders characterize fraktur. This statement, which can be found in the DIN classification, tallies with the actual situation and this might be the strongest argument, not against fraktur, but against centuries of German type design which sought a substitute for quality in interesting flicks and curls. Without curled tails and forked ascenders, fraktur would again have another chance to inspire good typefaces.

The list of available fraktur fonts fails to impress the designers among the contributors in Plata's book. They learned to appreciate the wide range of possibilities in a good roman font. If fraktur should have a future, it must not be as an alternative to this range, but as an addition. If understood as a bold, upright cursive, an accompanying fraktur could enrich many roman fonts (Fig. 20).

This would mean a new beginning, which we cannot expect from the traditional typefounders; the production of leaden type is a painstaking process. But photographic matrices are very easily made by every designer who masters handwriting. Independent from the commercial afterthought of type foundries, designers will have the future in their hands, provided that these hands are trained to write.

The Siloam Inscription and Alphabetic Origins

Roy K. Patteson, Jr.

The Siloam Inscription is one of the most important monuments to alphabetic writing. It is, however, almost unknown to people in Western civilization. This article relates the story of its discovery and points to some of the evidence for the development of writing contained within that inscription. The acrophonic principle, upon which the inscription is based, seems to have been the invention of a domestic situation within Palestine. Theories about the origin of the alphabet are discussed, with a tentative conclusion that Palestine was the alphabet's place of origin.

The precise age and place of origin of our alphabet are questions which have remained unanswered down until our time. Literary monuments from the Near East, in addition to their value for historical inquiry, contain vital information for scholars interested in the development of the alphabet and writing. Eventually we shall be able to give an accurate account of alphabetic origins, perhaps within the next five to ten years.[1]

The purpose of this paper is to acquaint the reader with the Siloam Inscription—one of the most important, but little-known, monuments of early writing. This article points to evidence for development of writing contained within that inscription, when it is compared with other prominent Palestinian inscriptions which can also be dated. Internal developments in the writing style, when connected with a unique acrophonic principle, suggest that the alphabet originated within Palestine in simple domestic situations. In contrast to cuneiform and hieroglyphics, this alphabet prevailed in Western civilization.

The Siloam Inscription was discovered in 1880 at the opening of the Siloam Tunnel, a hand-cut aquaduct located on the south-eastern edge of the present city of Jerusalem (Fig. 1). While our main concern