Typeform dialogues

An interactive interface presenting a comparative
survey of typeform history & description

Explained and illustrated through its User's Manual
and in essays by Catherine Dixon & Eric Kindel

Edited by Eric Kindel

Foreword

More than ten years have passed since work was discontinued on
Typeform dialogues. Its main element, as planned for publication, was
an interactive interface presenting a comparative survey of typeform
history and description, carried on a compact disc (CD). The CD was to be
held inside a printed book that included two essays and a User's Manual
for the interface. The present document contains the User's Manual
from the planned book, together with background information about
the interface and the project it was part of. While there are no plans to
complete the interface, this document offers a fuller account of it than
was published in articles at the time or described in conference papers.
What follows will also form an addition to project records held in the
Central Lettering Record at Central Saint Martins College of Art & Design,
London.

    Typeform dialogues itself was one of several elements of a yet larger
research project carried out at Central Saint Martins between 1994
and 1998. This larger project, 'Interactive multimedia: creative uses of
interface design for typographic research', was supported by the Higher
Education Funding Council for England through funds granted to Central
Saint Martins. It encompassed the cataloguing and conservation of the
Central Lettering Record and the acquisition of new materials (printed
matter, photographs) documenting in particular the proliferation of type-
faces in the 1980s and early 1990s. Work on what became the *Typeform
dialogues* interface began in 1994, but was pursued most intensively from
1995 until 1998, when the funded project ended. In 1998, Hyphen Press
agreed to publish *Typeform dialogues* and efforts to complete the inter-
face and book continued unfunded until 2001.

    In 1999, Hyphen Press announced *Typeform dialogues* as forthcoming,
though it subsequently failed to appear. Why this happened should be
briefly explained. With the end of project funding, those of us involved
in the work were compelled to find new professional situations, mak-
ing progress towards completion difficult. This was compounded by
the acknowledgement that the Internet was inexorably displacing free-
standing hard disks (CDs) as a means of content delivery. In the early
1990s, CD-based interfaces held considerable promise, and by the middle
of the decade they could still do much that was not possible online. But
by the later 1990s, it was clear that in this respect CDs were a transitional
format, as most of their advantages had fallen away. *Typeform dialogues*
– wholly bound to the CD format when the project it was part of was
conceived in 1992–93 – was trapped by this transition, as its means of
delivery became obsolete. A late and at the time rather comic develop-
ment also helped kill it off: the discovery that the otherwise flexible
SuperCard authoring application used to construct the interface imposed
a 32K character limit in several of its scripting areas. That limit had been
reached in one key area, thereby blocking any easy route to completing
the programming.

    Having accepted that an on-screen interactive interface was now
unlikely, efforts were briefly redirected toward configuring *Typeform
dialogues* as a print-only publication. But its estimated extent (two
volumes totalling more than 400 pages) discouraged this solution,

4　which in any case was far distant in form and intention from what we had always envisioned. When work finally ended, what remained was an interface whose design was complete but not yet fully populated, and with several areas of scripting not quite complete. The book within which the CD was to be held, however, was largely finished, including its essays and User's Manual.

The time that has passed since work ended on *Typeform dialogues* has helped lessen the disappointment of its failure to appear. We hope that in making available at least some of what was realized, we can document a project whose merits we continue to believe in, and repay in some small measure those whose interest, enthusiasm and support were so valuable at the time. We especially offer the work to those who generously donated digital material from their font libraries or artefacts from their collections, who consulted on the work, or who invited papers about the project, commissioned articles or did the writing. We are pleased now to finally record our gratitude.

Although *Typeform dialogues* did not appear as planned, it evokes a recent period in the history of typeface design marked by risk and invention. The aims of the interface were apt for its time: to show, describe and compare new types alongside types of the past, on an equal basis, and so demonstrate continuities and ruptures. The need to document significant, ongoing changes in typeforms remains, as does the need to include these in a comprehensive framework of history and description. *Typeform dialogues* was an attempt in that direction. In other respects, it may also prove of interest to those who eventually look back at the phenomenon of CD interfaces that briefly flourished in pre- and proto-Internet days, before being overrun by the now familiar online domain.

Eric Kindel & Catherine Dixon
November 2012

Note to the second edition

Following the publication of the first edition of *Typeform dialogues* in late 2012, we have had the opportunity to prepare our essays, 'Eminents observed' (pp. 50 ff) and 'Systematizing the platypus' (pp. 88 ff). Apart from minor edits elsewhere in the present document, the addition of these essays represents the difference between the first and second editions.

Eric Kindel & Catherine Dixon
November 2018

User's Manual

Hardware & software

Platform:	*Typeform dialogues* runs on Macintosh OS 7.0 or higher. No installations are required from the CD-Rom to hard drives.
RAM:	16 MB minimum
Extension:	QuickTime required.
Resolution:	The interface is designed for a 14" monitor with a 640 x 480 pixel resolution. Settings for larger monitors should be equivalent.
Colour depth:	Thousands
Adjustments:	Monitors should be adjusted for balanced effects. Because monitor display effects vary across models, the following settings are a rough guide for individual adjustments:

      white point: 9300+8 MPCD
      gamma curve: 1.8 (default)
      ambient light: none
      contrast: high (9 on a scale of 10)
      brightness: low (3 of 10)

Introduction

There are two reasons why a User's Manual accompanies *Typeform dialogues*. The first is the absence of an on-screen 'help' facility. Instead, the User's Manual that follows illustrates every feature in the interface and explains how it works. The second reason is to add commentary about the interface itself: the rationale for interface features, their links and connections, and their visual and functional design.

In advance of specifics, it may be useful to set out a general characterization of the interface. *Typeform dialogues* is a survey of the forms given to types of the Latin alphabet since the 1450s, that is, since the invention of printing with movable metal letters. The idea of a survey is significant: *Typeform dialogues* is not encyclopedic. Rather, the 140 types it examines are intended only to indicate the breadth of forms created over the past five and a half centuries. But to understand form, beyond simply showing it, a survey must also present the many factors that influence it. The types included in *Typeform dialogues* have therefore been chosen with the aim of taking in a broad field of discussion, one that addresses the inauguration, evolution and interrelations of typeforms, and the conceptual, philosophical and technical impulses that define them.

To ensure this breadth of discussion, *Typeform dialogues* ranges freely across time, presenting and discussing – on equal terms – recent types as well as those already established by tradition and reputation. By doing so, *Typeform dialogues* attempts to bring freshly conceived and often difficult to describe types into the arena of historical discourse, and position their innovations in relation to types of the past. Supporting this strategy is a new method for describing types. It provides a unified but flexible approach to analyzing and describing all types regardless of age, provenance or formal complexity. *Typeform dialogues* is designed to demonstrate this method across the extent of form, embracing those types apparently most intractable to description along more conventional classification lines.

Together with its presentation of interface features and their interconnections, this User's Manual explains how the construction of the *Typeform dialogues* interface is itself integral to editorial intention and expression. The interface offers flexibility in its presentation of typeforms and their comparisons, its illustration of visual concepts, its diversity of content formats, and its permutations of arrangement and cross-reference. By enabling an ever-shifting assembly of content, the interface transforms its separate features into a dialogue of ideas whose sum is a richly integrated view of typeforms.

Arrangement

The content of the User's Manual is divided into successive spreads:

1 left-hand pages illustrate interface features with indicative screen-grabs
2 right-hand pages describe features and how they function
[**Notes**] run in parallel and explain the rationale behind content and design.

8

types   description   timeline   alphabets
types   description   timeline   alphabets

①

index ②
quit   ③

A

types   description   timeline   alphabets
types   description   timeline   alphabets

2-way links in I

activates link in **I**   activates link in **II**

2-way links in II

activates link in **I**   activates link in **II**

index
quit
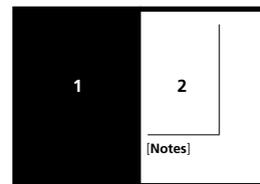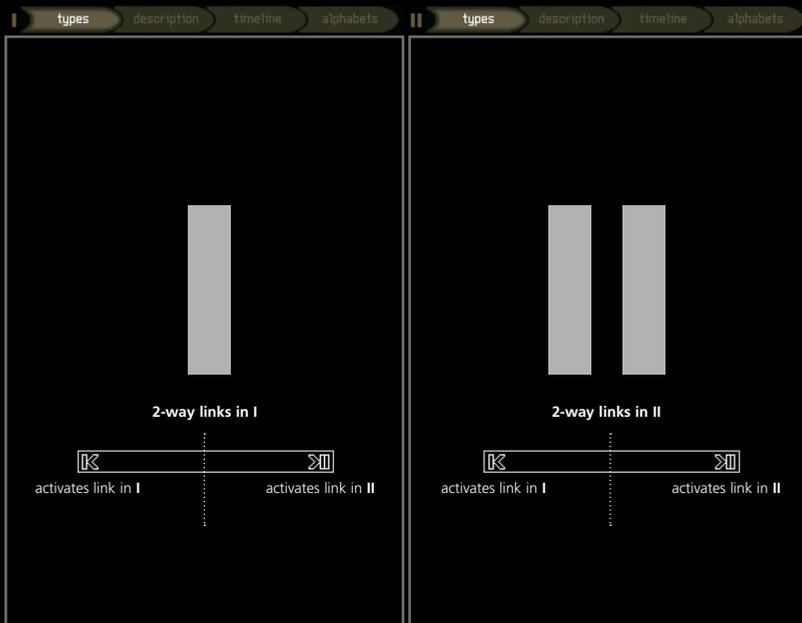
B

Interface principles

1 The *Typeform dialogues* interface is constructed of two 'screen-halves' identified as **I** and **II** (**A**). They are identical in content and arrangement. Navigation of **I** and **II** is also identical, but importantly each screen-half contains links both within itself and to the other screen-half. Each screen-half may be navigated independently or in co-operation with the other.

2 Screen-halves contain four principal areas: *Types*, *Description*, *Timeline* and *Alphabets* (**1**). Their buttons remain visible and usable at all times and indicate an active state when bright and three-dimensional in appearance. A button for the peripheral area, *Index* (**2**), also remains visible and usable at all times.

3 Four cursors are found in the interface:
  3.1 Arrow: neutral cursor state
  3.2 Pointing index finger: cursor within an active button
  3.3 Vertical bar: cursor within a 'roll-over' index graphic (see *Types*: overview for details)
  3.4 2-way (�⊢ or ⊢⊩): cursor within a link.
  2-way cursor operations and associated links serve a important interactive function. Links mimic the construction of the interface: they are composed of two halves (**B**). Within a link, the 2-way cursor displays two states:
  (⊢⊩): displayed in a link's left half, this 2-way cursor state indicates that when a mouse-click is made, the link's reference will appear in screen-half **I**.
  (⊢⊩): displayed in a link's right half, this 2-way cursor state indicates that when a mouse-click is made, the link's reference will appear in screen-half **II**.
  In some instances, 2-way cursor operations allow only a single link 'destination' (to the screen-half opposite). These exceptions are noted in the User's Manual where they occur.

4 All mouse operations are single clicks except when launching *Typeform dialogues*, when a double click is required.

5 Quit (**3**) exits the interface.

[**Notes**] *Typeform dialogues* attempts an inclusive representation of typeform diversity. To achieve this, it was important to not only identify a full sprectrum of form but to also develop a method of analysis able to describe typeforms on an equal basis. This aim grew out of discussions about how a reformed survey of types might be organized and presented, and it was crucial to the work that followed.

The interface construction shown throughout the User's Manual provides a framework for describing typeforms on a equal basis. Within the interface, the organisation and design of content emphasizes consistent presentation, analysis and illustration, flexible narrative pathways, and simple and transparent navigation. The construction of the interface is based on the assumption that types are best seen on equal terms if all parts of the interface can be accessed and compared with equal ease.

To avoid over-determined narrative pathways or arrangements of content, the interface is split into halves. The halves are identical in design and content, and are therefore symmetrical. Each half may be used independently or in combination with the other. Simple in principle, in practice it allows an almost infinite number of content arrangements.

This flexibility of arrangement benefits the analysis of types individually, in groups, and in the context of the general description of form and its origins. Flexible screen arrangements also allow concepts and references to be immediately illustrated through cross-referencing, or for users to elect different modes of access (indexing) or presentation (as text, image, or graphics). Throughout, hierarchy and branching are minimized in favour of a shallow interface structure whose sections remain for the most part continuously visible and accessible.

2-way links are a key interface feature. By activating content in either screen-half, a link reference can be displayed wherever the user chooses, either replacing the content in the screen-half from which the link was made or activiting new content in the screen-half opposite. By following internal content links and bypassing area/section buttons or indexes, the user can construct a free-flowing narrative.

The aim of presenting types on an equal basis, with an emphasis on open exploration and flexible arrangement, led directly to an interface structure built from symmetrical screen-halves. This structure has many benefits, though in places it necessarily circumscribed design solutions. In the notes that follow, particular design solutions should be considered in light of the interface structure's overall advantages, which are instrumental to the aims of *Typeform dialogues*.

User's Manual Eric Kindel

A

B

C
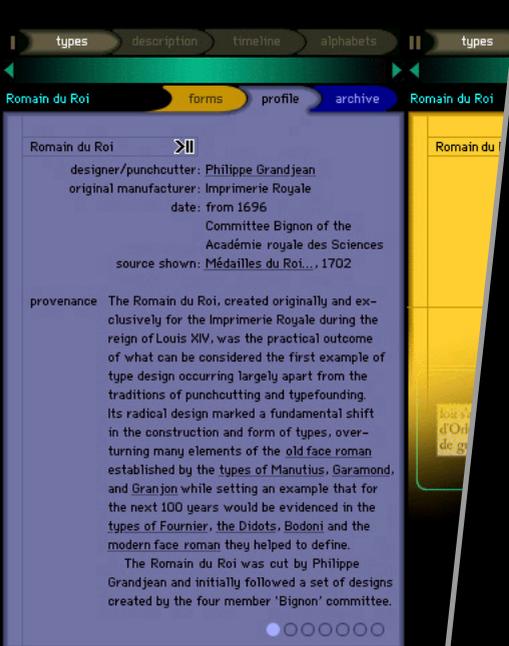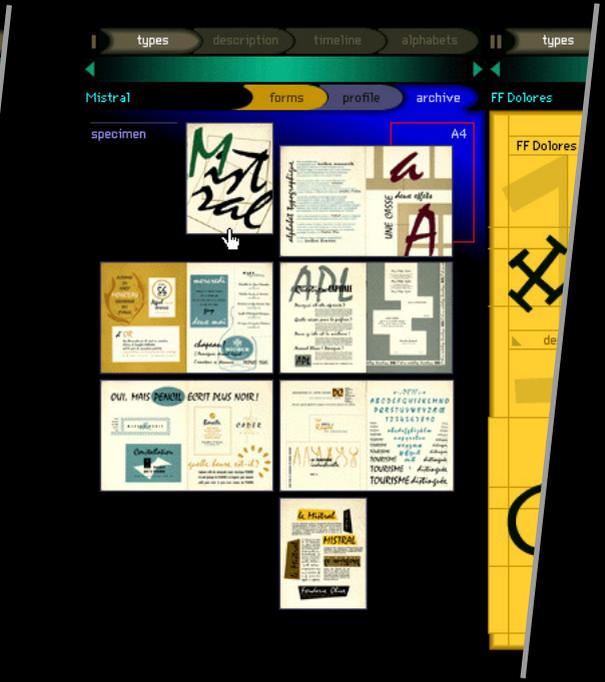
Typeform dialogues

Types: overview

The first principal interface area is *Types*. It presents each of the 140 indi-
vidual types that make up the *Typeform dialogues* survey. *Types* is divided
into three sections: *Forms*, *Profile* and *Archive*. These sections provide
details about the types in several formats: as graphics, text, or images.
Together the three sections form a unit of information for each type.

1 *Types* is activated in either screen-half by its named button (**1**) or via links
elsewhere in the interface.

2 Individual types are accessed via the green index graphic (**2**). It is arranged
alphabetically by type name.

3 The index is activated when the cursor moves within the index graphic.
As the cursor (vertical bar) travels along the graphic (left towards A, right
towards Z), names are displayed beneath. A type is selected with a mouse-
click on the graphic when that type's name is displayed.

4 The section of *Types* that is active is determined by the following
conditions:

4.1 when *Typeform dialogues* is launched, each screen-half activates
random selections from *Types*: *Forms*. The other *Types* sections (*Profile*
or *Archive*) may be activated using their buttons (**3**; screens **B**/**C**);

4.2 different types are selected in any *Types* section by using the index
graphic. New index selections remain within the section of *Types*
that is currently active: for example, if a type's *Profile* is active, further
index selections will activate the *Profile* of the new type chosen.

5 Index selections may be advanced sequentially using the left and right
arrows at either end of the index graphic.

[**Notes**] Several factors guided the selec-
tion of the 140 types in *Typeform dialogues*.
Initially, types that introduced innovations in
form were selected as best representing the
diversity of forms over the past 550 years.
Because not every innovation could be repre-
sented, those thought most influential on sub-
sequent types took priority. Significant revivals
of form were also identified, particularly those
that were first or early instances. Distinctions
were not made between types intended for
text or display, though a significant number
of text types were selected to reflect their
historical importance. An additional factor
was the attempt to represent a wide range of
punchcutters and type designers, typefound-
ers and manufacturers, and type-making
technologies. As work on *Typeform dialogues*
progressed, the selection of types was regu-
larly reassessed to insure that it remained as
representative as possible within the evolving
scope and design of the interface.

When the *Typeform dialogues* interface
is launched, it opens to random selections
in the *Types: Forms* section. This is intended
to reinforce individual types as the point of
departure. Exploration then moves outward,
to other types (and profiles and images), to
related groups of types, and to the description
of form.

Within the *Types* area, the alphabetically
ordered horizontal roll-over index (and similar
indexes in *Timeline* and *Alphabets*) is pur-
posely non-hierarchical; nor does it separate
or group types. These indexes embed, func-
tionally and visually, the attempt to treat indi-
vidual types on an equal basis while providing
a rapid overview of, and easy access to, all
the types in *Typeform dialogues*.

Each of the three sections of *Types* employs
a graphic presentation appropriate to its
content. Forms are presented through large
glyphs and descriptive lists (*Forms*); the story
of each type is told through text (*Profile*); and
the context of promotion and use is suggest-
ed through photographic images (*Archive*).
Sections are separated to concentrate and
optimize their graphic presentation, though
it is still important to regard the three *Types*
sections as a unit, giving a rounded view
of form, history, and use.

①

A

types | description | timeline | alphabets

Playbill | forms | profile | archive

② ③ ④ ⑤

Playbill

xdRTAgm

description

k   j

B

types | description | timeline | alphabets

St. Augustin Civilité | forms | profile | archive

St. Augustin Civilité

description

index
quit

C

types | description | timeline | alphabets

Galliard | forms | profile | archive

⑥

Galliard

xdGta

description

A   E

D

types | description | timeline | alphabets

types of Granjon (roman) | forms | profile | archive

types of Granjon (roman)

d M

description

Après tout cela enoit en sa puissa tres biens de cette qui bon lui sembloi | econnoissoient au les honneurs, les , pour les donner mais qui estoit une

lloient Lares, ou tits Marmousets a honoroient comm eur offroient des sa | de Nemesis, qui pour les venger able & odieux à tiroit sa naissance

index
quit

Typeform dialogues

Types: Forms

The first *Types* section is *Forms*. It presents enlarged characters for each type in *Typeform dialogues* and gives detailed analyses and descriptions of their forms.

1 *Forms* is activated by its button within the *Types* area (**1**) or via links from elsewhere in the interface. Individual types within *Forms* are selected using the index graphic (**2**, see *Types*: overview, p. 11, 2–5).

2 The *Forms* section displays alphabetic characters. The upper group of characters (**3**) illustrates the general visual qualities of the selected type.

3 Immediately below the upper group of characters is a box labelled 'description' (**4**). A single mouse-click within the box activates an analysis of sources and formal attributes specific to the type (this feature is explained in *Description*: integrated operations, p. 29).

4 Below 'description' are two further boxes (**5**). These contain the full set of alphabetic characters for the selected type (see 6, below). A dark bar over either box indicates that it is active. Keystrokes display characters in the active box. An inactive box is activated by a mouse-click within it.

5 The name-box near the top of *Forms* (**6**) activates the same type in the opposite screen-half using a 2-way link operation.

6 Most types contain upper- and lowercase alphabets and the ampersand within feature (**5**). In some instances where the distinction between upper- and lowercase does not apply, only 26 characters are available, while numerals are provided for OCR-A. For any exception to the provision of upper- and lowercase alphabets, a notice appears (not illustrated). For types represented only by photographic images, this feature is not available.

7 Where a type is represented only by images, indicative characters may be found in the type's *Archive* section. For types of this kind, the *Forms* surface is partly removed to reveal the *Archive* section behind (screen **D**).

8 For all types sourced from digital font data, the nominal type size shown is 115-point except in the case of F MoveMeMM, which is shown at 100-point due to space limitations. (For types shown only as images, sizes are indicated in captions; see *Types*: *Archive* (1), p. 17.)

9 In several instances, characters extend beyond their box; here, a smaller, tinted version of the entire character is provided (screen **B**).

[**Notes**] *Forms* presents the formal attributes of the 140 types in *Typeform dialogues*. For each type, these attributes are summarized visually in the upper group of characters, and analyzed in detail in the 'description' feature, which is additionally linked to the *Description* area of the interface.

The upper group of characters typically includes x, d, and an uppercase character. In addition to displaying attributes of form, key proportional relationships within and between characters are indicated by horizontal guides. Where these relationships are highly erratic or non-existent, no guides are provided. The nominal type size (115-point, with one exception) was chosen as the largest size of type able to fit within the space restrictions of the *Forms* area. It was not felt necessary to show visually equivalent type sizes (i.e. by equalizing x-heights), as this is more relevant to comparisons of type composed as text.

Where types do not exist as digital fonts, no attempt was made to extract them from their printed context; instead, they are represented photographically. The effect on form of substrate, ink and impression is left for the user to interpret. Type names prefaced by 'types of' indicate that the examples provided are part a larger group of types made by individuals (or a family). The sizes of types shown photographically are intended to offer rough equivalents to the digital fonts, to aid comparison.

Because *Forms* emphasizes the visual appearance of types, colours were chosen to optimize figure/ground contrast while minimizing the effects of pixelated edges. Trials indicated that a combination of dark grey-green (figure) and yellow (ground) achieved this most effectively.

User's Manual Eric Kindel

A

types | description | timeline | alphabets

Romain du Roi | forms | profile | archive

Romain du Roi

designer/punchcutter: Philippe Grandjean
original manufacturer: Imprimerie Royale
date: from 1696
Committee Bignon of the
Académie royale des Sciences
source shown: Médailles du Roi…, 1702

provenance The Romain du Roi, created originally and exclusively for the Imprimerie Royale during the reign of Louis XIV, was the practical outcome of what can be considered the first example of type design occurring largely apart from the traditions of punchcutting and typefounding. Its radical design marked a fundamental shift in the construction and form of types, overturning many elements of the old face roman established by the types of Manutius, Garamond, and Granjon while setting an example that for the next 100 years would be evidenced in the types of Fournier, the Didots, Bodoni and the modern face roman they helped to define. The Romain du Roi was cut by Philippe Grandjean and initially followed a set of designs created by the four member 'Bignon' committee.

B

types | description | timeline | alphabets

Romain du Roi | forms | profile | archive

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designer/punchcutter: Philippe Grandjean
original manufacturer: Imprimerie Royale
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C

types | description | timeline | alphabets

Romain du Roi | forms | profile | archive

Romain du Roi

related types

1 Cicero 'la Police' (Mathieu Malherbe des Portes, c.1705) the first copy of the reputedly protected Romain du Roi types.
2 types of Jean Alexandre (Imprimerie Royale, 1712–34) who, as Grandjean's successor, followed the typeforms set out by the Committee Bignon.
3 types of Louis Luce (1737–c.1745) whose type output as successor to Grandjean and Alexandre followed from but also advanced the stylistic features of the Romains du Roi.
4 types of Fournier (roman and italic, c.1737–68)
5 types of the Didots
6 types of Bodoni
7 Jaugeon (Imprimerie Nationale, 1904) a newly cut roman and italic, close in form to Grandjean's types but based upon the later revised proposals of the Committee Bignon.
8 Egmont (S.H.De Roos for Typefoundry Amsterdam, 1932–35)

D

types | description | timeline | alphabets

Romain du Roi | forms | profile | archive

Romain du Roi

designer/punchcutter: Philippe Grandjean
original manufacturer: Imprimerie Royale
date: from 1696
Committee Bignon of the
Académie royale des Sciences
source shown: Médailles du Roi…, 1702

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Typeform dialogues

Types: Profile

The second *Types* section is *Profile*. Here information is provided about
each type's design, rationale, context of production, and those types that
are related to it.

1 *Profile* is activated by its button (**1**) within the *Types* area, or via links
from elsewhere in the interface. Individual types within *Profile* are
selected using the index graphic (**2**, see *Types*: overview, p. 11, 2–5).

2 Underlined text references (**3**) link *Profile* texts with related material else-
where in the interface. These 2-way links include:

type names	*link to*	*Types*: *Forms* or *Archive* (screens **A**/**B**)
designer names	"	*Timeline* (screen **C**)
descriptions of form	"	*Description* (screen **D**)

3 Advance icons (**4**) are positioned at the base of every *Profile*. They cor-
respond to the number and sequence of text graphics that make up the
Profile. The individual icon highlighted indicates which text graphic in the
sequence is displayed. The *Profile* is advanced or changed with mouse-
clicks over the other icons in the set.

4 A name box (**5**) activates the same type (*Forms* section) in the opposite
screen-half using a 2-way link.

[**Notes**] The *Profile* section presents narratives and references through text, complementing the presentation formats of its partner sections *Forms* and *Archive*.

Profile texts encompass discussions about aesthetic, historical, and technical matters. Each text indicates the larger context within which a type may be located, and highlights the contribution that type makes to the *Typeform dialogues* survey. Cross-references build up relationships among types. At the end of the profile, a selection of related types is provided. The types listed may be related in different ways and these are described. While not all type listed appear in the inter-face, the intention is build up groupings and associations.

To enable the comfortable reading of *Profile* texts, several design features are employed. These include moderate line lengths (7–9 words per line) and column depths (24 lines), and substantial margins. The text type is a modified Geneva bitmap, respaced and anti-aliased with 16 colours between black and the background colour. The latter was chosen for its low saturation and receding effect; the anti-aliased text sits well over it. These attributes contribute to a reading environment designed to minimize the eye fatigue typically associated with concentrated screen viewing.

Several text link indicators were considered before a conventional (but de-emphasized)-underline was chosen; it was thought to offer the least interference to reading and was con-sidered unambiguous. Similarly, a row of text advance icons was chosen over vertical scroll-ing as least disruptive to continuous reading and place finding.

② ①
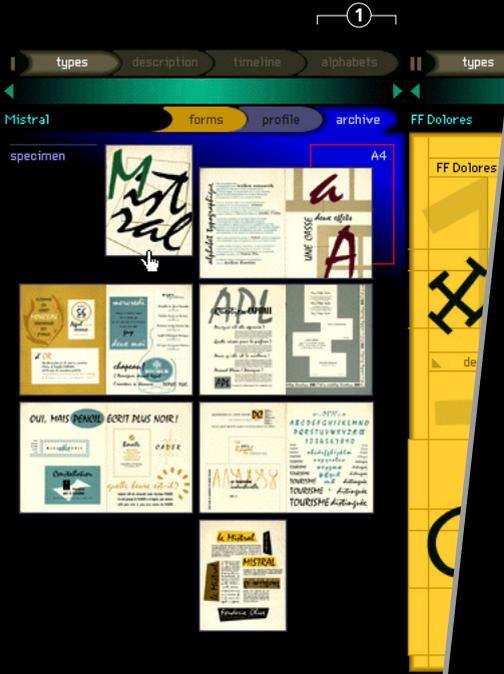
A
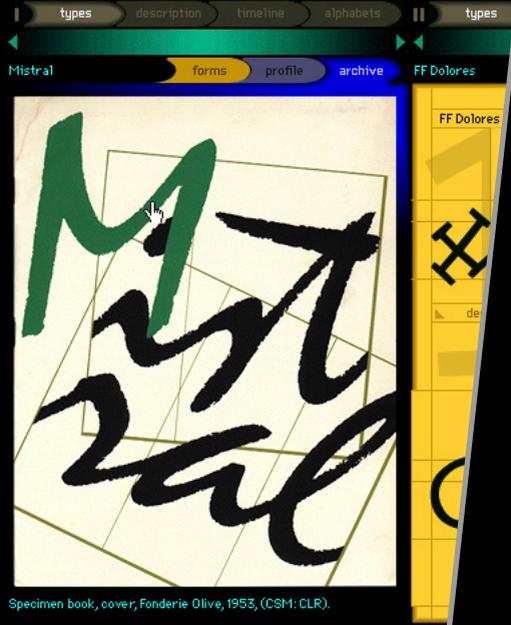
Specimen book, cover, Fonderie Olive, 1953, (CSM: CLR).

B
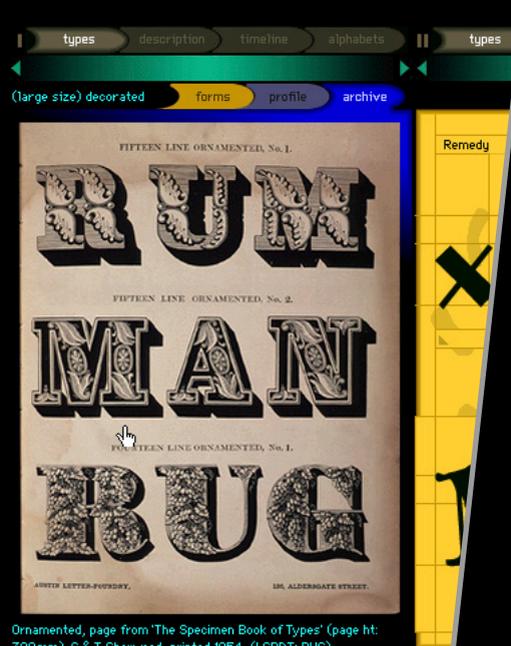
③

C

Ornamented, page from 'The Specimen Book of Types' (page ht: 308mm), S & T Sharwood, printed 1854, (LCPDT: PHC).

D

Typeform dialogues

Types: Archive (1)

The third *Types* section is *Archive*. It features images of types, type specimens, and promotional material.

1 *Archive* is activated by its button (**1**) within the *Types* area or via links from elsewhere in the interface. Individual types within *Archive* are selected using the index graphic (**2**, see *Types*: overview, p. 11, 2–5).

2 When a type's *Archive* is activated, a graphic presents one or several small images (screens **A**/**C**). In the graphic's upper left a short note of image source or identity is given. In the upper right an icon is provided to indicate scale. In the instance of a rectanglar icon labelled 'A4', the small images are in scale to it (screen **A**; A4 = 297 x 210 mm). Where a square icon labelled 'photo' is shown (screen **C**), the images have no specific scale. Instead, their size is given in a caption when they are enlarged.

3 Some *Archive* graphics display advance icons (**3**). These indicate that multiple *Archive* graphics are available for that type. The highlighted icon indicates which graphic in the sequence is displayed. The *Archive* graphic is changed with mouse-clicks over the empty icon(s) in the set.

4 Two methods of image enlargement are employed in *Archive*:
   4.1 static: a small image is enlarged with a mouse-click within its edges (screens **A**–**B**/**C**–**D**). After enlargement no further operations are available. Return to the initial *Archive* graphic with a mouse-click within the enlarged image.
   4.2 dynamic-frame: described in *Archive* (2), overleaf.
   to note: For some references elsewhere in the interface, the reference is linked directly to an enlarged *Archive* image.

5 All image enlargements are accompanied by a caption (screens **B**/**D**).

[**Notes**] *Archive* complements *Forms* and *Profile* by presenting types in contexts of use. Given the great diversity of material available to illustrate types in use, it was decided wherever possible to draw on specimens or advertisements produced by manufacturers near in date to a type's release. Although promotional materials generally and type specimens in particular are sometimes unrealistic in their invented uses or their standard of production (very high), they nevertheless demonstrate how manufacturers sought to position type in the market initially.

Attempting to limit the *Archive* section to material of this kind raises some difficulties. Not all promotional material is equally illuminating in itself or as reproduced on-screen; in some instances no such material is available. For (usually older) types for which no promotional material was produced (in the modern sense), type in use is shown through specimen sheets or books issued by typefounders, or in exemplary early uses in books or other printed matter. Overall, some suitable material was available for nearly all types in *Typeform dialogues*, much of it located in the Central Lettering Record and several other collections.

The initial display of *Archive* provides an overview of images available for enlargement. Scales of enlargement vary, but are informed by several factors: (1) the showing of informative detail; (2) a concern to produce images optimized for screen viewing, which in turn limited image production to just a single enlargement; (3) the reconciliation of image format to interface configuration, which dictated portrait enlargements; and (4) the use of legacy photography in the Central Lettering Record. Image enlargements are fit to the maximum dimension (horizontal or vertical) possible within a screen-half, whether as a static image or for manipulation via dynamic framing operations (see overleaf).

Captions provide additional details about images including the identity of what is shown, its date, and its location.
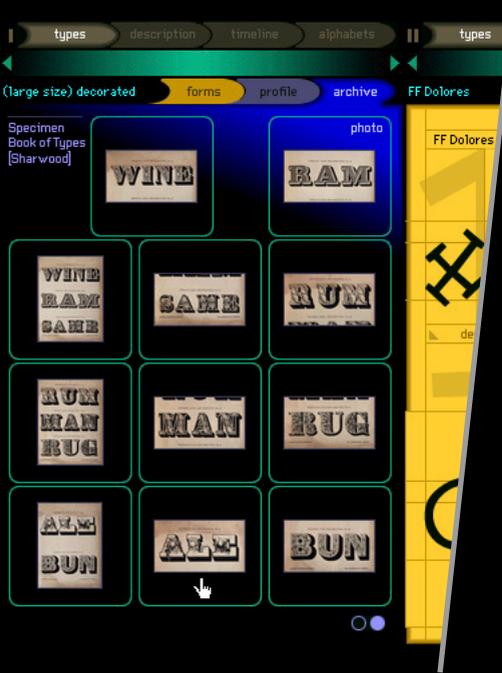
A
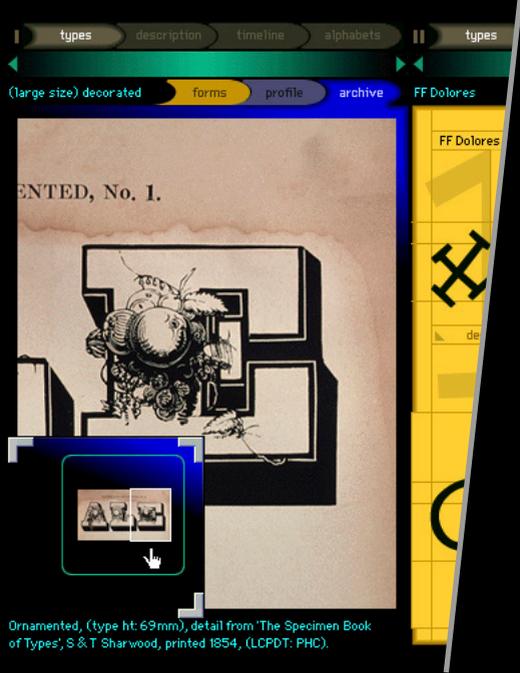
B

Ornamented, (type ht: 69mm), detail from 'The Specimen Book
of Types', S & T Sharwood, printed 1854, (LCPDT: PHC).

C

Ornamented, (type ht: 69mm), detail from 'The Specimen Book
of Types', S & T Sharwood, printed 1854, (LCPDT: PHC).

D

Ornamented, (type ht: 69mm), detail from 'The Specimen Book
of Types', S & T Sharwood, printed 1854, (LCPDT: PHC).

Typeform dialogues
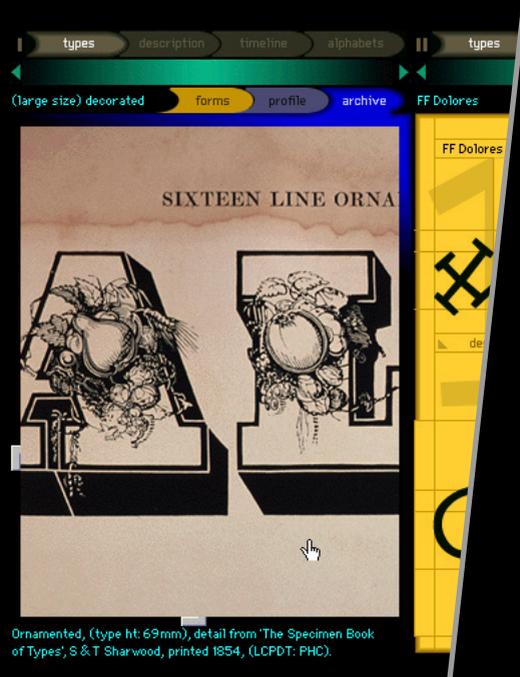
Types: Archive (2)

1 Dynamic-frame: in addition to the static enlargement described in *Archive* (1), a second enlargement method is also provided for some images: the dynamic-frame. Dynamic framing is employed for landscape format images, or for images that require greater detail than is possible with a single static enlargement.

   1.1 a small *Archive* image is enlarged with a mouse-click within its edges (screens **A**–**B)**;

   1.2 after enlargement, the small *Archive* image re-appears in a bracketed cut-away (screen **B)**; a rectangle is positioned over it;

   1.3 the rectangle represents that area of the enlargement currently in view; the enlarged image may then be dynamically framed by clicking and dragging the rectangle over the small image (screen **C)**;

   1.4 the bracketed cut-away disappears when the cursor moves outside its screen area (screen **D)**. Parts of two brackets remain in view to indicate the cut-away's presence. The cut-away reappears when the cursor re-enters its screen area;

   1.5 a mouse-click within the enlargement returns to the initial *Archive* screen-half.

2 In some instances both static and dynamic-frame enlargements are provided for a single image. The static enlargement is activated with a click on the small image while the dynamic-frame enlargement is activated with a click on the icon attached to the small image's lower right corner (not illustrated).

[**Notes**] The dynamic-frame enlargement is designed to accommodate images whose size or orientation is difficult to reconcile with the portrait format image viewing area.

Dynamic-frame enlargements are related to the macro-photographic display of typeforms. Macro-photography is used to show types represented by a printed artefact (rather than font data). Typical sources include type specimens, or early or exemplary uses. Printed type is generally shown best in landscape format images to capture its natural disposition in lines and to fit as many characters as possible into a single image. Once captured in this format, dynamic-frame enlargements in turn offer the the most efficient image enlargement within a portrait display area.

Photographic qualities sought after were principally image clarity, focus, and a heightened (but not exaggerated) substrate texture achieved through raking light. This produced images that responded well to pixelation, giving a surprisingly natural effect despite the low-resolution screen display. Where possible, types were shot at a 1:1 lens ratio, thereby capturing the true size of the image area in the film transparency. While of little direct significance to the images of type as presented in *Typeform dialogues*, this technique added useful information to the transparency itself.

Macro-photography was conducted using 50 ASA Fuji Velvia 35mm slide film, a Nikon 1:72 mm macro lens, and a single source flash angled at <45˚. Film images were digitized using a Nikon SuperCoolscan slide transparency scanner (LS-1000). Image editing was completed using Adobe Photoshop, primarily to regularize uneven lighting, or heighten or de-emphasize substrate texture relative to ink impression. This was done through a series of contrast, colour, and sharpening adjustments.

A

**B**

Typeform dialogues
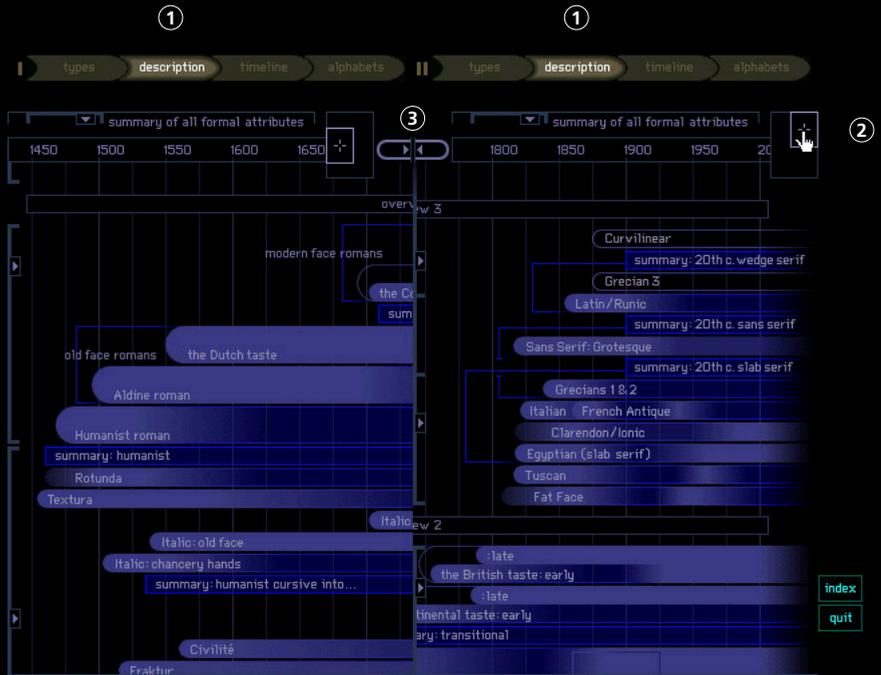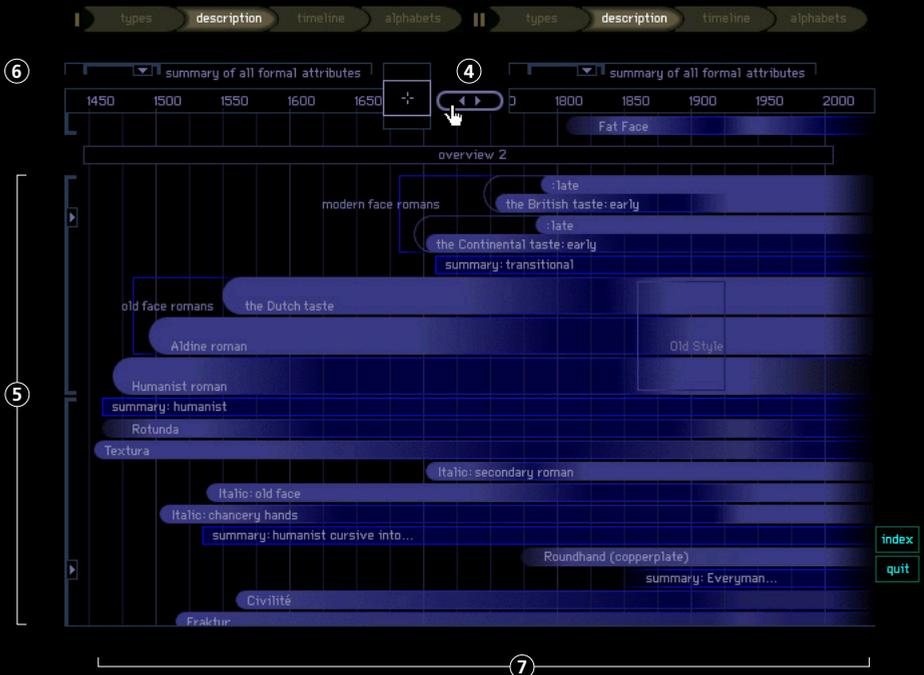
Description: overview

The second principal interface area is *Description*. Presented as an inter-active diagram, *Description* maps and illustrates the several components used to describe types. The *Description* diagram may be explored on its own or in conjunction with *Types*: *Forms* or *Types*: *Profile*.

1 *Description* is activated in either screen-half by its button (**1**), or via links from *Types*: *Forms* or *Types*: *Profile* (see pp. 13/15).

2 When *Description* is activated, only one-quarter of its interactive diagram is displayed. The entire diagram is accessible using the navigation feature in the upper right of the screen-half (**2**). A dynamic-framing operation is performed by clicking on the cross-hairs in the small rectangle (represent-ing the area of the diagram displayed) and dragging it within the larger rectangle (representing the boundary of the *Description* diagram).

3 In screen **A**, *Description* is active in both screen-halves, though here each half is operating independently. *Description* may also be viewed across both screen-halves operating in tandem:
3.1 if *Description* is active in both screen-halves, a mouse-click on the couple icon (**3**) (in either half) will join the diagram across both halves (screens **A**–**B**);
3.2 if *Description* is active in only one screen-half (see, for example, p. 26, screen **D**), a mouse-click on the couple icon will activate *Description* in the opposite screen-half and couple the halves;
3.3 the separate dynamic-framing rectangles are reconfigured into a single dynamic-framing rectangle representing the area of the diagram now in view (screen **B**);
3.4 clicking on the uncouple icon (**4**) returns the screen-halves to separate, independent operations.

4 The *Description* diagram employs three key content features:
4.1 Sources: located at the left edge of the *Description* diagram (**5**),
4.2 Summary of formal attributes: located at the top of the diagram in each screen-half (**6**), and
4.3 Patterns & Summaries: spanning the central area of the diagram (**7**).
4.4 The purpose, content and operation of these and several additional *Description* features are outlined in the following four spreads.

[**Notes**] While *Types* presents each of the 140 types individually, *Description* provides a framework that locates and describes all the types in a broader context. *Description* may be viewed independently, though it princi-pally operates in co-ordination with *Types*, supporting the analyses of specific types and locating them in a comprehensive field. To gain a full understanding of *Description*, it is recommended that this and the following four spreads be read together. The final spread, 'integrated operations' (pp. 28–9) demon-strates how the several features of *Description* work in relation to a given type.

The design and construction of the *Description* diagram has been reconciled to the symmetrical, split-screen configuration of the interface. The size and complexity of the diagram demanded that it be shown as fully as possible and this, in turn, suggested joining the screen-halves. While the full width of the diagram fits the width of the joined screen-halves, roughly half of the diagram's height remains out of view at any one time. The overall intention was to simplify the dynamic framing as far as possible (when the screen-halves are joined the diagram only moves vertically), and to minimize the unseen portion of the diagram. Uncoupling the screen-halves to operate the diagram independently in each half does, however, allow its opposite corners to be seen simultaneously.

A

types · description · timeline · alphabets · types

▼ summary of all formal attributes

1450 1500 1550 1600 1650 ⊹ ◀ ▶ 0 18

overview 2

modern face romans · the Brit...
the Continental tas...
summary: transit...

old face romans · the Dutch taste

Aldine roman

Humanist roman

summary: humanist

Rotunda

Textura

Italic: secondar...

Italic: old face

Italic: chancery hands

summary: humanist cursive into...

Civilité

Fraktur

B

types · description · timeline · alphabets · types

▼ summary of all formal attributes

1450 1500 1550 1600 1650 ⊹ ◀ ▶ 0 18

source: the roman model

overview 2

modern face romans · the Brit...
the Continental tas...
summary: transit...

old face romans · the Dutch taste

Aldine roman

Humanist roman

summary: humanist

Rotunda

Textura

Italic: secondar...

Italic: old face

Italic: chancery hands

summary: humanist cursive into...

Civilité

Fraktur

C

types · description · timeline · alphabets · types

▼ summary of all formal attributes

1450 1500 1550 1600 1650 ⊹ ◀ ▶ 0 18

source: the roman model

overview 2

description   2
issues
    roman and Roman   10
    Influence and emphasis   11
    Capitals — geometric,
    epigraphic or calligraphic 14
further reference   17

Humanist roman

summary: humanist

Rotunda

Textura

Italic: secondar...

Italic: old face

Italic: chancery hands

summary: humanist cursive into...

Civilité

Fraktur

D

types · description · timeline · alphabets · types

▼ summary of all formal attributes

1450 1500 1550 1600 1650 ⊹ ◀ ▶ 0 18

source: the roman model   10

overview 2

patterns on the description diagram.

issues
    roman and Roman
In the context of letter design, the term
roman is confusingly multifunctional.
Within this description framework
'Roman' spelled with an initial capital
means 'related to the Roman people'.

Humanist roman

summary: humanist

Rotunda

Textura

Italic: secondar...

Italic: old face

Italic: chancery hands

summary: humanist cursive into...

Civilité

Fraktur

Typeform dialogues

Description: Sources

The first key content feature of the *Description* diagram is 'Sources'.
Presented as QuickTime movies, sources consist of the generic references
and influences that underlie the forms of types. While sources may be
investigated in relation to other *Description* diagram features, their
primary function is to illustrate references to them found in *Types*
(see *Description*: integrated operations, p. 29).

1 Source graphics are located (and always remain) at the left edge of any
   Description screen (**1**). Source graphics appear twice if *Description* is oper-
   ating independently in both screen-halves, and once if screen-halves are
   operating in tandem (see illustrations, p. 20).

2 Sources are activated from within *Description* or via text links in *Types*:
   Forms or *Types*: *Profile* (see *Description*: integrated operations, p. 29).

3 Source graphics are constructed from brackets and arrows. Brackets
   group together related patterns and summaries (see *Description*:
   Patterns & Summaries, p. 27). A source name is revealed by clicking on
   its arrow (screen **A**). Clicking on the arrow and dragging the cursor to
   the right highlights the source name (screens **A**–**B**: **2**): when the mouse-
   click is released, a QuickTime movie is activated (screens **B**–**C**).

4 Source contents are displayed on the first frame of the movie (screen **C**).
   Subsequent frames are accessed using the 'forward' or 'fast forward'
   buttons or by dragging the slider to the right (screen **D**).

5 Sources are removed by clicking outside the QuickTime frame but within
   the *Description* screen-half where it appears.

6 Interactions elsewhere within the *Description* diagram are not possible
   while a QuickTime movie is displayed. To navigate or activate other
   features of *Description*, the movie must first be closed.

[**Notes**] Sources consist of the generic for-
mal references and influences that give rise
to typeforms. These references and influ-
ences are organized into the five *Description*
sources. Some sources have a relatively literal
visual basis ('Handwritten' and 'The roman
model') while others cover a broader spec-
trum of visual reference ('Decorated/pictorial'
and 'Vernacular: the C19th letter'). A fifth
('Additional') groups together many more
specifically described sources, some visual,
others conceptual and abstract. These are too
numerous and diverse to warrant separate
graphic features in the *Description* diagram.
'Additional' also offers a location where any
new sources may be placed in future, as the
Description framework expands.
   The five sources provided in the *Description*
diagram can be explored on their own,
though they are also integrated with other
features. Thus, in addition to describing
generic references and influences which
broadly inform types, sources group together
patterns and summaries that share the same
generic references and influences. This is
graphically indicated in the *Description* dia-
gram by the source brackets (see *Description*:
Patterns & Summaries, p. 27). Sources are
also referenced when each of the 140 types
is described individually (see *Description*:
integrated operations, p. 29).
   Sources are compiled as QuickTime mov-
ies. The QuickTime format requires minimal
screen space, allowing sources to be displayed
without excessively obscuring the diagram
behind. QuickTime movies also allow a frame-
by-frame advance through text, the preferred
manner of text presentation adopted in
Typeform dialogues (see *Types*: *Profile*, p. 15).

A

B

C

D

Typeform dialogues
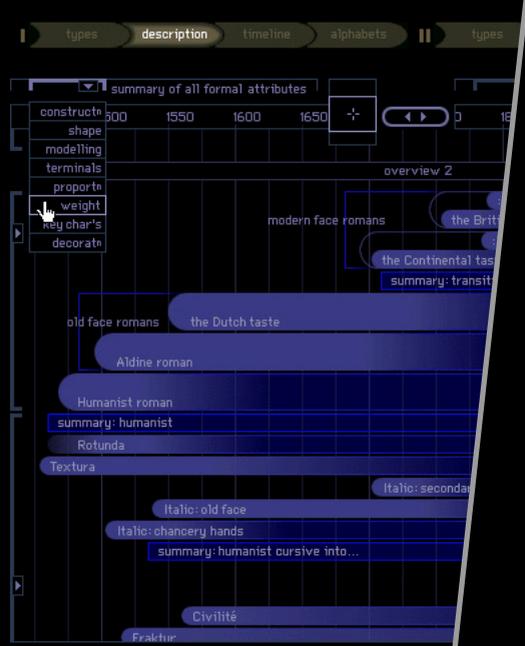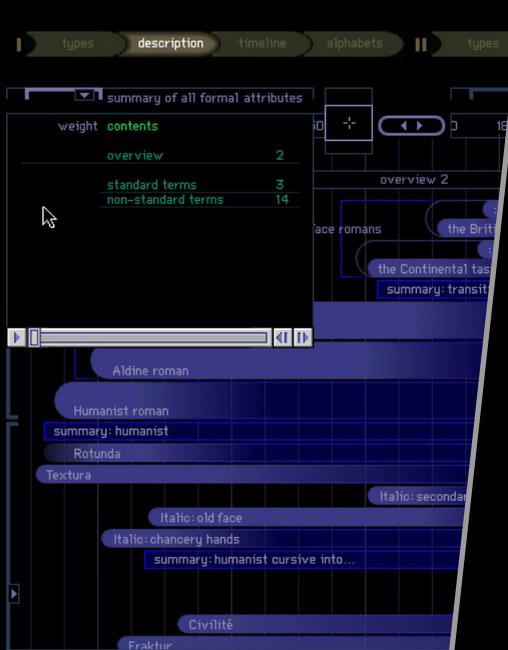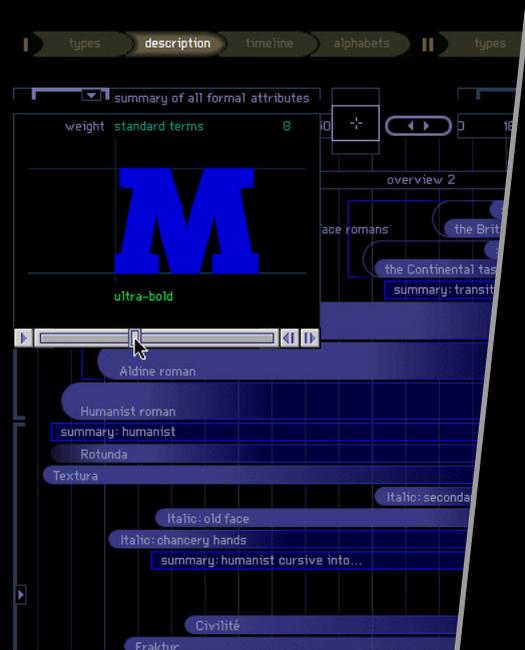
Description: Summary of formal attributes

The second key content feature of the *Description* diagram is the 'Summary of formal attributes'. These eight formal attribute groups, presented in QuickTime movies, are the basic 'units' of typeform description.

1 The summary of formal attributes is located at the top of the *Description* diagram (**1**).

2 It is activated from within the *Description* area or via text links in *Types*: *Forms* or *Types*: *Profile* (see *Description*: integrated operations, p. 29).

3 The eight formal attributes are contained in a pull-down menu (**2**). The menu is made active by clicking on the arrow set inside the summary's bracket. A highlight box appears under the cursor as it is dragged down the attribute list (screens **A**–**B**).

4 When the highlight is positioned over an attribute's name and the mouse-click released, a QuickTime movie summarizing the attribute is displayed (screens **B**–**C**). Its contents are listed on the first frame. Subsequent frames are reached using the 'forward' or 'fast forward' buttons or by dragging the slider to the right (screen **D**).

5 Frame numbers (in the upper right of each frame) correspond to reference numbers that follow formal attributes listed for individual types (see *Description*: Integrated operations, p. 29) and for patterns (see *Description*: Patterns & Summaries, overleaf).

6 An attribute's QuickTime movie is removed by clicking outside the QuickTime frame but within the description screen-half where it appears.

7 Interactions elsewhere within the *Description* diagram are not possible while a QuickTime movie is displayed. To navigate or activate other features of *Description*, the movie must first be closed.

[**Notes**] The 'Summary of formal attributes', in the form of eight Quicktime movies, names and illustrates all attributes of form found among types. By comprehensively naming and illustrating, it acts as a glossary for any reference to type form in *Typeform dialogues*. In addition to its role as a glossary, the summary of formal attributes plays an integrated role in several interface operations. These are explained in the following two spreads: *Description*: Patterns & Summaries, and *Description*: integrated operations.

The summary of formal attributes is organized under eight headings. Relationships between formal attributes found under separate headings are identified explicitly when the same form or principle may be described in different ways. In these instances the formal attribute is accompanied by a cross-reference the other attribute heading. Additionally, illustrations of formal attributes are representative and intended only to depict the general principle of a given attribute. Their specific expressions occur, of course, among the individual types.

As noted under *Description*: Sources, Quick-Time movies are able to deliver large amounts of information in an efficient and accessible manner. The format does involve a significant drawback in that specific frames within the movie cannot be linked to directly. Thus, when activated, movies display their contents frame first (screen C), from which the user must advance to the required frame.

The QuickTime movies should not in general be thought of as animations, though a basic dissolve is employed between frames. The implied continuity is of subject matter rather than form. There are several exceptions to this, including the sequence on modelling where dissolves between frames serve to animate the range of modelling found in typeforms.

A

types description timeline alphabets types

summary of all formal attributes

1450 1500 1550 1600 1650 18

overview 2

modern face romans

the Brit

the Continental tas

summary: transit

old face romans   the Dutch taste

Aldine roman

Humanist roman

summary: humanist

Rotunda

Textura

Italic: secondar

Italic: old face

Italic: chancery hands

summary: humanist cursive into...

Civilité

Fraktur

①

B

types description timeline alphabets types

summary of all formal attributes

1450 1500 1550 1600 1650

overview 2

modern face romans

the Continen

summary: t

old face romans   the Dutch taste

pattern the Dutch taste

construction

shape

modeling

terminals

proportion

weight

key char's

decoration

profile

types

oO dI

– continuous curves [22] with round
(circular) aspect [27].
– (basic) straight stems [42].

②
③
④

alic: secondar

Civilité

Fraktur

C

types description timeline alphabets types

summary of all formal attributes

1450 1500 1550 1600 1650 18

overview 2

modern face romans

the Brit

the Continental tas

summary: transit

old face romans   the Dutch taste

pattern the Dutch taste

profile
exemplifying what might be termed
'the Dutch taste'. This Dutch interpret-
ation is first seen in the work of
Hendrik van den Keere, then in types
by others such as Cristoffel van Dijk,
Miklós (Nicholas) Kis and Bartolomæus
& Dirk Voskens both of whom cut some
4/10   of the finest types of this kind.

alic: secondar

⑤

Civilité

Fraktur

D

types description timeline alphabets types

Renard

Renard

summary of all formal attributes

1450 1500 1550 1600 1650

over

modern face romans

the C

sum

old face romans   the Dutch taste

pattern the Dutch taste

types

types of Granjon (roman)
Janson
FF Quadraat
Renard
Times New Roman

nb types listed may only partly follow
this pattern.

⑥

alic

X

Civilité

Fraktur

Typeform dialogues

Description: Patterns & Summaries

The third key content features of the *Description* diagram are the 'Patterns' and 'Summaries'. Patterns describe recurring combinations of sources and formal attributes; summaries describe trends across large numbers of types, or group patterns with small numbers of types.

1 Patterns and summaries are represented by horizontal bar graphics (**1**) running across the diagram from left to right, each labelled with its name.

2 They are activated from within *Description* or via text links in *Types*: *Forms* or *Types*: *Profile* (see *Description*: integrated operations, overleaf).

3 Patterns and summaries are activated from within *Description* by a mouse-click on their bar graphic (screen **A**).

4 Patterns and summaries are presented on an information 'plate' when activated (screens **A**–**B**; here a pattern is illustrated). At the left side of the plate are several interactive features:

  4.1 formal attributes (**2**) describe and illustrate the pattern. (Summaries are not illustrated by formal attributes but are described only by a 'profile'; see 4.5 below);

  4.2 when the cursor enters an formal attribute name-box, the box is highlighted and a set of indicative typeforms and brief text descriptions are displayed; the cursor simultaneously indicates a 2-way link;

  4.3 clicking on the link illustrates the formal attribute by activating its QuickTime movie in the summary of formal attributes (the 2-way cursor only allows the link to be activated in the screen-half opposite);

  4.4 bracketed numbers within the attribute text description correspond to frame numbers in that attribute's QuickTime movie;

  4.5 'profile' (**3**/**5**) outlines the historical context of the pattern or summary. The profile is activated by clicking its box (**3**); it appears as a QuickTime movie (screens **B**–**C**). Unlike movies elsewhere in the interface, the profile is removed using the close-box in the frame's upper-right corner;

  4.6 'types' (**4**) activates a list of those types in the interface that are related to the pattern or summary (screen **B**). A click within 'types' activates the list. The 2-way cursor appears within name boxes, and links to *Types*: *Forms* (screen **D**). The 'types' list is removed using the close-box;

  4.7 if a link to *Forms* is made while both *Description* screen-halves are operating in tandem, then the screen-halves will automatically uncouple before *Forms* appears.

5 Pattern or summary information plates are removed using the close-box in the plate's upper left. They are also removed by clicking outside a plate's edges but within the *Description* screen-half where it appears.

6 'Overviews' (see top of *Description* diagram) and 'Technology summaries' (at base of diagram; not illustrated) are delivered as QuickTime movies and are operated like sources (see p. 23).

[**Notes**] Sources and formal attributes are the two underlying components used to describe individual types. In many instances, individual types share the same source and formal attributes. These types follow a 'pattern' and can be grouped accordingly. Patterns therefore identify recurring combinations of sources and formal attributes; patterns also acknowledge a degree of historical continuity and may be tracked over time. 'Summaries' are related to patterns. They describe general trends that can be identified across many types; or they group together several patterns that are closely related but which contain too few types to warrant an individual listing. They may also be tracked over time.

The configuration of the *Description* diagram shows how sources and formal attributes relate to patterns and summaries. Positioned to the left (sources) and above (summary of formal attributes), they converge within the diagram to create patterns or summaries. Patterns and summaries are thus initially defined by the source whose bracket groups them (see, for example, p. 22, screen B). Then, when a pattern is activated in the *Description* diagram, its formal attributes are listed and illustrated, and linked to the summary of formal attributes. When a summary is activated, its formal attributes are described only in general terms (in text) since unlike a pattern, the many forms it encompasses cannot be efficiently illustrated. Both patterns and summaries are also described by a profile setting out their historical context. Within the *Description* diagram, patterns are additionally characterized by their horizontal bar graphics whose opacity or transparency indicates the pattern's relative presence or absence over time.

The 'types' list identifies individual types in the interface that can be grouped under a given pattern or summary. Some of these types, however, may be only partially described by that pattern or summary, and therefore will be listed under other patterns or summaries as well. The 'description' feature associated with individual types (in *Types: Forms*) supplies a type's full description. (See also *Description*: integrated operations, overleaf).

The *Description* diagram contains several addition features that span time. Three 'Overviews' explain the historical progression of patterns and summaries, and their eventual limitations in describing types that adhere to no identifiable pattern or summary. 'Technology summaries' outline advances in the technology of type production that have had a significant impact on type form.

A

types · description · timeline · alphabets

FF Disturbance · forms · profile · archive

FF Disturbance

description

Sabon

B

types · description · timeline · alphabets

FF Disturbance · forms · profile · archive

FF Disturbance

source | the roman model >||
additional [ideas]
formal attributes | see pattern | Aldine roman
but modified by list below

constructn
shape
modelling
terminals
proportn
weight
key char's
decoratn

C

types · description · timeline · alphabets

FF Disturbance · forms · profile · archive

FF Disturbance

source | the roman model
additional [ideas]
formal attributes | see pattern | Aldine roman >||
but modified by list below

constructn
shape
modelling
terminals
proportn
weight
key char's
decoratn

D

types · description · timeline · alphabets

FF Disturbance · forms · profile · archive

FF Disturbance

source | the roman model
additional [ideas]
formal attributes | see pattern | Aldine roman
but modified by list below

constructn — proportions follow influence of
shape   additional sources [33], with strong
modelling   reference to roman square capital
terminals   proportions [28].
>|| proportn
weight
key char's
decoratn

Typeform dialogues

Description: integrated operations

The *Description* diagram is integrated with the analyses of individual types given in *Types*: *Forms* and *Types*: *Profile*.

1 In *Types*: *Forms*, one or several characters in the upper group are enclosed in a box labelled 'description' (**1**). Clicking within this box activates an interactive description for that type (screens **A**–**B**).

2 The individual type description is made up of:

  2.1 one or several sources (**2**); and

  2.2 formal attributes, given either as named patterns or summaries to which the type corresponds (**3**), or as a list of specific formal attributes that describe the type uniquely, if it does not match any pattern or summary (**4**).

  2.3 A combination of (**3**) and (**4**) may be required if a type only partially corresponds to a pattern or summary; this is illustrated in screens **A**–**D**, where specific formal attributes (names darkened) supplement the named pattern to generate a complete description.

3 The components of each type's description are linked to corresponding features in the *Description* diagram via 2-way links (screens **B**, **C**, **D**). Any source, pattern, summary, or formal attribute listed for a type is thus illustrated by the *Description* diagram. Links between *Types*: *Forms* and *Description* are as follows:

reference in *Forms*		feature in *Description* diagram
source	*links to*	source (screen **B**)
pattern / summary	"	pattern / summary (screen **C**)
formal attribute	"	summary of formal attributes (screen **D**)

4 Within each type's description, the 2-way links only activate the screen-half opposite. Links are delineated by their boxes.

5 The list of formal attributes functions as it does on pattern or summary information plates in *Description* (see above, p. 27, 4.1–4.4):

  5.1 when the cursor enters an attribute name box, the box is highlighted and a brief text description is displayed (screen **D**);

  5.2 within the name box, the cursor indicates a 2-way link; clicking on the link illustrates the attribute by activating its QuickTime movie in *Description*'s summary of formal attributes. As noted above, 2-way links only activate the screen-half opposite;

  5.3 bracketed numbers within the text description correspond to frame numbers of that attribute's QuickTime movie.

6 The type's description is removed using its upper left close-box.

7 References in *Types*: *Profile* also activate *Description* features via 2-way links in their texts, as summarized in the table above.

[**Notes**] The integration of *Types*: *Forms* and *Types*: *Profile* with *Description* allows the specific description and narrative of each type to be generalized. The *Description* diagram thus serves as a map within which individual types are more broadly defined, positioned, compared and grouped, as form and historically. The integrated operations shown here demonstrate the most extensive connections in the interface, connections that are significantly aided by the interface's split-screen construction.

① ④ ⑤ ③ ② ⑥ ⑦ ⑧

A

types · description · timeline · alphabets   ‖ types

Johann Gutenberg

1380 1400 1420 1440 1460 1480

types of Schwe

types of Sc

Jo
Pete
Henrik Pi
Ludovico degli
Francesco Griffo
Erhard Ratdolt
Aldus Manutius
Peter Schöffer
William Caxton
Nicolas Jenson
Conrad Sweynheym & Arnold Pannartz
Johannes & Wendelin de Spira
Adolf Rusch/R-Printer
Johann Gutenberg

B

types · description · timeline · alphabets   ‖ types

Roger Excoffon

1900 1920 1940 1960 1980 2000

types of Schwe

types of Sc

Carl Dair
Sem L Hartz
Will Carter
François Ganeau
Bradbury Thompson
William S Gillies
Robert E Smith
Roger Excoffon
Max Miedinger
Dick Dooijes
Reynolds Stone
Jackson Burke
Walter Brudi
Samuel Winfield (Tommy) Thompson
William E Fink
Berthold Wolpe
Max Richard Kaufmann
Marcel Jacno
Warren Chappell
Herbert Post
Ashley Havinden
Walter Baum
Konrad Bauer
Alfred R Bosco

C

types · description · timeline · alphabets   ‖ types

Roger Excoffon

Mistral

1900 1920 1940 1960 1980 2000

Mistral

Carl Dair
Sem L Hartz
Will Carter
François Ganeau
Bradbury Thompson
William S Gillies
Robert E Smith
Roger Excoffon

☐ Roger Excoffon (F)
1910-83

Mistral, (Fonderie Olive), 1953 ▶‖

Antique (Fonderie Olive), 1962-66
Calypso (Fonderie Olive), 1958
Chambord (Fonderie Olive), 1945-51
Choc (Fonderie Olive), 1955
Diane (Fonderie Olive), 1956

Herbert Post
Ashley Havinden
Walter Baum
Konrad Bauer
Alfred R Bosco

D

types · description · timeline · alphabets   ‖ types

Rotis (semi-antiqua) · forms · profile · archive

Otl Aicher

1920

Rotis (semi-antiqua)

designer: Otl Aicher ▶‖
manufacturer: Agfa-Compugraphic
date: 1989
version shown: Rotis by Agfa-Compugraphic
variant: semi-antiqua 55

provenance: The Rotis family of types, released in 1989 and
encompassing four closely related variants, was
the practical outcome of Otl Aicher's wish to
reconcile in a single type the best formal and
functional attributes of roman (i.e. seriffed) and
sans serif letterforms. In doing so, Aicher hoped
to discover both a philosophical and formal
position unifying the often dogmatic separation
of roman and sans serif types in C20th graphic
design and typography.
    Such an approach was not new to type design
and in particular to the sans serif. However,
prior to 1916 sans serifs had largely followed
the Grotesque pattern derived from C19th
vernacular sources (see for example Franklin
Gothic, Grotesque No.9 or Akzidenz-Grotesk).
But in that year Edward Johnston's sans serif

Typeform dialogues

Timeline

The third principal interface area is *Timeline*, which lists type designers and their types. Here links are made to types elsewhere in the interface. The *Timeline* may be searched alphabetically or by dynamic framing.

1 The *Timeline* is activated in either screen-half by its button (**1**) or via text links in *Types*: *Profile* (see p. 15).

2 The *Timeline* consists of 255 designers displayed as horizontal bar graphics (**2**). Bar length, measured against the timescale (**3**), shows lifespan. Where a bar fades in or out, the date of birth or death is not known.

3 Above the timescale is an index graphic (**4**), similar to the index graphic in the *Types* area. It is arranged alphabetically by surname, and can be used in three ways:

3.1 search for individuals by name:

— when the cursor (vertical bar; not shown) rolls over the index graphic, names are displayed beneath it (**4 / 5**; left towards A, right towards Z);

— a designer is selected with a mouse-click when their name is displayed;

— following the mouse-click, the diagram is repositioned to display the bar graphic of the selected designer; an information 'plate' appears adjacent to it (screen **C**).

3.2 advance sequentially through the index:

— mouse-clicks on the left or right arrows at either end of the index graphic make sequential index selections (left arrow clicks towards A, right arrow clicks towards Z);

— with each click, the timeline is re-positioned and the selected designer's information plate is activated.

3.3 search the diagram by dynamic framing:

— clicking the slider at the centre of the index graphic and dragging it left or right (screen **B**) moves the diagram;

— the diagram accelerates as the slider is dragged to the right or left and decelerates to stationary as the slider is returned to a centred position;

— diagram movement is also stopped by simply releasing the slider;

— information plates are activated by clicking on bar graphics.

4 When an information plate is activated (screen **C**), several items of information are displayed:

— the designer's name (**6**), nationality, and life dates.

— type boxes (**7**) containing those type(s) created by the designer that are in the interface. Each box is a 2-way link to the type it contains; the link destination is *Types*: *Forms*.

— a list of other types created by the individual (**8**). Here no interactivity is available beyond scrolling down the list.

5 The *Timeline* is also activated via 2-way links from *Types*: *Profile*. In *Profile,* underlined references to designers are linked to their *Timeline* entry (screen **D**). When the link is made, the *Timeline* is activated in the chosen screen-half, after which the designer's information plate appears.

6 An information plate is removed by clicking its upper-left close-box, or by activating another information plate, or by clicking elsewhere within the *Timeline* diagram.

[**Notes**] *Timeline* offers an alternative method for locating information: by punch-cutter or type designer name. Several criteria were used to determine an individual's inclusion in the timeline: (1) a typeface by that individual appears in the interface (automatic inclusion); (2) productivity (quantitative); (3) significantly original work; (4) influence on others; and (5) diversity and range of work.

The number of individuals in *Timeline* is restricted by the configuration of the interface, specifically the width of the index graphic. Because the index graphic functions by using pixels as cursor access points, its horizontal pixel dimension limits the number of access points (and thus the number of names) to a maximum of 260.

User's Manual Eric Kindel

① ③ ④ ②

Citizen

Memphis   St. Augustin Civilité   Citizen

g   £   X

FF Dynamoe   OutWest

A

OutWest

Memphis   St. Augustin Civilité   OutWest

g   £   X

FF Dynamoe   OutWest ▸❙❙

A

A   **B**

Prototype   Perpetua   ITC Bodoni   FF Fudoni   ⑤

U   u   u   u

Sabon   FF Disturbance   F Caustic Biomorph   Futura

u   u   U   u

index
quit

C

Typeform dialogues
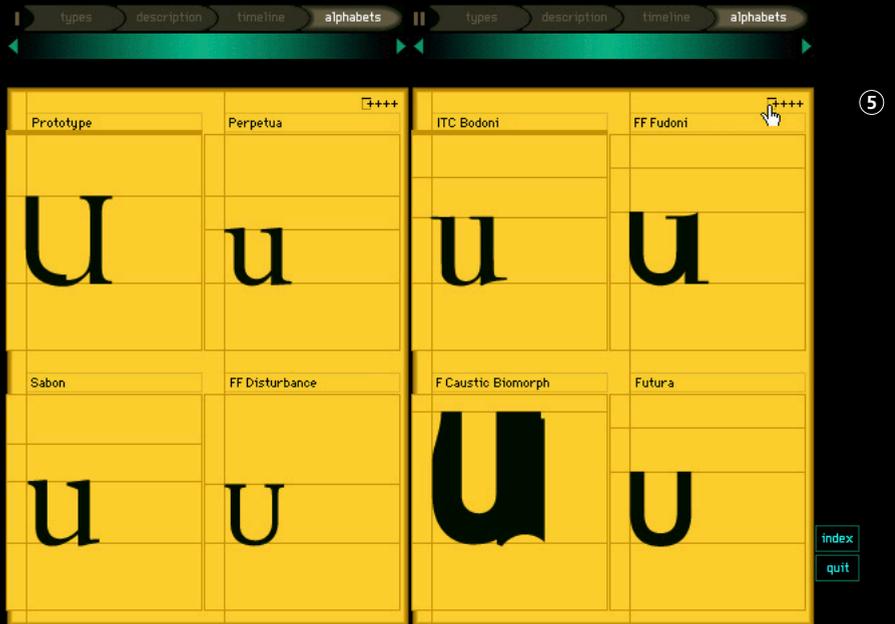
Alphabets

The fourth principal interface area is *Alphabets*. It contains alphabets
of each type in the interface, except those represented only by *Archive*
images.

1 *Alphabets* is activated in either screen-half by its button (**1**).

2 *Alphabets* is made up of four boxes displaying typeforms (**2**), and an
index arranged alphabetically by type name (**3**) from which any of the
140 types in the interface may be selected.

3 Each box is labelled with the name of the type it contains (**4**). A dark bar
over a box indicates that it is active; keystrokes display individual charac-
ters in the active box. An inactive box is activated by a mouse-click within
its edges. Only one box may be active at a time.

4 The type assigned to an active box is changed using the index graphic:
  4.1 the *Alphabets* index operates in a manner identical to the *Types* index
    (see p. 11), except that type names appear in the label above the active
    box when the cursor (vertical bar) rolls over the index graphic.
  4.2 clicking within the index graphic will assign a new type to the active
    box when the type's name is displayed in the label; a character from
    the selected type then appears in the active box. Further characters
    are displayed with keystrokes.

5 Types are represented by the same character sets available under *Types*:
Forms (p. 13); types represented only by *Archive* images are unavailable
in *Alphabets*. For any exception to the provision of alphabets, a notice
appears stating the exception.

Two further interactive features are available in *Alphabets*:

6 2-way links: the label above each box offers 2-way links to the type
displayed in the box; the link activates *Types*: *Forms* (screen **B**).

7 Single change / four-change: a toggling icon positioned at the top right of
alphabets (**5**) allows all four boxes to display the same character simulta-
neously. The icon has two states:
  7.1 **+++**: single change (default; screens **A**, **B**): when displayed, only the
    active box is altered by keystrokes.
  7.2 **++++**: four-change (screen **C**): activated with a mouse-click on (**+++**);
    a keystroke changes the active type box, followed by automatic
    changes to the other three. Each of the four boxes now displays the
    same character. A click on (**++++**) returns to (**+++**).

[**Notes**] *Alphabets* offers a location where
characters from different types may be gath-
ered and compared in greater numbers than
is possible using other interface features.
Alphabets can be used in one or both screen-
halves, on its own or to supplement related
avenues of investigation.

As in *Types*: *Forms*, characters are not avail-
able in *Alphabets* for those types represented
only by *Archive* images. This is compensated
for by 2-way links above each *Alphabets* box.
If a selected type is not available in *Alphabets*,
it may be viewed instead in *Types*: *Forms* by
activating it in the opposite screen-half.

A

types | description | timeline | alphabets

types

index

to ▼ forms

Optima

③

x·Boyl
OCR-A
XDRGS
Optima ▷‖
xdDgi
OutWest
xdWgmt
Palace Script
xHpmdfr
Peignot

Optima

B

types | description | timeline | alphabets

index

to ▼ section

▼ section
forms
profile
archive

④

ECRI
Avant Garde Gothic
xdRg
types of Baskerville
dN
Baskerville
xdEeg
Bayer-type
xdgo
Bell

index ①
quit

②

C

types | description | timeline | alphabets

index

to ▼ archive

ECRI
Avant Garde Gothic
xdRg
types of Baskerville
◁◁ **dN**
Baskerville
xdEeg
Bayer-type
xdgo
Bell

index
quit

Typeform dialogues

Index

Index enables content searches by typeform, and activates any of the
three sections of *Types* via 2-way links.

1 *Index* is activated by its named button located at the lower right edge
   of the interface (**1**). The 2-way cursor operates within this button: the
   index can therefore be activated in either screen-half.

2 *Index* employs a vertically scrolling type list:

   2.1 the list appears when the index is activated;

   2.2 the list is scrolled using the adjacent up / down pointers, by clicking
      and dragging the slider, or by clicking on random locations within the
      slider channel (**2**).

   2.3 individual types are listed and displayed in alphabetical order by type
      name (as in the *Types* and *Alphabets* indexes). Each entry occupies
      a discrete rectangle that operates as a large 2-way link (**3**);

   2.4 using 2-way links, the *Types*: *Forms*, *Profile* or *Archive* section for each
      type may be activated;

   2.5 to select the section of *Types* activated from the index, a pull-down
      menu (**4**) is available. Its default setting is to *Types*: *Forms*. Clicking the
      'section' box activates the menu (screen **B**). Dragging the cursor down-
      ward produces a highlight; when the highlight is positioned over one
      of the *Types* sections listed, releasing the mouse selects it. 2-way links
      then activate index entries in the selected *Types* section (screen **C**).

3 *Index* is exited via 2-way links, or by activating other interface areas in
   the screen-half where *Index* is displayed.

[**Notes**] In the latter stages of work on
Typeform dialogues, it was decided to sup-
plement the horizontal roll-over indexes in
the *Types* and *Alphabets* areas with the visual
index described here, for users who might
prefer this method of searching.

Credits & acknowledgements

Appendices

Types in the interface   Catherine Dixon

Listed here are the 140 types selected for *Typeform dialogues*.

Ad Lib
Akzidenz-Grotesk
Albertus
Alte Schwabacher
Apollo
Arrighi Italic
Augustea Open
Avant Garde Gothic

types of Baskerville (roman)
Baskerville
Bayer–type
Bell
Bell Centennial (bold listing)
Bembo
FF Beowolf
Beton
Blado Italic
FF Blur
types of Bodoni (italic)
types of Bodoni (roman)
(Bauer) Bodoni
ITC Bodoni
Bodoni
Bulmer

PMN Caecilia
Caledonia
Cancelleresca Bastarda
types of Caslon (roman)
Caslon
F Caustic Biomorph
Centaur
Century Expanded
Cheltenham
Chisel
Citizen
Clarendon
Consort
Cooper Black
Copperplate Gothic
Countdown

Dante
(large size) decorated
Democratica
types of the Didots
Didot
FF Disturbance
FF Dolores
Doves Roman
FF Dynamoe

(first) egyptian
Ellington
Eurostile

FF Fontesque
types of Fournier (decorated)
types of Fournier (roman)
Fournier
Franklin Gothic
Frutiger
Fry's Baskerville
Fry's Ornamented
FF Fudoni
Futura

Galliard
types of Garamond (roman)
(Adobe) Garamond
(Monotype) Garamond
Gill Sans
Golden
Goudy Text
types of Granjon (italic)
types of Granjon (roman)
Granjon
Grotesque No. 9

Helvetica

Imprint
Industria
Ionic No. 5

types of Jannon (roman)
Janson
types of Jenson
Joanna

Keedy Sans

Lithos
Lucida
Lydian

types of Manutius (roman)
Mason Serif
Matrix
Memphis
FF Meta
Minion
Mistral
(Linotype) Modern
F MoveMeMM

Not Caslon

OCR-A
Optima
OutWest

Palace Script
Peignot
Perpetua
Perpetua Italic/Felicity
Plantin
Playbill
Praxis
Poliphilus
Prototype

FF Quadraat

Remedy
Renard
Romain du Roi
Romulus
Rotis (semi-antiqua)

Sabon
St. Augustin Civilité
Scotch Roman
(first) sans serif
types of Schweynheym & Pannartz
ITC Serif Gothic
ITC Souvenir
Stencil
ITC Stone Informal
Swift
Syntax

Template Gothic
types from the Teuerdank
Thorne Shaded
Thorowgood
Times New Roman
Trinité
FF Trixie
(first) tuscan

Union Pearl
Univers

Van Dijck
Variex
Vendôme

Walbaum Buch
Wallau
Windsor

Typeform dialogues

Typeform dialogues*   Catherine Dixon & Eric Kindel

Typeform dialogues is perhaps most briefly and accurately characterized by its subtitle: 'a comparative survey of typeform history and description on interactive CD-Rom'. It maps types by way of form to create a survey of historical and contemporary type-making interleaved with the description of appearances. It is also unequivocally 'of the screen' because the possibilities of screen-based construction and interactivity lie at the core of its narrative strategy.

Typeform dialogues has emerged from a three-and-a-half year programme of research sponsored by Central Saint Martins College of Art and Design in London. From the start, the research took as its principal interest the interactive multimedia of the personal computer. Here an enquiry would begin into the representations of type and type history a multimedia approach might encourage. Alongside and partly in support, work was also initiated to catalogue an extensive archive of type and lettering located at the College, the Central Lettering Record (CLR). An important element of this work was to update the CLR's holdings. Collecting activities associated with the archive, which always aimed to represent the full expanse of type and lettering, had effectively ceased in the mid-1980s, threatening a serious lack of documentation of the subsequent, highly energetic period in type design.[1]

Now, near the conclusion of research, the association of work on-screen with the original aims of the Central Lettering Record, and efforts to bring it up to date, resonate in *Typeform dialogues*. In concept and by construction, it joins together many moments in the history of types. By so doing, *Typeform dialogues* echoes narratives of form and history already resident in the archive that provides its backdrop. But in the foreground is its own distinct survey of form and history, old and new, interactive and screen-based.

140 types

Typeform dialogues is a survey of types used in printing with the Latin alphabet. These are documented both historically and as immediately present forms, to be described equally and systematically regardless of their time of origin. *Typeform dialogues* is not encyclopedic. Instead it is a selection of examples whose detailed analysis and distribution across the spectrum of types are intended to cast a net over the entire field of practice. One hundred and forty types are featured in the survey. Their choice was largely driven by a single narrative impulse: to chart the variety of type forms of the previous 550 years, that is to say, since the invention of printing with moveable type.[2] In general, those types chosen needed to signal historical shifts in form such that a full and coherent progression could be assembled.

Helpful though this impulse was in establishing priorities, the survey also follows other themes, which, though subsidiary to that of form *per se*, play a helpful role in identifying influences on it. So, a first, rough choice of types was refined by the stipulation that the survey encompass a range of uses for which types are often specially designed. Along similar lines, the impact on form of particular and often new methods of production or manufacture would also be documented (figure 1). Both themes

1. The Central Lettering Record (CLR) was begun in the mid-1960s by Nicholas Biddulph and Nicolete Gray, and through their collecting efforts became a repository of type- and letterforms of all kinds. Collecting was in large part guided by the view that a diversity of reference offered the best inspiration to fresh creativity, and to this end the CLR sought the broadest possible representation of work in the field.

The many photographs, type specimens, and other artefacts it contained were most commonly used for teaching. The course in lettering taught by Biddulph and Gray was informed by their concern that students develop abilities in the analysis of form such that examples from all eras, while understood in their original context of design, might also contribute to new formal inventions released from historical constraints. Discussion of this approach, and the course in lettering generally, can be found in several locations including Gray's *Lettering as drawing* (Oxford, 1971) and 'Lettering and society' (*Visible Language*, vol. 8, no. 3, Summer 1974), and in contributions made by Gray, Biddulph and Brian Yates to *Dossier A–Z*, proceedings of the 1973 ATypI Congress in Copenhagen.

The Central Lettering Record continued its support of teaching, research, publishing, and exhibitions until the mid-1980s when its active role in these areas, and its systematic collecting, declined significantly – just short of the personal computer's widespread introduction. The new research project thus recognized the opportunity and need to update the CLR and has subsequently documented much digital type designing triggered by the personal computer. Today [2000] the Central Lettering Record remains on-site and active at Central Saint Martins. As part of the College's Museum and Study Archive, it is now co-curated by Phil Baines and Catherine Dixon and contributes primarily to undergraduate studies in graphic design and typography.

2. The invention of printing from movable type has, in fact, been located in eleventh century China. But as *Typeform dialogues* surveys formal diversity among types of the Latin script, the advent of printing in Europe in the mid-fifteenth century is an appropriate starting point.

Appendices
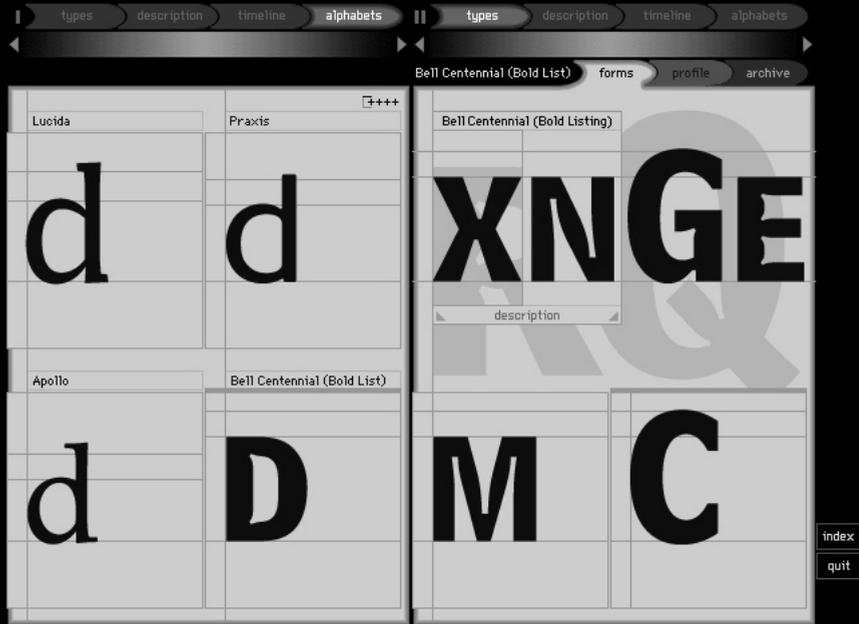
Figure 1. Typeforms can be gathered together to illustrate several approaches to form, here on the theme of production and/or output constraints.
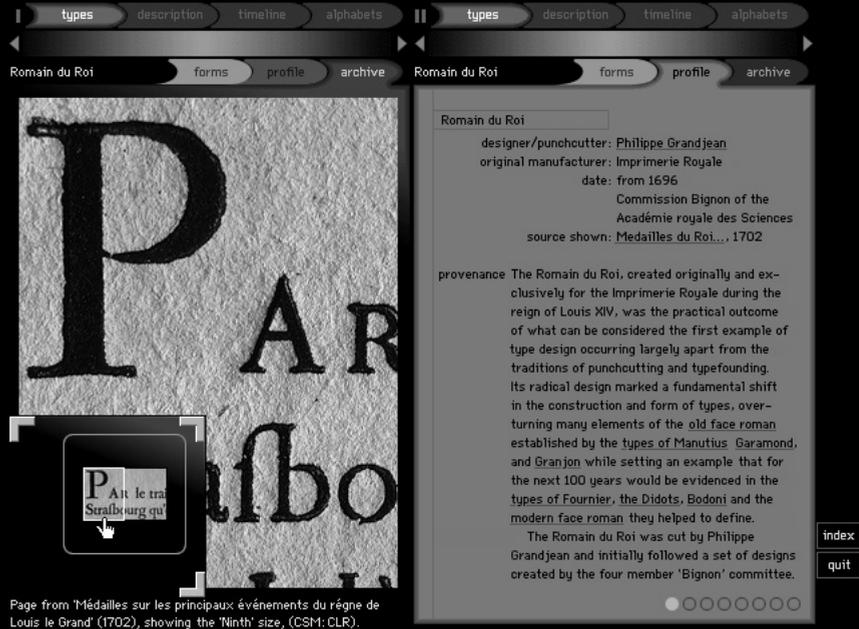

Figure 2. The presentation of form is complemented by images and text narratives.

– use and making – offered the opportunity to discuss and define form in terms highly specific to context. To these a third supporting theme was added, that of foundries and punchcutters/designers whose work was significant in the field of type design generally, and in the creation of new forms in particular.

Thus a blend of concerns determined the survey's 140 choices, a blend most strongly and simply governed by the thorough representation of form. But within *Typeform dialogues* this representation also spreads quickly into text narratives, and images of use and marketing (figures 2–3). These are grouped together and delineate each type's specific history. However, in defining the expanse of form over the past five and a half centuries, a broader frame of reference is also needed, one offering equal and consistent treatment across the sample despite the vagaries of individual context. This treatment is provided by a detailed description of each type's visual appearance.

Description

Accompanying and underlying the discussion of 140 types individually is a single framework that is able to order, describe and depict their many forms while at the same time accounting for differences among them. In the past, the description of differences in appearance has largely relied on terms that only summarize broad groupings of apparently similar types. These terms are found in the systems of type classification with which we are most familiar: the British Standard, for example, or other derivatives of the Vox system. The evaluations of type design history and current practice that inform these systems are, however, plagued with bias. They afford the description of certain types – namely roman 'text' types – far greater detail than others. At the same time they are unable to address the descriptive requirements of many designs of substantial formal complexity. This shortcoming is compounded by a reliance on categories which are generally inflexible – increasingly so as types of a hybrid nature flourish.[3]

Unsurprisingly then, systems such as these quickly failed to supply the even-handed and systematic description of form *Typeform dialogues* wished to provide,and instead a new system – or framework – was developed to supply its descriptive analyses.[4] This framework redresses bias and rejects categories.[5] Modular in design, it grew out of the assumption that the form of any type can be defined using a set of descriptive components. These components, called 'sources' and 'formal attributes', are configured to describe the features of types on an individual basis rather than in groups. The source identifies those generic influences that underlie a given type, such as 'roman', 'handwritten', or 'nineteenth century vernacular'. The formal attributes outline a type's properties of form, properties that are primarily but not exclusively visual.

But while addressing the need for precise description, the framework's emphasis on differences between types threatened to obscure the pockets of formal cohesion that often exist among them. To counteract this tendency to segregate, a third kind of component was created. Called a 'pattern', this component describes configurations of sources and formal

3. Many existing systems of classification are informed by structures introduced by early twentieth-century surveys of type history. In their evaluation of type history and practices, these surveys favoured roman 'text' type over their commercial 'display' counterparts. The current British Standard for typeface classification (BS 2961:1967), for instance, uses several categories to distinguish fine differences among several variations of the roman model. Those types included in the British Standard category 'slab serif' would, if examined similarly, show more than ample difference to warrant several categories for itself. Yet attention to such subtleties among these and other display types is not generally observed. For an example of a dismissive view of types outside the roman canon, see Harry Carter's review of Nicolete Gray's *XIXth century ornamented types and title pages* in *Signature* 10, November 1938.

4. Early ideas for surmounting problems raised by existing classification systems were summarized and published in 1995, together with a proposal for the revision of categories. This article, and in particular the regimented diagram of categories that accompanied it, served to illustrate that which was most unsatisfactory about category-bound classification. In doing so, it contributed to the rejection of categories as a means of describing types. See Catherine Dixon, 'Why we need to re-classify type', *Eye*, vol. 5, no. 19, Winter 1995.

5. The new description framework has been designed by Catherine Dixon as part of her doctoral program of research titled 'A critical framework in which to locate and discuss recent trends in type design and a vocabulary to describe them.' While integral to *Typeform dialogues*, the framework is also intended to operate independently of any specific application.

Appendices

Ornamented, page from 'The Specimen Book of Types' (page ht: 308mm), S & T Sharwood, printed 1854, (LCPDT: PHC).

Ornamented, (type ht: 60mm), detail from 'The Specimen Book of Types', S & T Sharwood, printed 1854, (LCPDT: PHC).

Figure 3. Both interface 'screen-halves' hold the same information, here enabling several levels of detail to be viewed simultaneously.

Figure 4. The description framework diagram with the Civilité pattern activated.

attributes that recur among types. Thus when describing an individual type, reference can be made to a pattern if a strong correlation is detected between it and the type's specific configuration of sources and formal attributes. This introduces both a degree of efficiency, and more importantly draws together related types where they share the same pattern.

The framework is arguably but necessarily complex. Its potential for unwieldiness is managed by its presentation as a diagram. The diagram maps the context and range of each description component. Indeed the facility to quickly locate and view any component within the space of the diagram insures that the specific analysis of a type is never abstract but instead supported by explanatory context, terms, and illustrations (figures 4–5).

The interface

The principle of interface construction that guides *Typeform dialogues* is one of flexible arrangement and combination. It is perhaps the most suitable principle for a story whose narrative strategy is to encourage comparisons across time and over the widest range of form. To enable flexibility, the composition of the interface is symmetrical, that is, it is divided into left and right halves. Each 'screen-half' is identical to the other in design, content, and function. Each is linked to itself and to the other at numerous points. Through these links, investigations that at first appear discrete quickly thread into other areas of the interface, drawing in references to descriptions, illustrations, or other types. These references can be activated in either half of the screen, augmenting the investigation or replacing it. Simple in principle, in practice this mutable construction allows for any arrangement of content; narrative pathways are suggested but those followed are freely chosen. From this flexibility, too, arise the comparisons it makes possible. Indeed, comparison lies at the core of type interrogations where distinctions small and large instructively reveal varying approaches to form-making. Equally, comparison is often required when corollating generally illustrated attributes of form with their expression in a specific type.

To ease navigation, the scheme of information division purposely avoids hierarchy and hidden content. This is most apparent in those sections named at the top of each screen-half. All sections remain constantly in view, and only one hides subsections (figures 1–3). In this way, the location of content is largely transparent and ready to hand. Other features assist: rollover indexing provides speedy, alphabetical access to each type. The index is repeated in a separate section where types are listed visually (figure 6). Where section divisions occur, they indicate differences in both content and presentation. That divisions are abrupt not only makes plain the distinctions in how types are examined (by form, for example, or by text narrative, artefact, or description framework), but they also allow each section to optimize those visual and functional tools thought most effective to it. What drives the design of each section is an appropriate match of content, image, and function. Despite their apparent autonomy, each section extends the contribution of its partners while the architecture of the interface makes possible their combination in whatever
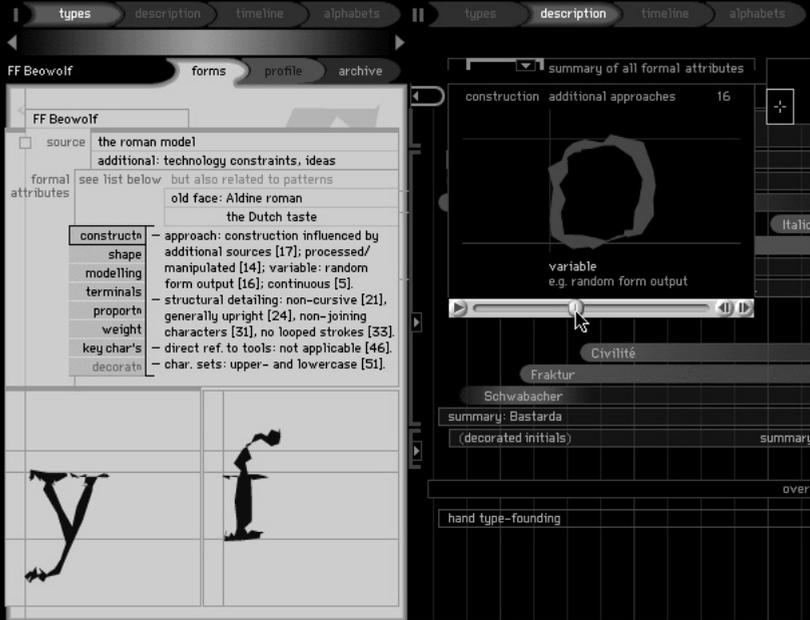
Figure 5. The formal analysis of every type in the survey is illustrated and contextualized by the description framework.

Figure 6. Types are quickly located through a visual index.

arrangement the user finds most useful to construct a purposeful view
of type form.

Reviewing the course of work whose result is *Typeform dialogues* leads
quickly to the (rather obvious) view that no survey is free from those
interests and influences propelling its compilation. The significance or
otherwise of the 140 types surveyed in this work, or the narrative struc-
ture they are placed within, merely represent our thoughts on how the
progression or expansion of formal invention to date might be under-
stood. Similarly, methods of description or classification are also subject
to special interests and indeed aging. Nevertheless, the principle of flex-
ibility that informs both the construction of *Typeform dialogues* and its
description framework challenges obsolescence. Its disregard of a singu-
lar narrative allows the simple addition of new types as needed, without
disrupting those stories already present. Equally, other description com-
ponents can be easily added to its base of formal reference if required.
As the field of type design practice evolves, the new framework can
respond and evolve alongside it.

    The crux of *Typeform dialogues* is an interactive, digital space where
description, reference, illustration, and construction are meant to operate
with an internal logic and consistency that encompasses its entire survey
of types. Its aim is to summarize a field of visual design which has persis-
tently eluded such treatment, where each example contributes equally
– at least by form – to a view of creativity at once accessible and described
in full.

Project bibliography (date order)

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Hyphen Press

In 1998, Hyphen Press agreed to publish *Typeform dialogues*. The work was announced in the Hyphen Press catalogue for 1999 as *Typeform dialogues: a comparative survey of typeform history and description on interactive CD-Rom*, edited by Eric Kindel, with essays by Catherine Dixon and Eric Kindel, a User's Manual, and a foreword by Robin Kinross; it was assigned ISBN 0-907259-15-4 and given a guide price of £25 for an 80 pp book + CD. The work was listed again in the 2001 Hyphen Press catalogue and advertised in several publications.

Eric Kindel (ed.). 2018. *Typeform dialogues: an interactive interface presenting a comparative survey of typeform history & description, explained and illustrated through its User's Manual and in essays by Catherine Dixon & Eric Kindel* (2nd edn; 1st edn, 2012). London: Hyphen Press. See this document; PDF file only

***Typeform dialogues*, additional content**

Description (Catherine Dixon). All elements of the description framework used in *Typeform dialogues* may be found in Dixon (2001), including sources (5), patterns and summaries (37), overviews (3), technology summaries (4), summaries of formal attributes (8 QuickTime movies, 30–98 frames each, with captions), and individual form descriptions for each of the 140 types in the interface.

Types: Profiles (Eric Kindel). Ninety of the planned 140 type profiles in *Typeform dialogues* (300–1200 words each) are among project materials in the Central Lettering Record, Central Saint Martins College of Art & Design, London.

Interface. An in-progress version of the *Typeform dialogues* interface is also among project materials in the Central Lettering Record; it is only accessible using the Mac 'Classic' OS (7.0 or higher).

Essays

Author's note

'Eminents observed' was written between 1998 and 2000 to accompany *Typeform dialogues*. The essay was intended to provide historical context for the interface by locating it within a tradition of Central School teaching in the disciplines of writing, lettering, type and typography. The essay was partnered with another by Catherine Dixon that detailed her thinking on systems for classifying typeforms, thinking that had informed her contributions to the *Typeform dialogues* interface.[*]

In 2012, while preparing the first edition of *Typeform dialogues*, I considered including 'Eminents observed'. But the demands of other work did not allow this. Later, when revisiting the essay, I resolved to finally bring it to a publishable form, regardless of the lapse of time and despite its numerous faults. In preparing the text, I have fixed factual errors, and what I now consider to be errors of interpretation. Throughout, I have made changes to language in an attempt to improve clarity and expression, and I have inserted several new footnotes. I have not otherwise attempted to alter the essay's style (such as it is) or its somewhat tidy trajectory, which are artefacts of its original composition. Nor have I made reference to the activities of the Central Lettering Record subsequent to the writing of the essay, under the curatorship of Phil Baines and Catherine Dixon.

In publishing the text, I would like to thank two esteemed former colleagues, Stuart Evans and the late Justin Howes. In 2000, both provided insightful comments on the text in draft. I am also much indebted to Robin Kinross, who similarly offered valuable comments in 2000, and on the present text. And I extend special thanks to Catherine Dixon, whose own research during the *Typeform dialogues* project, freely shared, had a beneficial influence on my understanding of Nicolete Gray. Catherine likewise gave me helpful comments on the whole of my text in draft. In thanking each of the above, I do not wish to implicate any of them in errors of fact or interpretation that may follow.

Eric Kindel

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[*] The foreword to the present document (see above, pp. 3–4) gives further details about the original publishing circumstances of *Typeform dialogues*. For Catherine Dixon's essay, 'Systematizing the platypus: a perspective on type design classification', see below, pp. 88–133.

Eminents observed: a century of writing, lettering, type and typography at the Central School, London

The moral is, if we want beautiful type, we must teach children to write beautifully.
Emery Walker, 1888

On copying a Hand.—Our intentions being right (viz. to make our work essentially readable) and our actions being expedient (viz. to select and copy the simple forms which have remained essentially the same, leaving the complex forms which have passed out of use ...) we need not vex ourselves with the question of 'lawfulness'.
Edward Johnston, 1906

We are too apt to be perplexed with what seems to us a jumble of styles to choose from, when acknowledgement of but one style, permitting degrees of elaboration in execution according to circumstances would unravel the whole matter. This is the remedy suggested here. The tool which developed and preserved for us so magnificent an achievement of the Roman alphabet may well be trusted for the performance of our modern needs also.
Graily Hewitt, 1930

I do not intend to present any sort of watertight theory, but to examine examples which I recognize as in some way admirable and to analyse what it is in each which I admire; since the eye, not principle, is the basis of all judgement of visual things. I want to arrive at a new way of thinking about lettering from which nothing is excluded on a priori *grounds.*
Nicolete Gray, 1960

Typeform dialogues has been made in an institution where throughout its history the teaching of writing, lettering, type and typography has occupied a place of great importance. This institution is Central Saint Martins College of Art & Design, known originally as the Central School of Arts & Crafts.[1] During the previous century [i.e. looking back from from the late 1990s] the Central School has employed teachers whose firmly held views on these subjects have shaped its pedagogy. Given the connections between subjects, it is not surprising that those who taught them had common concerns, as well as individual pre-occupations. In the essay that follows, those who taught (or who influenced the teaching) will be observed. Observations will highlight arguments about what sources and techniques, tools and materials, encouragements and prohibitions should be at work, in theory and in practice, in writing, lettering and typography. Attention will focus on Emery Walker, whose valuation of early printing, set out before the Central School opened,

1. The Central School of Arts & Crafts was founded in 1896. It retained this name until 1966 when it was changed to the Central School of Art & Design. Central Saint Martins College of Art & Design dates from 1989 when the Central School and St Martin's School of Art were formally joined under the administration of The London Institute. As the present essay concentrates on the Central School before its merger with St Martin's, this name – the Central School – will be adopted throughout.

Eric Kindel

influenced its teaching from the outset; on Edward Johnston, whose renewal of formal writing and lettering while at the Central School established a new foundation for its practice; on J. H. Mason and Graily Hewitt, whose lengthy tenures did much to consolidate the Central School's early innovations; and on Nicolete Gray, whose reconfiguration of the study of letterforms was embedded into the Central Lettering Record she built up in partnership with Nicholas Biddulph. In each instance, the ideas that supported teaching or practice were expressed in quite specific, even idiosyncratic, ways. Thus observations will also note how individuals gave form to their views, in published works or as designed artefacts, on the assumption that as much may be learned from structure and presentation as from content. In making observations of all kinds, historical connections and disjunctures will not be the sole concern. Rather, their compilation is intended to build up a context within which *Typeform dialogues*, as a late addition, may be located.

1

Much of the thinking that would guide instruction in writing, lettering, type and typography at the new Central School of Arts & Crafts was anticipated by Emery Walker. One moment in particular has often served as the first instance when this thinking was cogently set out: 15 November 1888. On that day (in the evening), Walker delivered a lecture entitled 'Letterpress printing' to the Arts & Crafts Exhibition Society in London. In it, he presented highlights in the development of letterforms, type, printing and illustration since the fifteenth century. The lecture was a prescient articulation of the interests and concerns that would revitalize printing in the last decade of the nineteenth century and the first decades of the twentieth.

Despite the lecture's foundational role in a now familiar story, Walker's words and pictures were only reassembled by John Dreyfus in the early 1990s.[2] In a compelling investigation, Dreyfus confirmed the lecture's well-known thread of discussion: that early printing was pre-eminent, and set standards from which later efforts slowly declined. He also confirmed Walker's espousal of type partnered and printed in harmony with illustrations, a harmony that was both artistic and mechanical in nature.[3] Type, too, should be well-formed, derived from a vigorous practice of writing; on it all other aspects of printing depended. Walker noted that throughout the fifteenth and early sixteenth centuries, a living relationship existed between manuscripts and their print and typographical relations. Thereafter writing became debased, a condition echoed in types that were poorer in form and beauty. The ensuing decline terminated in the types of Giambattista Bodoni and related nineteenth-century designs still common in 1888.

Evidence of printing's triumph and fall was provided throughout the lecture by a subtly polemical group of images displayed by means of magic lantern slides. These Dreyfus also reassembled. From them,

and from reminiscences of those present in the audience, it is possible to imagine the persuasiveness of Walker's words and pictures. Recollections suggest that the images were novel both in their subject matter and in their display. Photographic enlargements of letterforms and type were arresting; they and other images of books, manuscripts and woodcuts were enchanting, and intensified by their projection in the darkened hall. Their visual rhetoric formed a powerful partnership with Walker's comments on printing's glorious past and wayward progress.[4]

While this account of the lecture (taken from Dreyfus) omits some details, it does give sufficient indication of Walker's views, which had a great effect not only on his audience that evening but on a movement of printing reform that followed soon after. To give his views in summary: that the historical course of writing, type-making and printing was marked by gradual corruption; that renewal might begin by collecting and examining artefacts of the past to establish guides for present-day practice; and thereafter, that the communication between type-making and writing should be re-established to encourage the latter's revival and its central role in the making of types for books.[5] Crucial to this process were images of letterforms and type brought from the past emphatically into the present through photography that recorded and amplified their forms and could thereby guide new designs.[6]

2

Emery Walker's lecture was well received. Apart from its immediate appeal, it was favourably reviewed at the time, while subsequent versions continued to generate comment in the printing trade press (see figure 1, overleaf).[7] But perhaps of greater consequence was the hold Walker's ideas took on William Morris, in whose Kelmscott Press Walker would play a significant advisory role. Though suffused with Morris's own aesthetic tastes, the books issued by the Kelmscott Press

2. John Dreyfus, 'A reconstruction of the lecture given by Emery Walker on 15 November 1888', *Matrix 11* (Leominster: The Whittington Press, 1991), pp. 27–52.
3. According to Dreyfus's reconstruction, the last third of Walker's lecture addressed the relationship between type, illustration and their combination on the printed page. The artistic harmony referred to was partly one of form, that type and illustration should exhibit some formal equivalence. But true harmony was realized only when type and illustration were mechanically unified, i.e. when printed simultaneously and with the same effect. Indeed, Walker argued that artistic harmony was only made possible by mechanical harmony, and that the relationship should always be determined by the type. Judging from Walker's chosen illustrations, woodcut was the illustration technique he thought harmonized with type most effectively.

4. As May Morris observed, 'the audience … were much struck by the beauty of the "incunables" shown, and by the way they bore the searching test of enlargement on the screen. One after another the old printers passed before us, one after another their splendid pages shone out in the dark room'; and 'The sight of the finely-proportioned letters so enormously enlarged, and gaining rather than losing by the process, the enlargement emphasizing all the qualities of the type'. These comments are extracted from a longer description of the lecture. The effect the images had on her father, William Morris, who also attended the lecture, was said (by her) to have sparked into action his latent interest in printing and led to the establishment of the Kelmscott Press. William Morris, *The collected works of William Morris, with introductions by his daughter May Morris*, vol. 15, (Cambridge: Cambridge University Press, 1912), p. xv.

5. This was Walker's preferred scenario. While he is perhaps best remembered for participating in the revival (or reworking) of many historical types, Walker had in fact only proposed this as an interim measure. In his essay 'Printing', published by the Arts & Crafts Exhibition Society (1888), Walker argued that typefounders should endeavour 'to produce once more the restrained and beautiful forms of the early printers, until the day when the current handwriting may be elegant enough to be again used as a model for the type-punch engraver.' It is worth re-emphasizing that Walker focused almost solely on types for books (i.e. for text); the discussion of letters and types for display is conspicuously absent.
6. The excitement generated by Walker's enlargements was only the first indication of their usefulness. Such photography later provided the means for adapting a number of historic types for use by private presses (e.g. Kelmscott, Doves, Cranach, and others).
7. Dreyfus notes Oscar Wilde's attendance at the 1888 lecture and quotes from his enthusiastic review in the *Pall Mall Gazette* the following day. Reports on subsequent versions of the lecture appeared in *The British & Colonial Printer* in 1890 (6/13 February) and 1896 (2 January; see figure 1).

Figure 1. Report on a lecture delivered by Emery Walker at the Central Art Department of the Technical Education Board, Bolt Court, London. *The British & Colonial Printer*, 2 January 1896. 437 x 289 mm (page). Despite the lecture's title, the report notes that Walker also discussed paper and ink, the harmony of type and illustration, and the relative poorness of modern printing materials and methods; thereafter he summarized national characteristics of type. The text does not indicate that Walker discussed formal writing or its relationship to type despite the inclusion of many images of handwriting. Not reproduced here but shown by Walker were images of work from the Kelmscott Press;

a 'lengthy communication' from William Morris (not present) was also read out. John Dreyfus surmises that the images in this report were generated from Walker's slides and may therefore give some indication of those used in his previous lectures. However, there is little direct correlation between the report's text and its illustrations; consequently text, image and layout, as published here, achieve little didactic coherence. The report ends: '[a]t the conclusion of the lecture, a hearty vote of thanks was unanimously accorded to Mr Emery Walker, on the proposition of Dr William Garnett, seconded by Mr W. R. Lethaby, and the meeting terminated.'

Eminents observed Eric Kindel

between 1891 and 1896 embodied much that Walker had recommended.[8] Incunabular and sixteenth-century books provided models for new types and demonstrated the effective use of woodcut illustrations. The manufacture of Kelmscott books harmonized type, illustration, paper, printing and binding to produce objects whose visual and physical qualities were unique at the time.

The books of the Kelmscott Press, and the scheme of concerns that shaped them, reverberated in many quarters of Britain and in countries abroad, and are credited with reinvigorating contemporary printing and type design practices. They also spurred renewal in the sphere of education. By the mid 1890s, efforts begun some years earlier to improve technical education in various regions of England had gathered speed in London. Here the architect William Richard Lethaby played an important role. In 1894, Lethaby was appointed inspector to the Technical Education Board (TEB) of the London County Council (LCC), tasked with scrutinizing London art schools and advising on teaching practices. Two years later, the LCC opened a new art school, the Central School of Arts & Crafts, offering specialized study in the applied arts. On the strength of his work for the TEB, and with recommendations from William Morris, among others, Lethaby was appointed co-principal.[9]

At the Central School, Lethaby set out his programme of reform. He argued that training in technical education – the 'artistic trades' – should derive from workshop practice, in which tools and materials, rightly used, were crucial to design for present-day purposes. Historicism, design by rule and the dislocation of form from context were to be avoided. To this end, teaching was placed in the hands of practitioners who were masters of their craft. Under their supervision, students would engage in experimental work. The aim was to counteract the division of labour and knowledge by encouraging students 'to learn design and those branches of their craft which, owing to the sub-division of processes of production, they are unable to learn in the workshop.'[10] Evening students or those on 'day-release' from jobs elsewhere would engage with processes of design and making in their entirety, an opportunity often unavailable to them in their workplace.

In the sphere of printing and book production, Lethaby gradually built up the Central School's curriculum, beginning with bookbinding. Offerings in printing and book production probably owed much to Emery Walker, whose influence may be discerned in several respects. Before the Central School was opened, Lethaby would have been well acquainted with Walker's views on printing through the activities of the Art-Worker's Guild and its offshoot, the Arts & Crafts Exhibition Society (Lethaby was a founder member of both). The work of the Kelmscott Press would have been known to him also, since by the early 1890s Lethaby counted both Walker and Morris as professional friends. Walker and Lethaby had together advised on London's first specialist printing school, the Bolt Court Technical School, and after the Central School

opened Walker became one of its Governors. Moreover, Walker served as chairman on the LCC's committee on book production.[11]

While Walker's presence can be detected in the character of Central School classes in printing and book production, his influence may also be found in Lethaby's wish to introduce writing into the Central School's curriculum. In 1888, Walker had declared 'The moral is, if we want beautiful type, we must teach children to write beautifully'.[12] Lethaby may have also regarded writing as essential to understanding the origin and appropriate form of letters and types; writing was important in its own right, while claiming a wider significance for printing and typography. His decision to offer the subject soon after the Central School opened seems to at least confirm his recognition of its value.[13]

3

In April 1898, W. R. Lethaby asked Edward Johnston to teach a class in 'Illumination' (as it was first advertised) and this began in September the following year.[14] Despite the title of the class, Johnston's programme of teaching would focus on writing as its primary concern and illumination secondarily. The necessary revival of writing – a 'practically lost art' without commonly understood standards – should proceed by recovering the broad-edged pen as writing's principal source. Through a kind of practical archaeology, Johnston examined older forms of writing as vestiges of the pen's construction and deployment, then made letters anew, guided by his findings. As he would articulate some years later in *Writing & illuminating, & lettering* (1906), '[d]eveloping, or rather re-developing, an art involves *the tracing in one's own experience of a process resembling its past development*.'[15] Thus the re-development of writing would include both the intensive study of historical models and their practical re-creation in a contemporary idiom, an espousal of Walker's view that historical artefacts should guide present-day practice. 'And it is by such a course that we, who wish to revive Writing & Illuminating, may *renew* them, evolving new methods and traditions for ourselves, till at length we attain a modern and beautiful technique.' (p. xvi)

8. Morris's espousal of Walker's recommendations is found in their jointly authored essay, 'Printing' (1893). The essay is more polemical than Walker's own from five years earlier (see n. 5, above; Dreyfus attributes the change to Morris), and its discussions wider, encompassing matters such as word spacing, text colour, and the unity of the double-page spread, concerns central to work at the Kelmscott Press.
9. For details on technical education in London in the 1890s, and the roles played by Lethaby (and Walker), see Godfrey Rubens, 'W. R. Lethaby and the revival of printing', in *The Penrose Annual*, vol. 69 (London: Northwood Publications, 1976), pp. 219–32, and *W. R. Lethaby: his life and work 1857–1931* (London: The Architectural Press, 1986), pp. 173–98.

10. From an early prospectus of the Central School of Arts and Crafts, 1896. See also Stuart Evans, 'Teaching collections then and now,' *Object lessons: Central Saint Martins Art and Design Archive*, Sylvia Backemeyer (ed.) (London: Lund Humphries / The Lethaby Press, 1996), pp. 15–20. This book gathers together other essays on the early years of teaching at the Central School, cited below.
11. (2018) In his comments on this essay, Justin Howes recommended that I investigate the influence of Walker's associate, T. J. Cobden-Sanderson, on the Central School's curriculum. Like Walker, Cobden-Sanderson served as a Governor at the Central School; he was also secretary of the Arts & Crafts Exhibition Society. I have not been able to follow up this line of investigation.

12. Dreyfus, 'A reconstruction', p. 40.
13. (2018) In his comments on this essay, Justin Howes cautioned me against ascribing too much sophistication to Lethaby's views about writing at this time; cf. Lethaby's later (1906) preface to Edward Johnston's important handbook (discussed below).
14. See Justin Howes, 'Edward Johnston's first class at the Central School on 21 September 1899', *Object lessons*, pp. 33–7. When asked by Lethaby to teach the class, Johnston thought himself hardly competent, and so spent the following year teaching himself.
15. Edward Johnston, *Writing & illuminating, & lettering* (London: John Hogg; 2nd edn, 1908), p. xvi. Quotations in this and the following two paragraphs are from this source; orthography and emphases as in the original.

If one examines *Writing & illuminating, & lettering*, this programme of learning by doing is embodied in the book's order and proportions (figures 2–6). The book quickly moves from an historical overview of letterforms (a single chapter) to the practical skills of making (the following twelve). Only then are theoretical issues of letterfrom construction dealt with. The priority is active writing, which Johnston considered the essence of the craft and its instruction. The goal was not only 'to take the best letters we can find, and to acquire them *and make them our own*' (p. xix), but to pursue this with an aim that was also practical in outlook. '[T]he independent craftsman would have to establish himself by *useful* practice, and by seizing opportunities, and by doing his work well. Only an attempt to do practical work will raise practical problems, and therefore *useful practice is the making of real or definite things*.' (pp. xxi–xxii)[16]

Johnston's concern both for making and 'making one's own' meant that he often revisited the relationship between the practice of writing and its models. The models Johnston recommended were several: the Roman square capital – 'The ancestor of all our letters ... in undisputed possession of the first place' (p. 238) – and its pen-formed capital and small-letter relatives, the latter including uncials, half-uncials and his (later) Carolingian-derived 'Foundational Hand'. But the practice of writing needed to approach the work of recovery with care. Models should not be slavishly imitated or humbly copied. Instead, their regeneration must be dynamic, beginning with the perception of a model's 'essential form', on which was built the '*character and finish which come naturally from a rightly handled tool*.' (p. 240)[17] A useful, even hard-working letter was the first criterion that should be satisfied in the present day, not mere obedience to forms located in the historical past. Thus: '*On copying a Hand*.—Our intentions being right (viz. to make our work essentially readable) and our actions being expedient (viz. to select and copy the simple forms which have remained essentially the same, leaving the complex forms which have passed out of use ...) we need not vex ourselves with the question of "lawfulness."' (p. 323)

Sample alphabets of any kind were regarded similarly. Those Johnston provided to his students were often described as freely copied, and were accompanied by annotations encouraging variations in form, shape, proportion, detail and combination. He was intent on discouraging the temptation to regard them as final forms (see figures 7 and 8, overleaf). There were good reasons to avoid doing so. Sample alphabets were themselves removed from the vitality of writing: 'if an Alphabet is written as a Specimen it is primarily a Specimen Alphabet (& is debarred from the natural Freedom or run of free Writing).'[18] They were also removed from true writing by the fact of their mechanical reproduction; and the impulse to 'touch-up' and perfect letters for publication threatened to further deprive them of those 'varieties, differences, faults – wh. are not real faults in Free Writing'. So the danger lay not only in the 'crystallizations' of letterforms through 'slavish' copying but in the
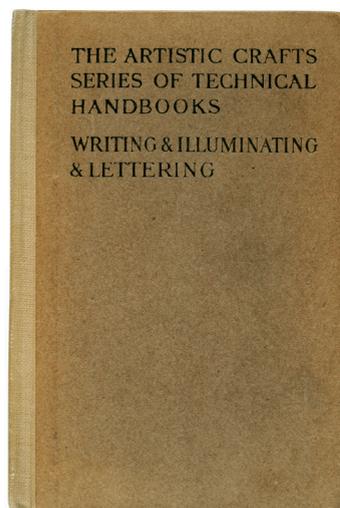
2

Figures 2–6. Edward Johnston, *Writing & illuminating, & lettering* (1906; 2nd edn, 1908, shown here), cover and inside pages, 182 x 120 mm (page). Sequence of diagrams illustrating essential forms and their role in constructing letters whose specific attributes were determined by the broad-edged pen (figures 3, 4). Additional lists and diagrams give an inventory of attributes found in Roman letters (figures 5, 6). These diagrams occur in the book's more analytical second part. Here (chapters 14 and 15) letterforms are dismantled and their parts described in detail.

Johnston created many diagrams for *Writing & illuminating, & lettering,* some of great inventiveness. Their success lies in their ability to demonstrate and summarize concepts and procedures with great precision. While Johnston, with his idiosyncratic flair (and compulsion) for annotation, typically integrated textual notes, the diagrams also function on a purely visual level, and can be understood solely through looking and seeing.

Despite their ingenuity, Johnston was nevertheless concerned that the diagrams should not obscure the proper aim of writing and lettering: 'it is rather as a stimulus to definite thought – not as an embodiment of hard and fast rules – that various methodical plans & tables of comparison & analysis are given in this book. It is well to recognize at once, the fact that the mere taking to pieces, or analysing, followed by "putting together," is only a means of becoming acquainted with the mechanism of construction, and will not reproduce the original beauty of the thing' (p. xxi).

3

4

5

6
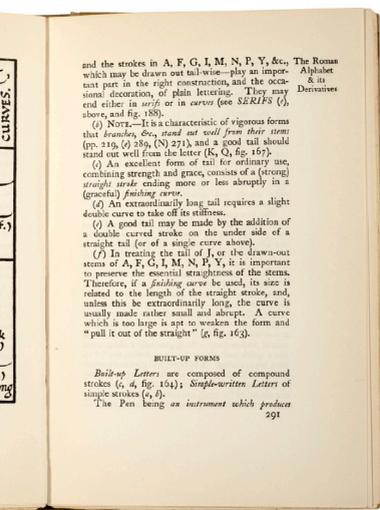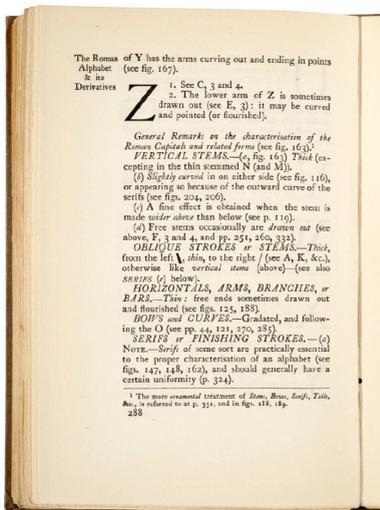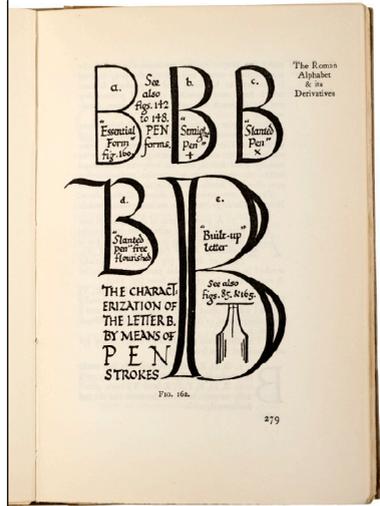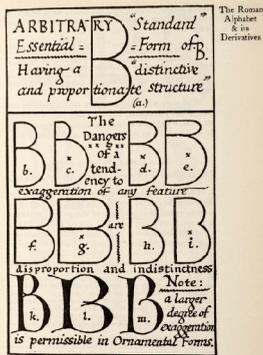
16. This priority remained key to Johnston's view of writing thoughout his working life. In a letter many years later describing progress on a successor to *Writing & illuminating, & lettering,* Johnston pondered both making and how it might be taught: 'Perhaps you know, perhaps not, how long I have puzzled over the question at what point in my Book and how much (and how expressed) should I reveal the vital factors in Formal Penmanship. It is a kind of paradox of Teaching or Learning – To know how to make Things you must make them – ("practising" teaches you how to practise – or rather how to do practising) but the student cannot make things (we say) until he has learnt how to make them. The solution (of How, then, does he learn?) is found in the theorem … Achilles cannot cross a Room, for before he crosses r he must cross r/2 and before he crosses the remaining r/2 he must cross r/2/2 and so on, leaving a fraction to be crossed. The answer may be found in the fact that Achilles does actually cross it, or, in the Act itself'. Edward Johnston, *Formal penmanship and other papers* (London: Lund Humphries, and New York: Hastings House, 1971), p.11.
17. For Johnston the implied tool was almost always the broad-edged pen. But he also made plain that the symbiosis of essential forms and a rightly-handled tool was applicable in many writing and lettering contexts.
18. Quotations in this paragraph from Edward Johnston, *Lessons in formal writing* (London: Lund Humphries, 1986), p.134, recorded in his 'vellum-bound notebook' (not dated).

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Figure 7. Edward Johnston, *Manuscript & inscription letters* (1909). '"Slanted-pen" capitals', plate 7 (of 16; illustrations for plates 12–16 by Eric Gill), 315 x 250 mm. The concept of 'Essential-Forms' (or skeletons) is demonstrated with three variants of Roman capitals made with a broad-edged pen. Each variant shows progressive elaborations until 'letters are of every form and of every variety.' Models illustrated in plates 2–7 are then shown in plates 8–16 in different contexts: as alternative pen forms (see figure 8, opposite), as wood-engraved letters or printing type (Caslon Old Face), and as stone-carved letters. *Manuscript & inscription letters* was published three years after *Writing & illuminating, & lettering*, and summarized the class sheets and notes Johnston distributed to his students. He emphasized even more frequently than in his book that alphabets should be *freely* copied and altered to ensure variety and spirit (see 'General Note' in this figure, above). Johnston stated in the portfolio's introduction that in extracting these models from manuscripts, he had himself copied them freely, leaving the results unretouched for reproduction in order to 'betray … to the *student* not only the forms, but the actual manner of their construction.'

removal of writing's 'natural breaks and roughnesses' that revealed the act of writing and the presence of the writer. Literal reproduction – in several senses – discouraged or disguised the uniqueness of handwritten words and thereby inhibited both freedom in creating them and truthfulness in conveying their essential qualities.

Given Johnston's concern for the immediacy of writing, it is appropriate to consider his classroom teaching as an apt expression of his published pronouncements. By all accounts Johnston was a gifted teacher: reminiscences suggest a presence that surprised and engaged. Seemingly introspective, retiring, even cryptic at first, these impressions were soon dispelled by his clarity of speech and line of inquiry that alternated between direct and discursive. Though Johnston was notoriously inefficient over the syllabus tick-list, for his audience it was a lively process of revelation. His manner and method were made graphic by the act of writing, which often occurred at the blackboard. Here, he would use the long side of a piece of chalk to emulate the strokes of a broad-edged pen. Repetition played an essential role: letterforms would be written, analysed and revised as differences in form and execution were noted and evaluated. Throughout, Johnston's writing was amplified by expansive movements that produced letters whose large scale vividly illustrated their form, proportion and construction.[19]

In different ways, the artefacts of Johnston's teaching are an echo of it. His handbook, the portfolio of class-sheets, surviving photographs of blackboard demonstrations, and his notebooks are all detailed graphic explorations that begin with the writing, which is then analysed through lists, diagrams, annotations and cross-references. The orthography of the texts is often speech-like: (typo)graphic pauses, alignments and stresses suggest the shifts and interventions of verbal delivery. The artefacts are conversational and provisional, encouraging the student to action and, where necessary, contesting the fact of their mechanical reproduction. And the conversations they preserve are vestiges of those Johnston conducted with himself, his qualifications and admonitions turning the artefacts against themselves as they are subjected to critical analysis. That this aligns with reminiscences of Johnston's habit of mind and practice suggests that such artefacts are true and natural, expressing an animated presence that continues to instruct in his absence.

4

By 1912, both Edward Johnston and W. R. Lethaby had left the Central School for the Royal College of Art, where each had been already teaching part-time. Before his resignation, Lethaby had succeeded in drawing together related areas of study. This is evident in the design of a new building in Southampton Row, occupied by the Central School in 1908. Purpose-built to a brief drawn up by Lethaby, it grouped together allied disciplines. Those related to the book were located on one floor and formed a School of Book Production. Lethaby enlarged its teaching
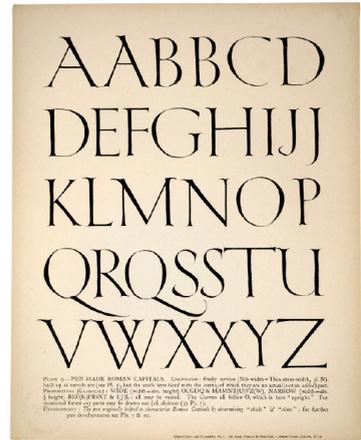
Figure 8. Edward Johnston, *Manuscript & inscription letters* (1909). 'Pen-made Roman capitals', plate 9, 315 x 250 mm.

19. A number of evocations by former students, associates and colleagues were published in *Lessons in formal writing*, among them Noel Rooke and Violet Hawkes. 'At the first sight of him, although his hands could be seen to be capable, sensitive and strong, the general impression was one of lassitude, of physical strength drained right out. Then he spoke. The clearness and vigour of his mind came as a shock, a delight.' (Rooke, p. 48) 'To watch him at work on the board was an education in itself. The easy, swinging rhythm of his strokes was unhurried and unhesitating, like the movements of an accomplished skater, combining perfect control with perfect freedom.' (Hawkes, p. 146).

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staff by appointing Noel Rooke and John Henry Mason. Rooke taught wood engraving, which he regarded as well-suited to book illustration; it played an important part in his classes in 'black & white' design, book illustration and poster design. Mason assumed responsibility for typography and printing. Mason was fresh from the Doves Press where he had served an apprenticeship under Emery Walker and T. J. Cobden-Sanderson, immersed in the principles of the private press movement.[20] Among those already on the Central School staff was Graily Hewitt; he, like Rooke, had been a student of Johnston's and he began teaching a second class in writing and illuminating in 1903.

The establishment of the School of Book Production marks the beginning of a period of remarkable continuity in the teaching of book production subjects that would extend into the 1940s. This continuity may be explained both by the enduring force of Lethaby's programme of technical education, and by the lengthy tenures of Rooke, Mason and Hewitt, whose firmly held and forceful views on teaching would dominate the book production curriculum through the decades. Their views were conservative by nature; that is to say, they espoused Lethaby's concern that craft work be preserved as the core of technical education, then adapted to industrial circumstances. The will to preserve was especially strong in the teaching of Mason and Hewitt.[21]

While risking the obvious, it is worth reiterating that teaching in the School of Book Production revolved to a large extent around *the book*, a place where several disciplines could be brought together and understood in union. If instruction was principally concerned with training apprentices for the printing trade, it nevertheless focused on book work of 'the highest type', modelled on the English private presses and explicitly distinct from advertising or indeed most trade book printing. As Mason wrote of his teaching at this time, 'the aim was to apply the lessons learned by the research and experiment of the great private presses, to technical training'.[22] For him, books from the Doves Press, in their austere richness, embodied many of the principles he valued. His teaching, in turn, enlisted a similar discipline and quality.[23] Discipline was especially evident in the role he assigned to type and typography. Here, typographic expression was circumscribed in deference to the unified book-object where all parts were harmonious and none dominant. This approach also dignified the scholarly texts Mason frequently recommended for student projects. Where type was concerned, the choice was generally Caslon Old Face.[24] The results thus evoked the atmosphere of private press books and the Central School became well known for work of this kind (figure 9). And, like those of the private presses, books made in the School of Book Production sat some distance from the sphere of trade printing where the standards of manufacture were almost always of a different order.

Despite Mason's emphasis on the finely made book, the concerns of trade printing did not go unaddressed. In 1913, the Central School
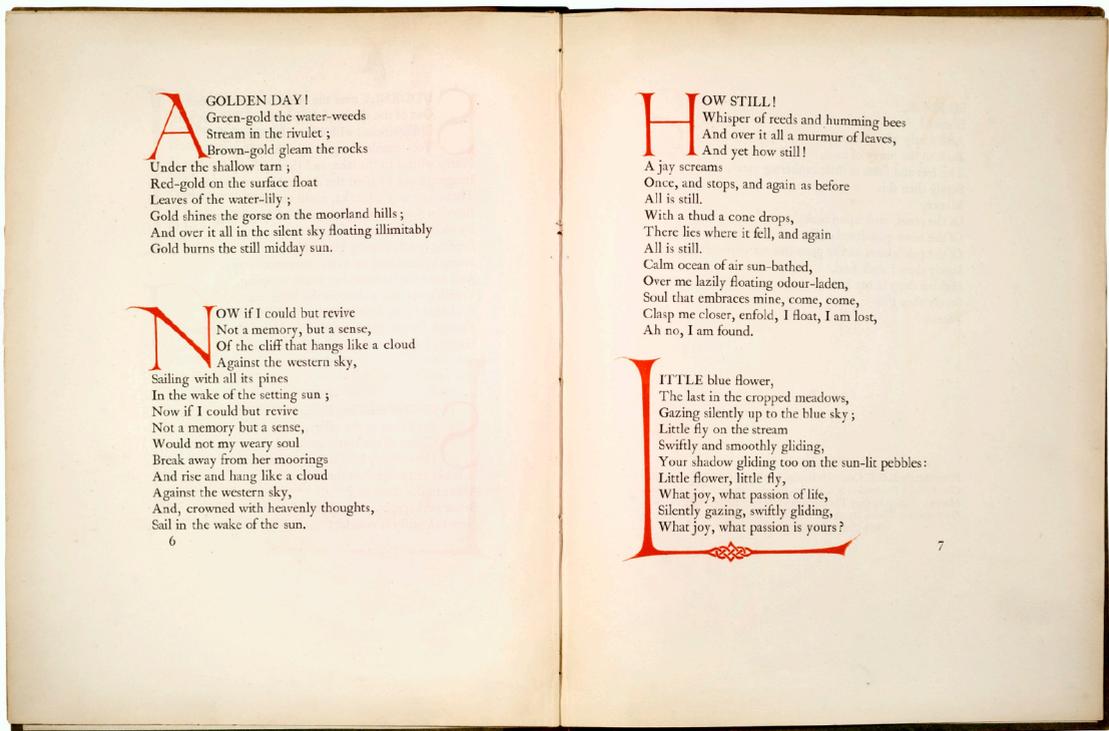
Figure 9. G[oldsworthy]. Lowes Dickinson, *A Wild Rose & other poems* (1910), 275 x 215 mm (page). J. H. Mason had studied the work of the Cambridge scholar Lowes Dickinson and had maintained a long-standing friendship with him, and suggested printing an edition of his occasional poems in the School of Book Production. Two editions were eventually published, one designed by Mason, a second produced by students (shown above). (Both, incidentally, are mentioned in E. M. Forster's 1934 biography, *Goldsworthy Lowes Dickinson*.) The student-produced book typifies the kind of collaboration that took place in the School of Book Production: its typographic design and printing were carried out under Mason's guidance, while the initials were cut with instruction from Noel Rooke (cf. figure 8, p. 61). Books made in Mason's classes at this time were similar to those of the Doves Press in their simplicity of design and their lack of illustration or typographical contrast. In this example, emphasis is laid on the basics: the relationship of text area to margins, the relationship of type size to page size, the evenness of text 'colour', and the unity of the spread of pages, in which each column of type forms a rectangle by means of its precise imposition on the column that shows through from the reverse, giving the spread symmetrical coherence. The exaggerated serifs of the initials and the woven stroke of the 'L' are the only concessions to decoration in an otherwise carefully restrained production.

20. Mason's appointment at the Central School in 1905 was initially part-time, while he continued work at the Doves Press. He took charge of printing and typography in the School of Book Production full-time in 1909. His appointment was warmly endorsed by both Walker and Cobden-Sanderson. Mason was a trade compositor by training (having left school at 13), though he was scholarly by inclination and had done much to advance his own education, notably in classical literature and languages. After some years in the printing trade, he was taken on at the Doves Press, which he later described (in a letter of 1941) as 'a new and beautiful world after commercial work because of its deliberate choice of only the finest standards.' L. T. Owens, *J. H. Mason, 1875–1951, scholar-printer* (London: Frederick Muller, 1976), p. 172.
21. While observations below focus on the views of Mason and Hewitt, Noel Rooke offered an alternative, freer, approach to letterforms as used for posters, book jackets and other kinds of display.
22. Prospectus, Central School of Arts and Crafts, 1928. A similar statement appears in Mason's pamphlet, *Notes on printing considered as an industrial art* (London: The British Institute of Industrial Art, 1926).
23. Mason's experiences at the Doves Press encouraged the view that printing and typography should seek the highest expression of learning and culture, a view he espoused throughout his career. In 1931, Noel Rooke said of the Doves Press influence on Mason: 'Walker and Cobden-Sanderson revealed to him whole constellations of new heavens of printing, and of the literature it had come into existence to serve. Soon, nothing in printing, short of the best that could exist, would satisfy him. Anything that was derogatory or hindered the search for perfection was an offence.' Quoted in Owens, *J. H. Mason*, p. 39.
24. The suggestion to acquire Caslon Old Face for the School of Book Production was apparently made by Emery Walker. As it had for a number of private presses lacking custom types of their own, Caslon Old Face provided Mason with an English type of distinguished pedigree in a range of sizes. In recommending types for study, he stated: '*First of all* Caslon Old Face. The design is based on the Dutch romans, and with that touch of genius so often seen in the work of our race, Caslon has embodied the English tradition in his instinctive modifications of the Continental type. He has made a gentleman of a sloven.' J. H. Mason, 'Essay on printing' (Arts & Crafts Exhibition Society, 1944), quoted in Owens, *J. H. Mason*, pp. 51–2.

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prospectus listed mechanical type composition and methods of process reproduction (three-colour, halftone and line work) as among the subjects Mason covered, while newspapers and advertising were also discussed. Little evidence appears to survive of the application of processes found in trade printing, though a contemporary, bound volume does gather together small advertisements composed by students and set mostly in Caslon Old Face.[25] But 1913 was important in another, related way: that year *The Imprint* magazine was launched. Written, edited and produced mainly by staff at the Central School (Mason served as a co-editor and contributing writer), it sought to promote new and different standards for trade printing in general, and periodicals in particular. As a printed artefact, *The Imprint* did demonstrate that high standards need not be confined to the private presses. This was especially true of the magazine's typography, which employed a new type, Imprint Old Face. The design was instigated by Mason, and was related to William Caslon's Great Primer Roman. It was expertly customized by its manufacturer, the Lanston Monotype Corporation, to the requirements of mechanical type composition and to the hard smooth papers then common in trade printing. The type served its utilitarian remit with notable success and illustrated the benefits of industrial and craft collaboration.

The Imprint, however, was short-lived, running for just nine issues. The magazine probably did encourage improvements in trade printing, while at the same time reinforcing Mason's contention that private press printing was the most relevant guide for the betterment of the trade. This view is evident in articles and reviews Mason contributed to *The Imprint*, which sometimes expressed impatience with commercial print and reproduction. The perfection of means and expression he valued were elusive in the less refined regions of printing where other imperatives – scale, speed, profit – dominated the work and required compromises that Mason was loathe to countenance. In the School of Book Production, emphasis remained for the most part on fine (book) printing as the point of departure. Curricula in successive prospectuses changed little from one year to the next, while the character of the books produced early in Mason's tenure persisted in later years, if more frequently embellished with wood-engraved illustration. The principle at work remained one of diffusion: that the craft of printing should flow from the private presses though technical education into the trade, carried there by the spread of students' skills. This assumption of cause and effect helped Mason define his means and materials, but it also ensured that many other applications of printing and typography, and the broader range of visual and technical expression they might require, would remain comparatively insignificant in his teaching.[26]

5

In the character of his teaching, Graily Hewitt had much in common with J.H. Mason. As mentioned, Hewitt had been a student of Edward
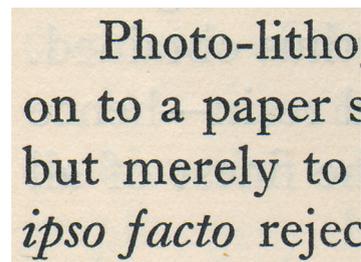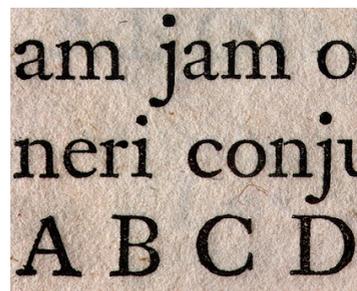
Figure 10. William Caslon I, Great Primer Roman (*c.* 1728), as shown in Caslon's broadsheet specimen of 1734.
Figure 11. Imprint Old Face (1912–13), as shown in *The Imprint* (1913).
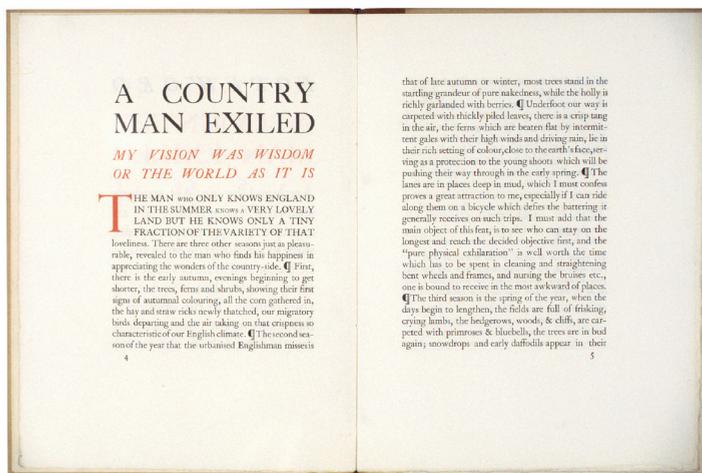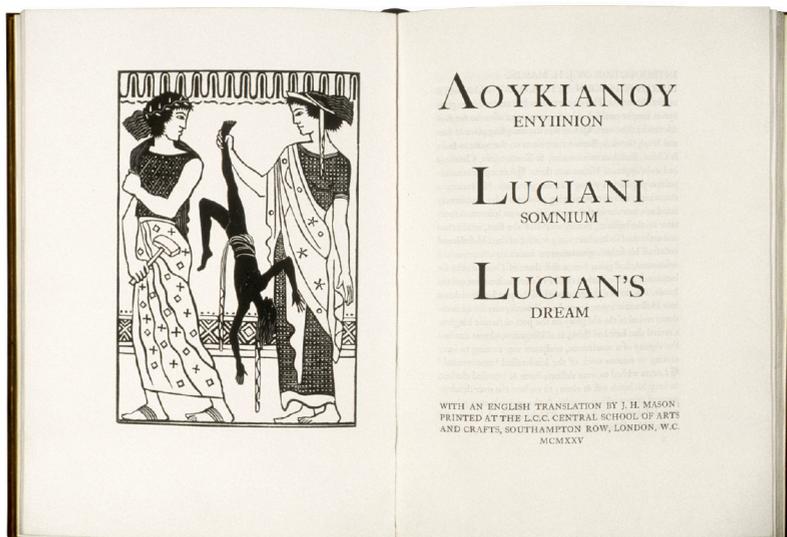
Figure 12. *Lucian's dream*, School of Book Production, Central School of Arts & Crafts, London (1925). English and ancient Greek composed in Caslon Old Face, Greek translation by J. H. Mason. 282 x 210 mm (page). Woodcut by Frederica Graham (Noel Rooke, instructor); type composition by J. J. Andron (J. H. Mason, instructor).

Figure 13. *A country man exiled*, School of Book Production, Central School of Arts & Crafts, London (1938). Compiled and illustrated by Reeve L. Johnson. 260 x 195 mm (page).

These examples illustrate typical literary material selected for student projects, to which Mason often made scholarly contributions. Together with figure 9 (p. 63, above), they suggest the continuity of typographic expression found in Mason's workshops over the years. Writing in 1946, after his retirement, Mason made plain those principles he valued in typography, principles resonating with the concerns that Emery Walker had outlined many years before: 'Typography has first a beauty of letter-form, from this we create a beauty of texture by word spacing and line spacing; from this we proceed to a beauty of proportion in planning a type area, in deciding the width of line in relation to the type, and depth of page in relation to the line, and then relating the margins to the printed page. Initial letters, or words or lines or masses, mark the exordium of the work and of its parts and afford the printer an opportunity for enthusiasm. A similar enthusiasm seizes the opportunity for illustration, or emphasis, but always in a strictly typographical mode. All this is to be realized in an atmosphere of loving technique. THIS IS HOW A FINE BOOK IS MADE.' 'Typography: a printer's philosophy', *Fifteen craftsmen on their crafts*, p. 59, capitalization in the original.

25. *School of Book Production & Printing, specimens of general jobbing advertisement & table work …* (London: London County Council, Central School of Arts & Crafts, 1914).

26. Mason's approach may be additionally characterized by his recommendation that Edward Prince, who had cut many private press types including the Doves Press roman, initiate a class in hand punchcutting. This was begun in 1914, immediately after the demise of *The Imprint*. Elsewhere, the lessons of Imprint Old Face seemingly played little role in Mason's teaching. While its success as an adaptation designed for the requirements of mechanical type composition suggest an engagement with up-to-date concerns, students were mostly set to work drawing the typeforms of Caslon Old Face as a prelude to that type's near-exclusive use in practical studies. Both instances reaffirm the Central School's aim to revive or preserve crafts whose relevance to modern industrial production was not always self-evident.

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Johnston's and subsequently began his own course in writing and illuminating at the Central School. During these years he formed a close friendship with Johnston and the two were occasional collaborators, most notably when Hewitt supplied an appendix on gilding to *Writing & illuminating, & lettering*. Hewitt's teaching followed that of his mentor in asserting the broad-edged pen as the source of writing and lettering. The applications of writing were title pages, notices, documents and addresses, while the form of the book set the 'traditional and conventional standard' for much of writing's visual expression. Like Mason, Hewitt's approach remained remarkably consistent during his years at the Central School. In 1930, when he retired, the description for his course was little changed from 1903, and the influence of Johnston's ideas remained undiminished. But in Hewitt's teaching there was a difference of emphasis on the proper role of writing, and this set him apart from Johnston in a number of important ways. The differences are perhaps best seen in two books Hewitt completed in close succession towards the end of his career.

The first was *The pen and type-design*, published to announce Treyford, a new typeface Hewitt had designed; the book was a type specimen in the mode of fine printing.[27] In it, Hewitt stated that Treyford was 'an attempt to represent our printed letter-forms with due regard to their creation by the pen and their adaptation for the use of the machine, and further to their conformations in our language.' (p. 31) Treyford was thus a rendition of Hewitt's writing with a broad-edged pen, adapted to mechanical type composition. His rationale for the design sprang from the pen's mediation of the forms of letters over many centuries. This encouraged a direct, even literal, translation of pen-formed letters into metal type. The goal was legibility, authorized by the historical conventions of writing.[28] In the preface to *The pen and type-design*, Hewitt also took the opportunity to disparage advertising's 'graphic bawl' as typified by 'block letters' (sans serifs), whose insensitive forms and aggressive deployment were, he asserted, a corruption of letters.[29]

Hewitt's second book, *Lettering*, was published two years later and summarized his practice and teaching of formal writing.[30] The book would not be like Johnston's; Hewitt felt that *Writing & illuminating, & lettering* was unsurpassed in its usefulness and he did not, anyway, wish to give his own thoughts this form. 'All who are interested in lettering are acquainted with Edward Johnston's classic. To him, as my first teacher, I owe more than most. This book [i.e. *Lettering*] represents a point of view and a settled policy in regard to writing, with reasons for the choice. Any restatement of familiar matter or figure is here only employed where the clarity and continuity of my observations or modifications have seemed to me to call for it.' Hewitt's approach, his 'settled policy', made *Lettering* treatise-like, less concerned with practical making than with the theoretical bases of writing and lettering. In tone and style, his writing was stern and occasionally sententious.
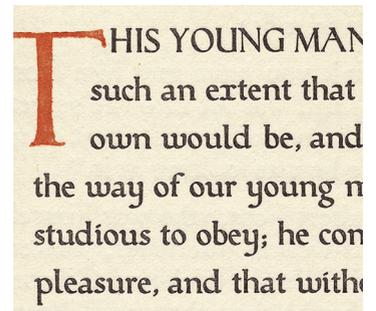
Figure 14. Treyford, designed by Graily Hewitt (1928), as shown in *Matrix 13* (1993).

The introduction to *Lettering* begins with a summary of the forces and pressures exerted by advertising and publicity, and that Hewitt detected at work in the field of writing and lettering. Here, as in *The pen and type-design*, he detected anatagonisms between the accumulated conventions of legibility and good taste, and the concerns of commerce:

> For some years past serious endeavour has been directed towards the improvement of writing – our alphabet's technique. Our lives are littered with lettering, our walls plastered with it, our skies ablaze with it. We have imagined this more endurable if better done. But in considering the bettering of it we have taken certain standards too much for granted, without weighing their applicability to our modern purposes; and are now becoming aware that too often they are inadequate. We have presumed that the scholar and the artist, and now the scientist, are fit judges for the essentially legible. We have overlooked the advertiser. His legibility is not always theirs. If refinement may assist his purpose, which is to sell something, well. But that he catch your eye is the important point. Advertisement is competitive. Exceptionally a quiet sobriety may attract notice in a noisy crowd, but only so long as isolated by singularity. If all our lettering, crowded as it is, were 'in good taste', it would fail commercially. For the essence of advertisement is to compel attention. The lettering must assist this – somehow. The classic style does not admit this premise. How, then, can we improve our commercial lettering by reference to classic standards? The question must be answered by reference to other than these. It is being so answered.[31]

This passage is notable for setting out the issues Hewitt found most vexacious in writing and lettering. Oddly, he appears forward-looking at first in his acceptance that other standards of form and legibility were required for commerce, standards other than those of the scholar, the artist and the scientist of letters. But Hewitt's seemingly pragmatic disposition is, in fact, shot through with disdain for advertising's simple and blunt requirements. He readily admits that the 'good taste' of the classic style is largely irrelevant in such circumstances, and it becomes clear that Hewitt's underlying concern is not with advertising, but rather that the classic style has little place in its operations. As such, advertising is regrettable: its crass pervasiveness crowds out alternatives in good taste, its distortions and exaggerations – the 'noisy crowd' – attack

27. Graily Hewitt, *The pen and type-design* (London: The First Edition Club, 1928). The book was bound in red morocco with gilt decoration; it was printed on Barcham Green hand-made paper in an edition of 250 copies.
28. Hewitt's line of reasoning was rebutted by Stanley Morison, who reviewed *The pen and type-design* in the seventh issue of *The Fleuron*. Morison accused Hewitt of ignoring the conventions of typography by asserting the priority of written forms in type-making and printing, thereby discounting what Morison considered the more formative contributions of engraving, i.e. the work of the

punchcutter. 'Mr Hewitt therefore is not, in our opinion, welcome to dismiss the printer as a mere corrupt imitator of the more highly endowed scribe.' Morison, 'The Treyford type', *The Fleuron*, no. 7 (London: Cambridge University Press, 1930) pp. 180–5. For a digest of this episode and the process of Treyford's design that preceded it, see Peter Foden, 'John Johnson and the Treyford type', *Matrix 13* (Whittington: The Whittington Press, 1993), pp. 62–72.
29. Block letters, commercial and utilitarian, ignored 'that prime element of beauty (as of scholarship) in lettercraft,– contrast of thick

and thin strokes, and the regular gradation from one to the other in the curves'. Hewitt, *The pen and type-design*, p. 31. Hewitt returned to the subject of block letters in other publications and in private correspondence (see n. 34, below).
30. Graily Hewitt, *Lettering for students and craftsmen* (London: Seeley Service, 1930). The book was published in a specially bound limited edition that included several original alphabets written by Hewitt, and as a cloth-bound trade edition in a paper wrapper, with no additional matter.
31. Hewitt, *Lettering*, pp. 17–18.
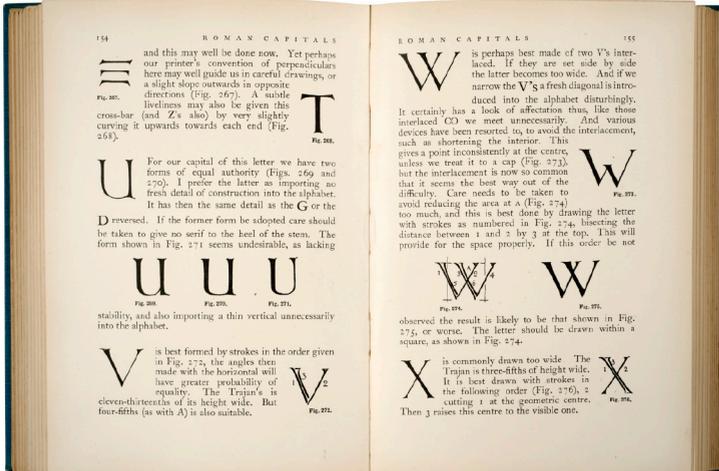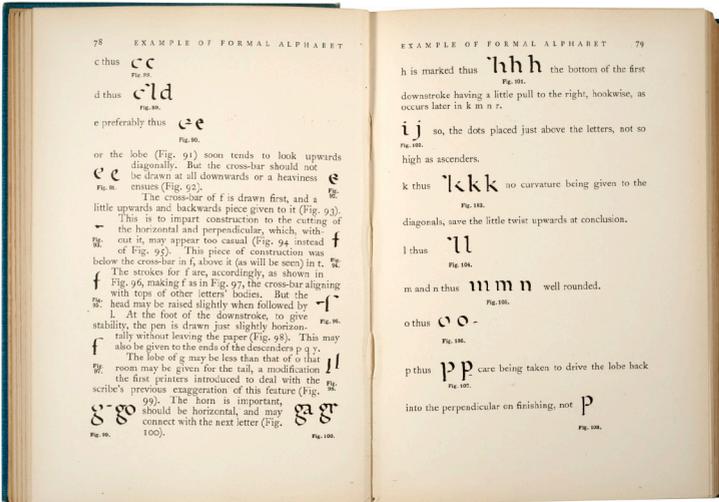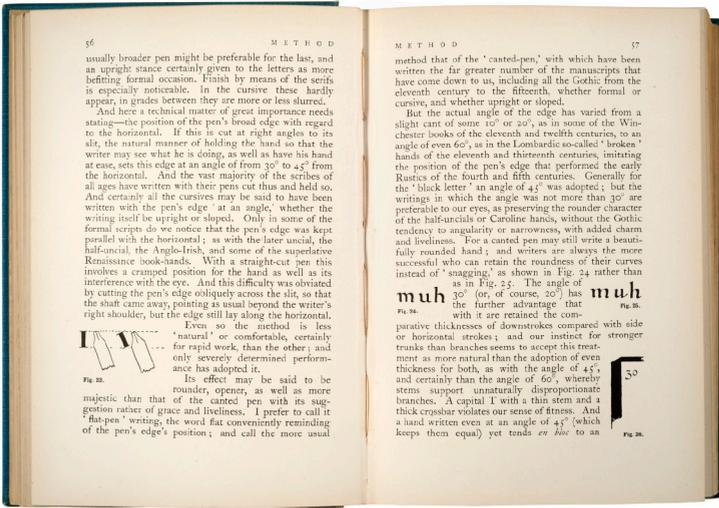
Figures 15–17. Graily Hewitt, *Lettering for students and craftsmen* (1930), spreads from trade edition, 197 x 135 mm (page). For Hewitt, as for Johnston before him, the broad-edged pen is the stated basis of letterform construction. Unlike his mentor, however, Hewitt grants far less importance to 'essential forms'; instead (roman) letters should follow no more than a general convention of stroke placement. Thereafter the letterform is determined by the characteristics of the pen. To accept that essential forms underlie roman letters is, to Hewitt, an espousal in principle of 'block' letters, which, unmediated by the broad-edged pen, are a contravention of its standard.

Hewitt's views meant that the letterforms he illustrates in *Lettering* are predominantly those formed by the broad-edged pen, in most instances shown at the same size as written to avoid any exaggeration of effect. The result is less demonstration through image – understanding by *seeing* – and rather more discourse through text. The integration of illustration and text, especially at sentence level (figure 16), offers coherence but of a kind facilitated mainly through reading. In general, the visual expression of *Lettering* is circumspect. Where the pages of Johnston's manual convey the act, energy and diversity of making, Hewitt's presentation is by comparison constrained and often monotonous, despite its strongly and consistently argued 'policy'.

15

16

17

valuable conventions by encouraging a new legibility determined merely by competitiveness. Despite the fitness for purpose that some (un-named) letterforms possessed in the service of commercial ends, it remained the grotesqueries of 'the competitive standard' that precluded more sensitive solutions.

While Hewitt suggested, in general terms, changes in the conduct of advertising to make way for more 'civil intercourse', he clearly recognized the difficulty of such reform. Here, he again echoed his colleague Mason by voicing interest in the variety of his displine while at the same time avoiding direct contact with practices whose means were considered impure. Thus in his second chapter, 'The pen's standard', Hewitt left behind the complexities and vagaries of lettering that he began with and focused instead on the core issues of writing. 'The story of writing, for us whose sole concern may be said to be the Roman alphabet, resolves itself into the story of but one tool, the Pen.'[32] With it, the construction of letters on a standard pattern disentangled the complexities and uncertainties of writing and lettering under modern conditions.

> We are too apt to be perplexed with what seems to us a jumble of styles to choose from, when acknowledgement of but one style, permitting degrees of elaboration in execution according to circumstances would unravel the whole matter. This is the remedy suggested here. The tool which developed and preserved for us so magnificent an achievement of the Roman alphabet may well be trusted for the performance of our modern needs also.[33]

Hewitt had now fixed his sights, though much of what followed in *Lettering* (chapters 3–20) still resembled *Writing & illuminating, & lettering* by first summarizing the letters whose source was classical Rome, then examining the methods, uses and details of writing. Both books were concerned with the practical elements of writing, and acquiring a good 'hand'. Each devoted considerable attention to the Roman square capital as a cornerstone of contemporary writing and lettering, and a guide to present-day practice. Thereafter, however, Hewitt put forward his own, more personal, opinion of the proper aim of writing and lettering by returning to the issue he had raised in his introduction: legibility. Over four succeeding chapters, he again defended the pen's standard as the only one to which present-day conventions of legibility could be traced, the standard that conditioned both the form of letters and how these forms were recognized. And while Hewitt acknowledged that each context required its own kind of legibility, he continued to excoriate departures from scribal convention. Thus *Lettering* was, like *Writing & illuminating, & lettering,* partly an argument for the priority of writing in determining the Latin alphabet's most conventionally appropriate form. But Hewitt went further by insisting, in terms that were explicitly limiting, that pen-written forms derived from a Roman heritage should come before, and give order to, everything else. Where variety was required,

32. Hewitt, *Lettering*, p. 23.
33. Hewitt, *Lettering*, p. 28.

the pen's standard might be embellished, but only modestly, as implied by Hewitt's dictum of 'variety modifying order'. Diversity to any greater extent would encroach on those conventions he sought to defend.[34]

6

Graily Hewitt's tenure at the Central School lasted nearly three decades, until 1930; J. H. Mason retired in 1940, and Noel Rooke, as head of the School of Book Production, stayed on until 1947. They were among the last whose teaching reached back to the Central School's earliest years, and in the case of Hewitt and Mason, the potent if at times circumscribed approach to their disciplines underpinned teaching that was continuous and largely unwavering.[35] But by the late 1940s, changes first hinted at in the inter-war period were now more in evidence as teaching in design for print and in the use of letterforms and type became increasingly varied. A key figure in these changes was Jesse Collins. He had joined the Central School in the 1930s, but did not belong to the Mason tradition. As one of his students, Anthony Froshaug, later observed, Collins 'did a class on one evening a week in what I think was called advertising design. He … had in fact been brought in, … once a week for 2½ hours, perhaps to lend a touch of actuality to the course, which was art & crafts based.' By 1948, Collins was in a position to invite back his ex-student Froshaug to teach part-time at the Central.[36]

Froshaug's appointment represented an important shift in the outlook of the School of Book Production. The influences that informed his approach to typography were then uncommon in Britain. They were continental in origin and modern, and thus some distance from the historicizing tendency of the private press movement that underpinned teaching at the Central School.[37] A second figure who also joined the School of Book Production staff at this time was Herbert Spencer. He, too, brought an alternative view of the typographic designer's relationship to commercial printing.[38] And, at Froshaug's suggestion, Edward Wright began an evening class in 'extempore' typography (i.e. typography without preparation) involving the free play of wood type and letterpress furniture on the press bed to produce prints in a spontaneous and expressionistic manner. In these and other instances, new teaching methods were introduced, often small in scale but nonetheless exemplary by encouraging ways of working that were considerably different from what had gone before.[39]

By the early 1960s, many of the innovations that had refreshed teaching at the Central School in the 1950s had become well established. Their contribution to instruction in 'graphic design' involved an engagement with letterforms that was predominantly typographic, that is to say, where an understanding of letterforms was pursued less by making them oneself, than by receiving them ready-made as type. Some in the renamed School of Book Production and Graphic Design felt that teaching had now swung too far away from writing and lettering, whose

principles and possibilities had much to offer graphic designers otherwise preoccupied with type. To effect a change in emphasis, Nicholas Biddulph, then instructing students in letterform design, began collecting material to illustrate his classroom discussions. He first secured examples of Roman inscriptional letters that had been of such importance to his Central School forebears, Johnston and Hewitt.[40] Soon after, Biddulph was joined by Nicolete Gray who had been invited to develop with him a much expanded course in lettering. It would emphasize an historical understanding of letterforms while urging an adventurous and eclectic approach to their present-day design.

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To provide some context for this new lettering course, and why the collecting of examples and artefacts began to accelerate soon after its launch, it is necessary to review some of Nicolete Gray's interests and

34. Though Edward Johnston never moved significantly beyond the broad-edged pen that he considered the 'essential arbiter' of letters – 'this magically seeming tool' – his conviction that letterforms were finally derived from the attributes of the tool and the medium left a more open, if unspecified, field for the subsequent development of writing and lettering. *Lettering* was reviewed by Johnston soon after its publication. He pointed out that Hewitt's concern to establish a standard had become disproportionately proscriptive: 'while the author shows appreciation of the value of variety, and points out that vitality and vigour are essential, yet – perhaps because of his strong desire to outline and prove a right standard – [there] is here and there a sense of prohibition which might check essays in the super-normal use of the pen, and even "obliterate", in a too literally faithful student, a "distracting choice" from that infinite variety which is the life of the craft.' Johnston, 'Review of *Lettering* by Graily Hewitt', *Artwork*, no. 28, Winter 1931. Hewitt's rigid, even doctrinaire, consolidation of Johnston's approach was, as mentioned, sometimes expressed in his attacks on 'block letters', a recurring irritation on both formal and moral grounds. In a letter (1935) to Sydney Cockerell, Hewitt wrote of Johnston's letters for the London Underground Railways: 'In Johnston I have lost confidence. Despite all he did for us at the beginning of this century he has undone too much by forsaking his standard of the classical Roman Alphabet – giving the world, without safeguard or explanation, his block letters which disfigure our modern life. His prestige has obscured their vulgarity and commercialism.' Quoted in Wilfrid Blunt, *Cockerell*, London: Hamish Hamilton, 1964, pp. 94–5). I am indebted to Justin Howes for both references in this note.
35. The components of their teaching were consistently lettering, wood-engraving, type composition and bookbinding; many students were trained as compositors for trade

printing. Mason claimed the Central School as one of the few institutions training the 'typographic designer'. Notably, a prospectus from the late 1920s, after describing at length the work of fine book production at the Central School, ends 'but our main energies are devoted to the training of the London printer, and therefore our pre-occupation is with advertisement display and jobbing work'.
36. Froshaug's first, part-time, appointment in 1948 lasted three terms. He returned in 1952 to assume a full-time post as Senior Lecturer in Typography, though this appointment only lasted a further four terms. Quotation from Robin Kinross, *Anthony Froshaug, Documents of a life* (London: Hyphen Press, 2000), p. 99.
37. The influences Froshaug brought to his work and teaching were derived from the reforming New Typography first summarized by Jan Tschichold in Germany in the 1920s. Tschichold's *Typographische Entwurfstechnik* (1932) was especially important to Froshaug's thinking. See Kinross, *Anthony Froshaug, Typography & texts* (London: Hyphen Press, 2000), pp. 15–19.
38. This could be seen in Spencer's work as consultant to the publisher and printer Lund Humphries, and in his book *Design in business printing* (1952). Spencer also promulgated variety in the work of the typographic designer, as seen in *Typographica*, the periodical he edited from 1949. It brought new work from continental Europe to the attention of British designers.
39. To signal its broadening field of concerns, 'Graphic Design' was appended to 'School of Book Production' in 1951. Reporting on this change, Central School principal William Johnstone wrote: 'A contemporary approach … regarding elements of printing does not necessitate a deviation from the high standards of Mason's perfectionism, but rather the application of those standards to new patterns, forms, and techniques.' Johnstone, 'Graphic design at the Central School', *Penrose Annual*, vol. 47 (London:

Lund Humphries, 1953), pp. 58–60. A less conciliatory view of this transition is provided by a student at the time, Ken Garland, who described Edward Wright's class as 'saved (for a while, at least) from the outrage of the trade printers by the fact that we were doing our awful thing only in the evening, and by the authority of Anthony Froshaug, who waged god knows how many bitter battles with those narrow-minded little people on our behalf.' Ken Garland, 'Graphic design in Britain 1951–61: a personal memoir', *A word in your eye* (Reading: The University of Reading, 1996) pp. 62–7; and in the same volume, 'Obituary: Anthony Froshaug 1920–84' (pp. 68–9) and 'Teaching and experiment' (p. 82). See also Edward Wright, 'The Central School of Arts and Crafts', *Edward Wright: graphic work & painting* (London: The Arts Council, 1985) p. 47; Robin Kinross, 'Letters in the city', *Eye*, vol. 3, no. 10, 1993, pp. 66–73; and Sylvia Backemeyer, '"Visual language": the growth of graphic design' in Backemeyer (ed.), *Making their mark: art, craft and design at the Central School 1896–1966* (London: Herbert Press, 2000) pp. 33–45, which includes a number of first-hand accounts. Discussion of this period of the Central School is also woven into Kinross, *Anthony Froshaug, Typography & texts*, pp. 29–30 and *Documents of a life*, pp. 94–103. (2018) See also Robin Fior, 'Working with Edward Wright', in Paul Stiff (ed.), *Modern typography in Britain: graphic design, politics, and society* (*Typography papers, 8*), (London: Hyphen Press, 2009), pp. 173–8.
40. The images Biddulph first acquired were taken by James Mosley, who had recently shot a series of photographs of inscriptional lettering in Rome. A set of enlargements were made from Mosley's negatives for Biddulph's teaching. See (e.g.) James Mosley. 'Trajan revived', in *Alphabet 1964: international annual of letterforms*, vol. 1, R. S. Hutchings (ed.) (London: James Moran, 1964), pp. 17–48.

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concerns in the years before her arrival at the Central School. 'Of all those who have written about letterforms, there is surely no-one whose repertoire was quite so extensive as Nicolete Gray's. She spanned the centuries with consummate ease from ancient times to the twentieth century.'[41] This observation made by a younger contemporary shortly after Gray's death in 1997 alludes to an important feature of her work, the embrace of breadth and diversity in letterforms. The introduction to her first book, *Nineteenth century ornamented types and title pages* (1938) (figure 18), announced this: 'we need to explore, not to exclude'. The compendious documentation of nineteenth-century examples that followed was proof of her intentions. Exploring meant discovering the diversity of expression that letterforms could convey. Gray sensed around her a 'growing susceptibility to the power of suggestion and expression in letters', and *Nineteenth century ornamented types and title pages* demonstrated the ways this power could be delivered. And, as the embrace of letterforms widened, so too their range (and power) of suggestion and expression would grow. Gray's explorations showed her determination to avoid proscription dictated by orthodoxy, taste or fashion, and demonstrate that the expanse of lettering was far larger and more extraordinary than many allowed. *Nineteenth century ornamented types and title pages* was again proof of this, surveying an era of type and lettering whose exuberant and fantastical inventions had attracted the scholarly attention of few others.[42]

The inter-war interest in nineteenth-century letterforms, to which *Nineteenth century ornamented types and title pages* contributed, gathered pace in Britain after 1945.[43] This was evident at the 1951 Festival of Britain, for example, where a variety of slab serif / Egyptian designs were deployed on buildings and in publications to reinforce the Festival's celebration of domestic industrial creativity. Interest could also be found in the pages of *The Architectural Review*, where a series of articles commissioned from Gray between 1953 and 1959 considered letters in the built environment.[44] These articles gave sense, order and historical context to the different letterforms architects could make use of in their work, and employed numerous photographs to illustrate both their formal qualities and their relationship to buildings and places (figures 19, 20).

In 1960, Gray assembled her articles for the *The Architectural Review* in a book entitled *Lettering on buildings* (see figures 21–24, overleaf). The content and organization of the book echoed the serial form of the articles, giving arguments scattered across many issues of the magazine a more concentrated form, while allowing Gray to also expand the arguments and refine them, and add important new material. By way of introduction, Gray turned her attention to a theory of letterforms she felt had restrained their expressive use in architecture. This was the 'classical theory', originally a Renaissance formulation of letters articulated in a sequence of fifteenth- and early sixteenth-century treatises. Their common feature was the construction of Roman square capital letters based
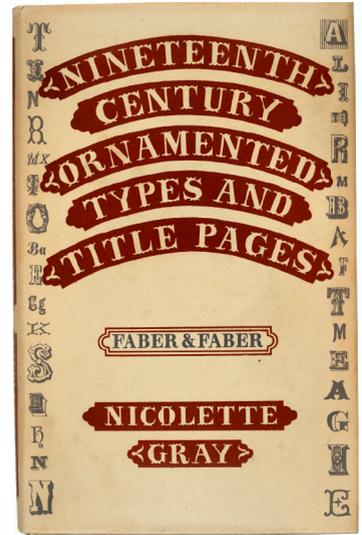
Figure 18. Nicolette Gray, *Nineteenth century ornamented types and title pages* (1938), cover, 218 x 135 mm.

Figures 19, 20. (opposite) *The Architectural Review*, spreads from articles by Nicolete Gray, 307 x 248 mm (page). **19.** 'Theory of Classical' (November 1953). **20.** 'Egyptians' (June 1954).

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41. Michael Twyman, 'Nicolete Gray: a personal view of her contribution to the study of letterforms', *Typography Papers*, 3 (Reading: Department of Typography & Graphic Communication, The University of Reading, 1998) pp. 87–102. This essay provides a review of those interests and ideas Nicolete Gray pursued throughout her working life. See also Frances Spalding's 'A true statement of a real thing' in the same publication (pp. 103–14). It describes Gray's interest in modern art, which informed her study and teaching of letterforms.

42. Quotations from *Nineteenth century ornamented types and title pages* (London: Faber & Faber, 1938). Gray made reference in her introduction to a doctrinaire view of typography to explain the relative lack of interest in letterforms from this era. 'We suffer today from the lucidity and insistence with which the principles of book typography have been explained to us. Having learnt our lesson we tend to apply it indiscriminately to all forms of lettering. "Typography is the efficient means to an essentially utilitarian and only accidentally aesthetic end …. If readers do not notice the consummate reticence and rare discipline of a new type it is probably a good letter." Mr. [Stanley] Morison has stated the austere doctrine in its most extreme form, but his idea is the logical root behind all doctrines that the primary purpose of all lettering must be legibility, that its only perfect attribute is simplicity.' (p. 13)

43. Further evidence in Britain of an interwar interest in nineteenth-century letterforms includes the release of typefaces such as Chisel, Playbill and Thorne Shaded by Stephenson Blake & Co. during the 1930s. These followed a renewal of interest in slab serif / Egyptian and fat face letterforms in the late 1920s and early 1930s. Discussion could also be found in the journal *Typography* (1936–9), whose editor Robert Harling was typographical adviser to Stephenson Blake.

44. 'Theory of Classical' (November 1953), pp. 295–302; 'Classical in practice' (December 1953), pp. 400–1; 'Sans' (April 1954), pp. 269–71; 'Egyptians' (June 1954), pp. 386–91; 'Ionic' (August 1954), pp. 119–20; 'Tuscan' (October 1954), pp. 259–61; 'Modern face and fat-face' (April 1955), pp. 273–4; 'Miniscule' [*sic*] (December 1955), pp. 398–400; 'Alphabet' (August 1956), pp. 109–14; 'Street lettering' (April 1957), pp. 224–9; '3D' (October 1957), pp. 252–4; 'Material and design' (July 1958), pp. 30–4; 'Expressionism in lettering' (April 1959), pp. 272–6; 'The Modern movement' (May 1959), pp. 336–40.

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Figures 21–23. Nicolete Gray, *Lettering on buildings* (1960), spreads, 220 x 140 mm (page). 'Roman Lettering' (21); 'Nineteenth-century Egyptian Lettering' (22); 'Twentieth-century Minuscule Lettering' (23).

on idealized proportions and other geometrical relations. In this theory, Gray detected an underlying Platonic ideal at work that neglected the mediating influence of size, material, purpose or function. In twentieth-century Britain, Gray argued, the classical theory had led to the adoption and use of a particular model, identified 'for convenience and through laziness' as those letterforms inscribed on the base of Trajan's Column in Rome. The result, in practice, was the tendency to uniformly impose Trajan letters – sometimes in a corrected and standardized form – on to many different contexts.

Gray linked this tendency to a misunderstanding of Edward Johnston's earlier proposal that 'essential forms' underpinned Roman square capital letters. But these, Johnston had insisted, were not an imposition of reductive uniformity but rather denoted a letterform's 'lowest-common-denominator' of structure and proportion, released from local detail. From its essential form, a letter could be made anew with various tools. Gray acknowledged that in Johnston's proposal there existed the possibility of avoiding homogeneity by way of the specific qualities wrought by the tool and, implicitly, the mediating circumstances of a letter's context of use. But what followed from Johnston, Gray argued, was often imitation and uniformity. Hewitt's self-imposed stricture of one tool – the broad-edged pen – and his desire for legibility and a single Roman standard were symptomatic. So, too, were Eric Gill's chiselled inscriptions, in their later manifestations excessively allied to his type designs and thereby lacking an animating spirit. From such evidence, Gray concluded that architectural lettering was in general stifled by a limited range of tools and media, and by an association with 'typographical ideas' that prioritized letterforms that were 'legible and unobtrusive'. Gray specifically challenged the transposition of the latter to architecture: 'with architectural lettering the typographical criteria must be reversed; the dominant factor is design not legibility.' Within the built environment, identity, character and location should come before mere legibility.[45]

Gray sought out lettering that was alive and appropriate to architecture. Uniformity was inimical, while diversity was essential in forms and materials responsive to physical context, meaning, even sound. She argued that a reductive view of letters was untenable when many forms might equally and purposefully represent a given letter and encompass a far greater range 'of feelings and intention, of purpose, abstract design and relation to architectural style … for which no room exists in an idealist or purely classical theory of lettering.'[46] In place of a debilitating orthodoxy, Gray offered revision: 'I do not intend to present any sort of watertight theory, but to examine examples which I recognize as in some way admirable and to analyse what is in each which I admire; since the eye, not principle, is the basis of all judgement of visual things. I want to arrive at a new way of thinking about lettering from which nothing is excluded on *a priori* grounds.'
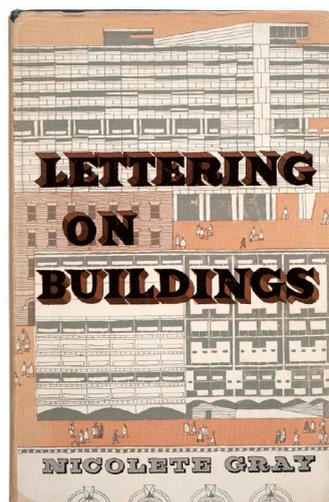
Figure 24. Nicolete Gray, *Lettering on buildings* (1960), cover, 225 x 150 mm. Jacket design by Gordon Cullen.

45. Quotations in this paragraph from *Lettering on Buildings*, pp. 19–20. Despite Gray's apparently novel arguments and observations, Edward Johnston made similar remarks many years before. In a lecture at the Leicester Municipal School of Art (1907) about decorative lettering of all kinds, he stated: 'Whenever you begin a new piece of work you are a beginner, and your way will be made clear for you by having this foundation: you will regard the thing itself – whether book, chest or building – as of primary importance, and adapt your lettering to it', and 'Generally I advise you to make your work as readable as you can, it is such a good discipline. But in many inscriptions ease of reading is not all important; & the less readableness matters, the less you are bound by practical limitations.' Johnston, *Lessons in formal writing*, pp. 97–8.
46. Quotations in this paragraph from *Lettering on Buildings*, p. 22.

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The groups of letterforms Gray set out in the eight chapters that followed her introduction were organized around 'norms', which had, she postulated, crystallized at certain periods in history. Each norm – the Roman letter, sans serif, Egyptian, Tuscan, and so on – was not, however, reduced to a single, summary representation. Instead a norm suggested a kind of node, around which specific examples clustered to build up a composite description. The 269 photographs assembled in the book were largely grouped around these norms and illustrated their expressive range. But the photographs also made plain the extraordinary breadth of practice, for which a normative description of letters – despite allowing for formal variation – was inadequate in making sense of *in situ* factors at work in architecture. So, in the second part of *Lettering on buildings*, Gray proposed a 'comprehensive theory of lettering' able to address more fully those issues that lay beyond the classical theory, or the mere description of form, normative or otherwise.

Gray's comprehensive theory began by insisting that lettering (on buildings) be considered primarily in relationship to the built environment of which it was a part. She noted that while both architecture and lettering were substantially utilitarian and functional, they were 'unavoidably visual and formal' as well and this encouraged each towards the artistic. In fact the artistic element was often dominant, to the extent that the message of lettering might be delivered by material form alone. In addition, both architecture and lettering, as non-representational arts, were governed by abstraction. Modern twentieth-century art had assisted in the understanding of abstraction by demonstrating the value of experiencing form and materials on their own terms, and not as representations of something other. All of this had important implications for lettering. By considering the particularity of each instance of lettering – its utility, aesthetics and physical circumstances – expression far beyond mere two-dimensional form was possible. Gray's comprehensive theory thus began with the meaning of words and the fitness of a given design to carry this meaning, serve a stated purpose, and at the same time express the letterer's intentions; it encompassed good or bad form, in part determined by materials; and it concluded with the letterform itself, flexible and mutable, known to the letterer's mind as an idea, but not determined until the specifics of context gave it visible, physical form.

The photographs reproduced in *Lettering on buildings*, discussed in Part I as illustrations of form, were re-assessed in Part II according to Gray's comprehensive theory. Letterforms were now considered in terms of their fitness to purpose and expression, and in terms of the relationship observed between their design and the materials used to make them. By re-evaluating the photographs in this way, a richer and more complex understanding of lettering was put across. But the photographs also demonstrated other ideas, if implicitly. In extent, they were proof of Gray's wish to dispense with exclusivity and proscription. Their

arrangement in a continuous gallery precluded any from taking prece-
dence; hierarchy was established, if at all, by chronology (though as Gray
explained in her preface, this was a convenient way to suggest the sub-
ject's historical breadth). And in recording examples, photography *in situ*
was preferred, in line with Gray's view that only by studying lettering in
relation to its architectural setting could its effectiveness be gauged.

8

In *Lettering on buildings* it is possible to find many elements of the
approach to letterforms that Nicolete Gray brought to the Central
School when she joined its staff in 1965. This is first apparent in the cur-
riculum of the lettering course that she began with Nicholas Biddulph.
While the course surveyed principal features in the history and develop-
ment of letterforms, much time was devoted to new creation. In prepa-
ration for this, students first explored the notion of ideal letters. Each
student drew what they considered to be *the* letterforms of the (Latin)
alphabet. The variations that inevitably emerged among the students,
and in relation to existing letterforms, served to undermine the notion.
The exercise offered a point of departure for analysing the attributes
that gave letterforms that their own identity and distinguished them
from other letters; it also demonstrated what alterations or embellish-
ments could be made without a loss of identity. Then began letterform
experiments, often developed around a specific visual theme or motif.
The process fostered skills of visual analysis, drawing and design that
enabled students to give expression to a text. Throughout, geometrical
principles helped structure the work, while historical examples pro-
vided reference and inspiration. Over eleven days, the course presented
a productive alternative to theories of the ideal, and a release from the
contraints of predetermined (i.e. typographic) form.[47]

When Gray began her collaboration with Biddulph, an ambitious
programme of image collecting was planned in support of the new
course. Both Biddulph, in his initial assembly of images, and Gray, in
Lettering on buildings, had already discovered the benefits of photography;

47. This summary is from Brian Yates, 'An introduction to letterform design', in F. Baudin & J. Dreyfus (eds), *Dossier A–Z: Association Typographique Internationale 1973* (Ardenne: Rémy Magermanns, 1973), pp. 101–5. Yates was head of the Department of Graphic Design (as it was by then known) at the Central School, and lent support and encour-agement to the lettering course and to the collecting of images for study and reference. Biddulph and Gray also delivered papers at the Copenhagen congress on its theme of 'education in letterforms'. Gray's paper was subsequently published as 'Lettering and society' in *Visible Language* (vol. 8, no. 3, 1974, pp. 247–60); it encapsulated her view of lettering practice and enumerated the aims of the lettering course:

'1. It should teach students to draw, a partic-ularly valuable contribution now that drawing from life is out of fashion; to distinguish and master the line which can alter the character of a letter by a minimal movement; and, if time allows, to master more than one drawing instrument.
'2. It should teach students to analyse existing alphabets, not just to recognise differences or learn the tricks of a style, but in order to find out the formal idiosyncrasies which create its character so as to be able to abstract and transpose these into their own idiom.
'3. It should teach students to think out design problems by integrating the conditions of material, purpose, wording, etc., with the formal and expressive qualities of the letters which they create.
'4. As a necessary tool for the third aim, students should have a wide vocabulary of letterforms, and know how to extend this vocabulary.

'Much of this implies a considerable knowledge of past lettering. This should not, I think, be taught as the history of lettering or through obliging the student to master his-toric styles. It should be introduced at various stages in the course, to illustrate solutions to problems or to demonstrate the many direc-tions in which lettering can be extended as an art. We have found our most essential teach-ing aid to be our Collection of photographs of examples of all kinds of lettering.' (p. 260)

now it would enable them to quickly and inexpensively record lettering that was widely divergent in style, size and material. Photography would also allow examples to be documented in a variety of localities, capturing contextual features such as lighting, or the position of lettering relative to surrounding (built) features. Specific imaging techniques were also employed: high contrast black-white film isolated and emphasized two-dimensional shape and line, while macro- and telephoto lenses brought the unseen or unnoticed startlingly near.

From the outset, Gray and Biddulph were determined that the collection of photographs should not only serve the immediate needs of lettering course, but should have a broader function, too. So the collection was given a name, the Central Lettering Record (CLR), and a correspondingly larger ambition, to gather in 'the whole history and range of lettering including contemporary developments and experiments'. This echoed Gray's view that lettering should be understood as far wider in scope and richer than was generally acknowledged; in the years that followed, the work of building up and giving order to the CLR gave tangible form to this view. Examples were gathered and ordered primarily by technique and material. Thereafter, lettering in architecture was emphasized, as were groupings of historical and contemporary letterform norms, functional lettering (signs and street lettering), and experimental work that pushed against boundaries of convention. Each group had many subdivisions ranging across numerous periods and styles. The division of material was also intended to emphasize that which was thought most stimulating or instructive, both to the practitioner and the non-expert. The aim was to avoid an arrangement whose logic or nomenclature might mystify users or relegate examples to a single grouping when they could belong to several.[48]

By the mid 1970s, the organization of the CLR achieved a definite physical configuration when its photographs and other artefacts were given long-term accommodation in the Central School library. Most notable was an impressive bank of labelled drawers built to house photographs in the 'Standard Series', each of which was mounted on a 24 x 24 cm card held in a plastic sleeve.[49] While unremarkable in itself, this system made interaction straightforward: not only were the photographs simple to access, their compact storage meant that the extent of the collection could be quickly grasped and its contents easily retrieved. It encouraged both guided and serendipitous exploration, and, using cross-references provided with each photograph, facilitated comparisons. These features were echoed in the 'Letterform Series', which was stored in standard office filing cabinets. Its images of letterforms from a wide range of sources, assembled on 24 x 37 cm cards (also held in plastic sleeves), were similarly quick and easy to find, retrieve, study and compare (see figures 25–39, overleaf).

When Nicolete Gray retired from teaching in 1981, the course in letter-ing she had taught with Nicholas Biddulph began to contract, and with it the activities of the Central Lettering Record. The collection had by this time grown to a considerable size, and in addition to serving the course for which it was begun, it supported externally facing activities. Among these were exhibitions and publications that explored letter-ing's contribution to the visual arts and design,[50] and work to document architectural lettering in Britain at risk of demolition. Both were part of the broader remit Gray and Biddulph had formulated when the CLR was established, namely to reach audiences both within the Central School and beyond that were not typically interested in letterforms. These included practising artists and designers, and art and social historians for whom the holdings of the CLR might supplement their enquiries and enable them to traverse conventional discipline boundaries. But after Gray's retirement, funds to develop the archive along these lines were increasingly scarce, while a research assistant post assigned to the CLR during the 1970s and early 1980s was discontinued. Biddulph persisted with the eleven-day lettering course, now with other collab-orators. But in 1984, as the Central School's graphic design curriculum began to merge with that of Saint Martin's School of Art, the length of the lettering course was cut in half, treating letterforms in a similar if now abbreviated way. The function of the CLR had thus shifted, no lon-ger serving the specific aims set out by Gray and Biddulph but instead making more diffuse and intermittent contributions to letterform stud-ies. When Biddulph retired in 1991, he left behind a collection whose original premise was understood by relatively few people.

In 1993, this period of contraction in the activities of the Central Lettering Record came to an end with the start of a new project whose programme of research would focus on the contribution screen-based interactive multimedia could make to the study of type- and letterform history.[51] An important part of the research would be to revisit the aims and resources of the CLR, both as a model for learning and study, and as an aid to teaching and scholarship. The gathering and recording of exemplars would also be reactivated, in particular to document the profusion of digital typefaces whose emergence from the mid 1980s onwards had coincided with the CLR's own cessation in collecting.

48. Leonora Pearse, 'The Central Lettering Record', *Art Libraries Journal*, Spring 1976, p. 14. Early collecting efforts at the Central Lettering Record also benefitted from a collab-oration with the Department of Typography & Graphic Communication at the University of Reading, where a similar photographic archive was initiated at the same time. It remains active as part of that Department's lettering, printing and graphic design collections; it has extensive documentation of inscriptions from ancient and Baroque Rome, and from Renaissance Florence, and lettering of many kinds from around Britain.
49. While most photographs in the CLR were of this size, a significant number were enlargements whose subject matter was typ-ical Roman epigraphy, which thus took on an appropriately epic dimension.
50. The most important of these was the exhibition 'Le tracé des lettres comme trace de l'histoire', organized in conjunction with the 1981 congress of the Association Typographique Internationale (ATypI) in Brussels and accompanied by a book under the same title, authored by Gray (Brussels: Palais des Beaux-arts, 1981, 32 pp).
51. 'B9 Interactive multimedia: creative uses of interface design for typographic research' This document was compiled by Simon Pugh, then Dean of the School of Graphic & Industrial Design, with contributions from Phil Baines and Colin Taylor. The proposal was sup-ported by Central Saint Martins College of Art & Design using funds allocated by the Higher Education Funding Council for England.

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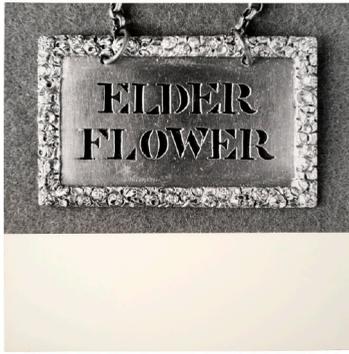
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Wood engraved / Roman caps /.1570 designer G. F. Cresci. 'Il perfetto scrittore'. Rome

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Type / Modern face / Bodoni (14pt) / designer G. B. Bodoni, from 'Manuale Tipographico'. Parma, 1818

38

Ms / Book hand (Foundational hand) / 1916 English / scribe Edward Johnston. Copy sheet / London V.6 A.
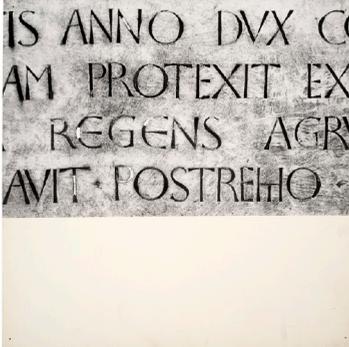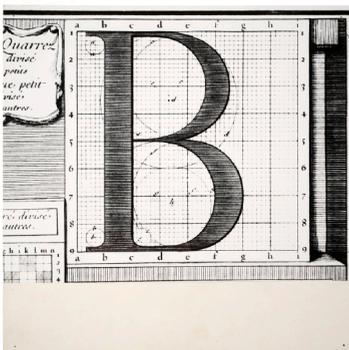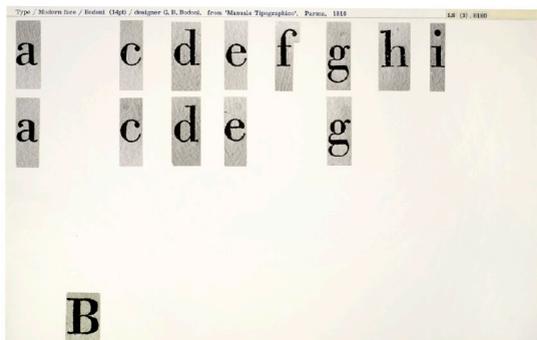
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Figures 25–36. (opposite) Central Lettering Record, Standard Series. 24 x 24 cm. **25.** Stone incription, Furius Dionysius Filocalus, Rome (late 4th century). **26.** Wine label, pierced silver, Charles Rawlings, England (1824–5). **27.** Street sign, painted wood, London (c. 19th century). **28.** Cafe sign, bronze (c. 1900). **29.** Stone inscription (with remnants of inlay), from the tomb of Spinetta Malaspina, Verona (15th century). **30.** Fascia lettering, ceramic, London Colosseum (1904). **31.** Blackboard demonstration, chalk, Edward Johnston (c. 1930). **32.** Engraved letter, model for capital letter 'B', Paris (before 1704). **33.** Specimen alphabet, Adalbert Carl Fischl, from *Beispiele künstlerischer Schrift* (Vienna: 1900). **34.** Fascia lettering, painted wood, London (19th / 20th century, destroyed 1971). **35.** Fascia lettering, painted iron(?), Lincoln's Inn, London (date uncertain). **36.** Fascia lettering, ceramic tile, Britain (19th century). The Standard Series was designed as the basic photographic reference format. Photographs were organized into five main groups (technique, architectural lettering, letterform styles, creative & experimental lettering, and non-Latin lettering) with numerous subdivisions. Each photograph was mounted on a card held in a plastic sleeve (not shown) and stored in one of 270 labelled drawers. Details were given on an pre-printed paper form inserted behind the card; they included date, designer, location, a description of the image, and cross-references to other images in the Standard Series and to enlargements stored elsewhere.

Figures 37–39. Central Lettering Record, Letterform Series, 24 x 37 cm. **37.** Wood-engraved Roman capitals, Giovanni Francesco Cresci, from *Il perfetto scrittore* (1570). **38.** Printed type, Giambattista Bodoni, from *Manuale tipographico* (1818). **39.** Book hand (Foundational hand), Edward Johnston, from a copy sheet (1916). The Letterform Series was begun by Nicholas Biddulph in the mid-1970s and illustrated letterforms reaching back to the Roman republic. Though arranged by technique ('Ms', 'Type', 'Wood engraved', 'Stone inscription' and so on), its emphasis was on the form of individual letters rather than their mode or context of production. Imaging was largely achieved through macrophotography (by Biddulph), though in some instances high-contrast film was employed to isolate letterforms from their background. Photographs were typically cut apart and their letterforms arranged in alphabetical sequences. The series eventually comprised some 1100 cards held in plastic sleeves (not shown), which were stored in standard office filing cabinets.

Both series enabled users (including non-specialists) to quickly find, browse and compare material. The mounted photographs, held in plastic sleeves (not shown), were appropriately robust for informal classroom handling and display.

Eminents observed Eric Kindel

Typeform dialogues
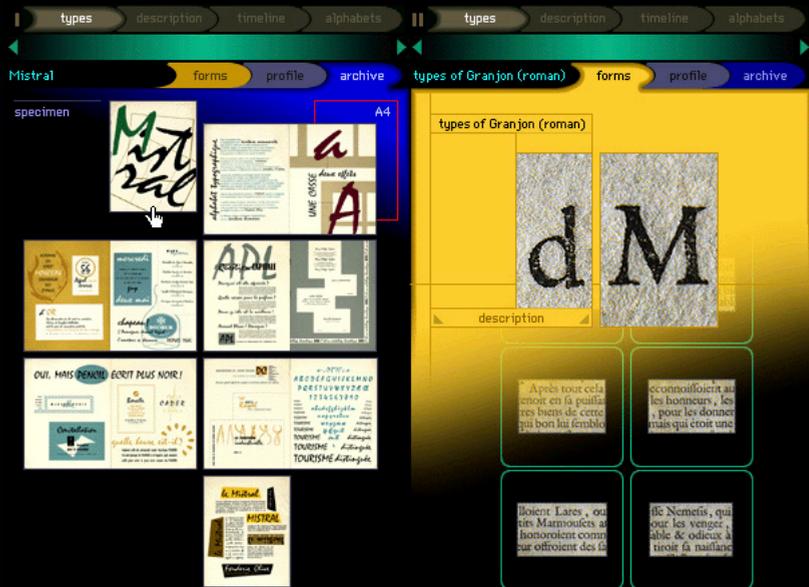
To narrow the initially broad programme of research following the project's approval and funding, a decision was made to focus work principally on type and its many forms. To fully enagage with the larger sphere of lettering, as favoured by the founders of the CLR, lay beyond the capacity of the research team. But within the sphere of type, research work would echo an aim of the CLR by acknowledging, embracing and making sense of diversity. Work would be guided by other aims as well: to explore the presentation of (printed) typeforms onscreen; to exploit the CLR's extensive holdings to aid the demonstration of diversity; and to document and accession new types to the CLR, even if many could not be situated within the CLR's existing system of organization and nomenclature, or indeed within any existing scheme of typeface classification.

After developing a series of prototype screen interfaces, a configuration was achieved that was able to contain and express a survey of typeforms (figures 40, 41). (The interface, eventually named *Typeform dialogues*, is fully illustrated in the 'User's manual', pp. 5–36 above, accompanied by explanations of its features and their rationale.) The survey is made up of 140 types, a number thought sufficient to represent typeform diversity over five and a half centuries. Each chosen type is presented in a purely graphic form, described in a written profile, and shown in a printed context, typically an early use of the type, or in a specimen or other promotional document or advertisement. Underpinning each type is a description of its sources and attributes of form. This description is generated by a single, comprehensive framework able to cope with examples that are old or new, and whose forms are conventional or novel. Throughout the interface – indeed built into its configuration – comparison and cross-references demonstrate similarities and differences between types. Threads of relation, connection, evolution, deviation and disjuncture can be discovered and explored. Taken together, the 140 examples offer a representative view not only of typeform diversity but also of historical, technical and cultural narratives that make up their story, which is itself unified structurally and by a system of description whose method is consistent and encompassing.

Figures 40, 41. (opposite) Screen shots from the *Typeform dialogues* interface.

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Looking back at a century of teaching at the Central School, London, *Typeform dialogues* takes its place in a line of published works and designed artefacts that give form to thinking about how writing, letterforms and types, in their profusion, complexity and diversity, should best be made sense of and used.

For those who played a formative role in the early Central School, above all Emery Walker and Edward Johnston, sense was found in the close relationship between the form of a letter and how it was made. Historical exemplars provided telling instances of this relationship at work, which could be transported into the present day untainted by

anachronism. The relationship was traced back to handwritten letters, made with an edged pen (narrow or broad), letters that expressed clarity and simplicity, and whose translation into types was fluent and vital, and guided by the technical and aesthetic qualities that printing needed to regain. By the early twentieth century, these notions conceived and articulated by Walker had became established and would prove enduring for the private presses and for programmes of study like that at the Central School. Johnston's teaching, and the publication of *Writing & illuminating, & lettering*, enabled his own conception of contemporary practice-based historical models to also become firmly rooted.

But the results from the search for appropriate models for practice encouraged in those who followed not further exploration but tenacious consolidation, not more experiment but entrenched defence of early discoveries. This is true of Graily Hewitt and J. H. Mason, who, as eminent guides to writing and lettering, type and typography, set limits on the tools and materials thought fit for practice, and consequently on the variety of work done in the classroom or in their own professional activities. These limits frequently gave rise to finely crafted books and other documents, assembled from materials of excellent quality, in forms of high refinement, using texts of scholarly or literary merit. Such work suited Hewitt and Mason, driven by their intellectual dispositions (Hewitt was a barrister by training, Mason a self-taught classicist). Both men were less concerned with form-making as such, and more with its proper derivation and principled application. Their discipline of means reinforced the foundations that the Central School had established early on. But over time, and by the 1930s, the potently condensed teaching of Hewitt and Mason had become recalcitrant in its control of creative boundaries.

Where instruction was pursued in the first several decades of the Central School through a single tool, the pen, for writing and lettering, or a singular view of type and typography, for making fine books, teaching after the Second World War drew on a broader field of reference, and was more synthetic and often purposely experimental. New teachers expanded or reconfigured tools and media to suit the emerging work of graphic design. The collaboration of Nicolete Gray and Nicholas Biddulph reflected this. In their teaching, norms and variations, historical inspiration and pure aesthetics offered numerous points of entry into a process of design that combined drawing and analysis with an eclectic vocabulary of form. Gray and Biddulph aimed to radically expand their students' experience of letterforms and thereby extend the expressive range of work they could produce. The Central Lettering Record gave substance to this aim, following Gray's own argument 'that lettering can and should be infinitely diverse.'

Typeform dialogues follows this approach in several ways: its 'survey' also suggests compendiousness and demonstrates how historical and contemporary artefacts, practices and contexts all contribute to

an inclusive understanding of typeforms. *Typeform dialogues*, like the Central Lettering Record, shows in its principles of selection, organization and construction that no examples should be excluded, as Gray put it, *a priori*. Where the CLR did this expansively, *Typeform dialogues* does so selectively, but with the implication that any typeform may be described in full by its combined means of presentation, narrative and analysis. But whatever parallels may be drawn with eminent predecessors, *Typeform dialogues* should also be judged as the product of a digital, interactive environment, in which the ideas specific to the circumstances of its making can be most clearly discerned.

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Image sources

Figure 1: St Bride Library, London

Figures 2–6, 9, 14–18, 21–24: Private collections

Figures 7, 8, 10, 25–41: Central Lettering Record, Central Saint Martins College of Art and Design, London

Figure 11: Collections of the Department of Typography & Graphic Communication, University of Reading

Figures 12, 13: Museum & Study Collection, Central Saint Martins College of Art and Design, London

Figures 19, 20: Reading University Library, University of Reading

Object photography

Figure 1: St Bride Library, London

Figures 2–9, 15–39: Laura Bennetto

Figure 10: the author

Figures 12, 13: Museum & Study Collection, Central Saint Martins College of Art and Design, London

Author's note

This essay takes as its starting point an unpublished text written in 2000. In revisiting this text after such a length of time, my aim has been to adjust and finish it as a piece of writing, while retaining a clear sense of the spirit of the thinking it gave account to, and without imposing any subsequent insights on the ideas that were then being explored. I have put these new thoughts in an afterword, which brings the story up to 2017.

The purpose of the essay is to set out the rationale informing a new description framework integrated within *Typeform dialogues* and the approach to typeform description it models. The mechanical operation of this description framework and the specifics of its application within the interactive environment of *Typeform dialogues* are explained in the User's Manual. Within this essay are examined the objectives and contextual circumstances informing the work undertaken and the shaping of the arguments put forward. It is an attempt to ground classificatory ideas about typeface design in a real situation, in response to an observed tendency within the field to indulge in less purposeful debate often lacking any specific practice focus.*

Key features of the work presented include a renewed emphasis on the activity of typeform description within the context of classification; the building of a descriptive framework based on observed models of adherence and divergence in practice; and the positioning of the description framework outcome as a tool for knowledge-building and for facilitating the formal understanding of typefaces. In so doing, this work pays homage to a series of classificatory heroes, not least Walter Tracy and Nicolete Gray. The true hero though is perhaps the platypus of the title. A mammal variously referred to as mole-like, egg-laying, semi-aquatic, venomous, duck-billed, beaver-tailed and otter-footed, the platypus is an animal descriptively made up of the parts of others, an essential metaphor for the classificatory challenge this account sets out.

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* In an email comment made on 1 November 2001 on the Association Typographique Internationale (ATypI) members' discussion list, John Hudson summarized the futility of much classificatory debate: 'I'm sure there are people working on new kinds of typeface classification. I think it should be formally recognized as one of the great parlour games.' In March 2009, classification actually became a game when the digital font distributor MyFonts launched 'The tag game' as a means to improve the accuracy of their font description tags; see <www.myfonts.com/games/tag/>.

Systematizing the platypus: a perspective on type design classification

> *Our actual situation is as if we were on board ship on an open sea and were required to change various parts of the ship during the voyage.*
> Otto Neurath, 1937[1]

The approach to the description of typefaces integrated within the *Typeform dialogues* environment has been informed by a new framework.[2] The primary consideration of this framework has been to describe typefaces in terms of their form, hence the use of the preferred term 'typeform' throughout this essay and the wider *Typeform dialogues* project.[3] In line with the scope of *Typeform dialogues* (and the expertise of the team) the remit for typeform description extended to Latin typefaces only.

The ambition for the new framework can be summarized as the wish to describe, on a consistent basis, the formal character of a typeface or a typeform, historical or contemporary, in a non-abstract way. While acknowledging that there are many variables informing the visual appearance of a font of characters of a particular typeface – spacing, context and so on – formal character can be understood as the appearance of the typeface as the punchcutter or designer intended it to be seen in use.[4] Primary reference has, therefore, generally been either to early printed matter or, for later examples, to founders' or manufacturers' printed promotional specimens. The concern with immediacy of description can be seen in part as a reaction to the abstract descriptions characteristic of systems which attempt to formally differentiate typefaces at an individual level.[5] Since the introduction of computer science to typeface design, the formal description has become the typeform. Knuth's Metafont description language, developed originally in the late 1970s, describes font shapes as equations, while Bauermeister's comparative PANOSE System from 1988 records a set of values determined by detailed formal analysis of a typeface as complex numerical codes: codes that have subsequently been incorporated into digital font metadata tags.[6]

Accessibility of the verbal descriptors in the new framework was a key issue. Typefaces were to be described as shown, and in such a way as to facilitate the viewer in making sense of typefaces in terms of their visual references and formal languages. The potential in facilitating such description within a contemporary educational remit was recognized by Gerry Leonidas: 'I am concerned with designers and educators describing typefaces, shapes on paper or shapes on screen … I am not

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interested in coming up with computer code; Don Knuth has more than covered this.'[7]

In the past, verbal methods of describing Latin typeforms have relied extensively on the category terms employed by systems of typeface classification. Direct importation of any single existing classification system was found inappropriate, however, for the purposes of differentiating the breadth of form represented by 550 years of practice. In particular, where existing systems even recognized contemporary typefaces, they struggled to satisfactorily accommodate them in a schema principally designed for older examples.

It has long been apparent that there were difficulties in classifying the necessary range of forms. Yet, for Walter Tracy, a member of the advisory committee for the 'current' typeface classification system published as a British standard in 1967, the presence of material beyond the scope of such a system was supposed acceptable.

> The classification is not all embracing, though. Originality does flourish, even in such a crowded field. It must be allowed that any type which cannot be classified at all is probably so distinctive as to demand a special description, like the duck-billed platypus.[8]

The practical difficulties experienced in continuing to accept this position offered a starting point for the development of the new framework.

A PROBLEM IN THE MAKING

The inability of existing classification systems to describe the necessary breadth of forms can be attributed to the length of time that has passed since the formulation of their underlying categorization structure. The categorization of typeforms grew out of a changing climate in production, when, during the nineteenth century, printers experienced a broadening in the range of typefaces at their disposal. It became necessary to find a way of ordering type – to ease communication between printers and clients, and as an organizational aid within the printing industry. The need to order types was not restricted to printers alone and the classificatory challenge was quickly taken on by type foundries. In 1903 the French typographer François Thibaudeau worked on a retrospective catalogue of the materials of the Peignot foundry using a historical classification model, while the system devised in 1911–12 by H. L. Bullen, the librarian of the American Typefounders (ATF), is an early example of a more analytical typeform classification.[9]

At the same time a scholarly interest in typeforms and particularly historical examples was growing. D. B. Updike was certainly an early advocate of the view that a more informed approach to the variety of typefaces on offer was of great practical benefit in helping printers decide how they should stock their businesses.[10] By the early twentieth

Figure 1. Illustration of a duck-billed platypus, from *The naturalist's miscellany, or coloured figures of natural objects grand and described immediately from nature by George Shaw*, vol. 10, pl. 385. London: Nodder & Co, 1790–1813, in 24 vols. Plate engraved by Frederick Polydore Nodder, 1799.

7. 'Annuals and perennials. A discussion of typographic research. University of Reading, 5 November 1996', *Type: a journal of a journal of the Association Typographique Internationale*, vol. 2, no. 1, 1998, pp. 28.
8. Walter Tracy, 'Type design classification', *Visible Language*, vol. 5, no. 1, 1971, p. 63. The British standard was published as 'Typeface nomenclature and classification' (BS 2961: 1967). As its title indicates, this standard encompassed nomenclature, which was based on an earlier standard of terms and definitions for general typographic purposes, published as 'Typeface nomenclature' (BS 2961: 1958). Although BS 2961: 1967 was scheduled for revision in 1981, it remains unrevised.
9. See François Thibaudeau, 'Classification des caractères d'imprimerie', *Manuel français de typography moderne* (Paris: Bureau de l'Édition, 1924), p. 39; and Henry Lewis Bullen. 'Notes towards the study of types', in *The Graphic Arts* (Boston: National Arts Publishing, 1911–12), see bibliography for date, vol. and pp. details.
10. 'The purpose of this book is to supply a basis for the intelligent appreciation of the best printing types through the study of their history, forms, and use. […] We now have a foundation for a reasoned judgement of type design, and the practical application of this judgement is developed in suggestions as to the choice of types for a composing-room.' Updike, *Printing types*, vol. 1, p. xxvii.

century the need for both industrial consensus and consolidation of the different strands of historical research being undertaken resulted in the publication of a series of practical and scholarly surveys. These included Theodore Low de Vinne's *The practise of plain printing types* (1900) and, in the UK, Stanley Morison's *On type designs past and present* (1926) and A. F. Johnson's *Type designs* (1934). Each used the morphological evolution of typefaces as an organizational structure, with each evolutionary stage summarized by a category (table 1). Embedded within these early surveys lies an evaluation of typographic history and practice now at least a century old, yet it is their categorization structure that continues to inform the underlying schema of most later classification systems.

Here the mid-century classificatory proposals of Maximilien Vox were key in terms of their influence in response to calls for a greater rationalization of typeface categorization. If the content grouping across different systems had been broadly similar, the terminology used to describe them varied considerably. In order to clarify particularly the commercial confusion resulting from a localized understanding

Table 1. Comparison of typeform categories in the organisational structures of early surveys*

De Vinne (USA)	Updike (USA)	Morison (Britain)	Johnson (Britain)
Plain printing types (1900)	*Printing types* (1922)	*On type designs …* (1926)	*Type designs* (1934)

Blackletter, a degenerate form of roman, in which angles are substituted for curves.	Types of the C15th in:
	  Germany
	  Italy
	  France
	  Netherlands
	  Spain
	  England
		The first gothic types
		The first humanist types
		Nicholas Jenson
		Aldus
			Gothic types
			Roman, the venetians and old face group

Roman, including: old style; modernized old style; modern faces of roman letter, e.g. scotch face, condensed French face, compressed face, round faces, light faces, etc.	The Aldine Italic
	Types between 1500–1800 in:
	  Germany
	  Italy
	  France, with specific reference made to royal types, the Imprimerie Royale and the Fournier family.
	  Netherlands, with specific index reference made to the work of the Plantin press and Elzevir.
	  Spain
	  England, with specific index reference made to the period from Pynson to William Caslon, William Caslon and the Caslon foundry, John Baskerville, and Wilson, Fry, Martin and other foundries.
		The origins of 'Old face'
		The Aldine Italic
		The Arrighi Italic
		The Garamond Old face
		Robert Granjon
		Christopher van Dyck
		The Dutch letter
		'Modern' face
		Phillipe Grandjean
		P.-S. Fournier
		J. M. Fleischman
		The Caslons
		John Baskerville
		John Bell's Modern
		The influence of calligraphy
		F.-A. Didot
		Giambattista Bodoni
		The effect of the Industrial Revolution
		New 'Black' letters
		The Caslon revival
		Louis Perrin
		The Gothic Revival
		William Morris
		Private Press types
		J. F. Unger
		The Brush-drawn letter
		German type design
		American type design
		French type design
			The evolution of the modern face roman
			Old face types in the Victorian age
			Italic, the old face
			Italic type in the eighteenth century
			Script types
			Early advertising types, fat faces and Egyptians (and sans serifs)

Italic, a simplified style of disconnected script. Its capitals differ from roman mostly in their inclination. Script types, imitations of different styles of handwriting, but every one of them … modeled on some fashion of roman letter pre-ferred or used by early copyists.	Types used in the American colonies, and some early American specimens. Nineteenth century 'classical' types, Bodoni and the Didots. English types: 1800–1844 Revival of Caslon and Fell types. English and American revival of early typeforms and its effect on continental types.		
Title, or fat face, a broad style of roman with over-thick bodymarks.			
Antique, a roman in which the lines of all the characters are nearly uniform as to thickness, with square corners and of increased boldness.			
Italian, a roman in which the positions of hairline and thick stroke have been transposed.			
Gothic, without serifs, the simplest and rudest of all styles, seems an imitation of roman capitals cut in stone.			
Ornamentals of every style, and even the newest varieties of eccentric types, show some conformity to the roman model.			* Editorial note. The orthography of category names follows the style of *Typeform dialogues*.

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Table 2. Vox's structural inheritance & classificatory legacy

Johnson (Britain)* *Type designs* (1934)		Vox (France) *Pour une nouvelle classification des caractères* (1954)	Vox (France) *Nouvelle classification des caractères* (1954)
Roman, the venetians and old face group		Humanes	Humanes
Italic, the old face		Garaldes	Garaldes
Old face types in the Victorian age			
Italic type in the eighteenth century			
The evolution of the modern face roman		Réales	Réales (1972: Granvilles)
		Didones	Didones
Early advertising types, fat faces and Egyptians (and sans serifs)	* The categories of Johnson (Britain) in Table 1, reordered to show their relation to Vox and post-Vox schemas.	Mécanes	Mécanes
		Simplices	Lineales
		Incises	Incises
Script types		Scriptes	Scriptes
		Manuaires	Manuaires (including Médièves)
Gothic types		Médièves	

Din 16518 (Germany) (1964)	BS 2961 (Britain) (1967)	Typefinder system (Britain) Perfect & Kono (1983)	Letter fountain (Netherlands) Joep Pohlen (2011)
		Text typeface categories	*Vox+1 Text typefaces*
Venetianische Renaissance-Antiqua	Humanist	1 Sloping e-bar (Venetian serif)	1.1 Humanistic
Französische Renaissance-Antiqua	Garalde	2 Angled stress/oblique serifs (Old style serif)	1.2 Garaldes
Barock-Antiqua	Transitional	3 Vertical Stress/Oblique serifs (Transitional serif)	1.3 Transitionals
		4 Vertical stress/straight serifs (New transitional serif)	
Klassizistische Antiqua	Didone	5 Abrupt contrast/straight serifs (Modern serif)	1.4 Didones
Serifenbetonte Linear-Antiqua	Slab-serif	6 Slab serif	1.5 Slab-serifs
Serifenlose Linear-Antiqua	Lineale a Grotesque b Neo-grotesque c Geometric d Humanist	8 Sans serif	1.6 Humanistic sans-serifs 1.7 Neoclassical sans-serifs 1.8 Benton sans-serifs 1.9 Geometrical sans-serifs
Antiqua-Varianten	Glyphic	7 wedge serif (hybrid serif)	1.10 Glyphics
		Decorative (non-continuous text) typeface categories	
Schreibschriften/Script	Script	1 Flowing scripts	1.11 Scripts
		2 Non-flowing scripts (including blackletter & uncial)	
Handschriftliche Antiqua/Manuale	Graphic	3 Unmodified (formal text shape)	1.12 Graphics
		4 Fat & thin face (modified & unmodified)	*Vox+2 Display typefaces* 2.1 Classic deco
		5 Ornamental	2.2 Typographic
		6 Modified serif	2.3 Disorder
		7 Modified sans serif	2.4 Techno
		8 Modified outrageous	2.5 Modular
			2.6 Fantasy
Gebrochene Schriften			1.13 Gothic
Gotisch			
Rundgotisch			
Schwabacher			
Fraktur			
Fraktur-Varienten			
Fremde Schrift			
			Vox+3 Pi fonts 3.1 Ornaments; 3.2 Symbols; 3.3 Pictograms
			Vox+4 Non-Latin

Typeform dialogues

of terms, standardization was sought. Agreement at an international level was anticipated in 1963 when the Association Typographique Internationale (ATypI) adopted the structure and spirit of Maximilian Vox's system. However, Vox's intentionally unifying nomenclature was left open to modification in accordance with national language requirements, with numbers assigned to each group to facilitate comparison. Even Vox himself stressed that the groupings in his system were more important than his vocabulary. Setting idiosyncracies of terminology to one side, the underlying categorization structure he inherited and carried forward has continued to be a significant point of reference in classificatory work[11] (table 2).

The influence of roman

In the early twentieth century the Roman inscriptional square capital, particularly that identified as 'Trajan', held for many in Britain and the USA a special fascination.[12] Having been admired at various points throughout history in the belief that it held the blueprint for letterform perfection, this model Roman letter was again popularized through the practice and teaching of Edward Johnston. That this letter should, within the field of lettering, then assume the commanding position it did, was, however, no accident. Rather, the emphasis laid upon the Roman inscriptional square capital, was according to Gray, a deliberately corrective measure: an attempt to return to 'absolute standards' and to reintroduce 'good taste into an art which had been debased; which the lamentable vagaries of nineteenth-century commercialism had diverted from its true nature and purpose.'[13] (see figures 2–3, overleaf)

Within the more specific context of typeface design, the implications of such an attitude are borne out in the distinction between so-called 'roman' typefaces and those characterized as 'display'. Here roman (with a lowercase initial) refers to a particular model for typefaces, which emerged as printing arrived in fifteenth-century Italy and came to epitomize the form of typefaces used for text setting.[14] Used here, as it has been traditionally understood, display indicates a typeface other than roman, highly individual, perhaps decorated but generally intended for use at larger sizes in commercial, often attention-seeking contexts.

The roman typeface model is closely descended from the favoured Roman inscriptional square capital letter. The uppercase starts as an almost direct formal translation, while the lowercase character set follows on from the Carolingian minuscule; a letterform evolved over several hundred years from the process of writing the Roman inscriptional letter. In addition roman typefaces found favour in their strong associations with the printing of books. The considerable and enduring value of books has always afforded them the greatest prestige within printing traditions. The heritage of this book culture was to distinguish roman types from the throw-away experimentation of their commercial display counterparts. J. H. Mason was one of many who saw the use of 'fanciful'

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display types as nothing less than a corruption of the printer's art, to be avoided or preferably extinguished through a puritanical adherence to the more traditional and well-established romans.[15] Mason's particular preference was for Caslon Old Face, the virtues of which he was keen to extol at length, encouraging its then widespread popularity.

Further still, in this period the commercial interest in roman forms heightened. In the boom era of the large-scale machine type manufacturers, above all Monotype and Linotype, an astonishing variety of roman text faces including many 'historic' revivals were put into production. Such a market emphasis on roman types is no surprise. The financial costs of the machinery and fonts of these manufacturers represented a considerable investment on the part of a printer, and roman types were less susceptible to fads of fashion and would generally see more use than those intended for headline or display use only. Yet, given the considerable investment required for the purchase of new typefaces, the significant consolidation in the available offer of roman typefaces represents a considerable marketing achievement on the part of the manufacturers. Historical research was combined with publicity endeavour in the education of the printer, that is to say, the shaping of an aesthetically discerning new customer, who was now able to differentiate between the roman text typefaces newly on the market and to grasp of their role in extending the existing typographic canon; printers had the necessary rationale and incentive to justify their purchase. The Monotype Corporation, for example, had a particular interest in promoting scholarly discussion of the historical and formal derivations of types in both their general publicity material and in marketing tools directed at trade schools to promote the awareness of typefaces pitched as being formally authentic.

Such entrepreneurial enthusiasm for roman typeforms was made manifest in the categorization schema adopted by the early survey texts and inherited by later classification systems. In this schema individual

Figures 2–3. L. C. Evetts, *Roman lettering* (1938; reprint, 1948, shown here), cover (2) and inside pages (3), 247 x 185 mm (page). Singled out from similar books by Nicolete Gray and praised for its detail and logic, Evetts's work nevertheless typified for her the misconception of Renaissance Platonism that informed much mid-century British lettering, in which a search for perfection in Roman inscriptional square capitals became instead a drive towards standardization.

No.	Name	Description	Examples
	Category		
BRITISH STANDARDS CLASSIFICATION OF TYPEFACES (BS 2961: 1967)			
I	Humanist	Typefaces in which the cross stroke of the lower case e is oblique; the axis of the curves is inclined to the left; there is no great contrast between thin and thick strokes; the serifs are bracketed; the serifs of the ascenders in the lower case are oblique. NOTE. This was formerly known as 'Venetian', having been derived from the 15th century minuscule written with a varying stroke thickness by means of an obliquely-held broad pen.	Verona, Centaur, Kennerley
II	Garalde	Typefaces in which the axis of the curves is inclined to the left; there is generally a greater contrast in the relative thickness of the strokes than in Humanist designs; the serifs are bracketed; the bar of the lower case e is horizontal; the serifs of the ascenders in the lower case are oblique. NOTE. These are types in the Aldine and Garamond tradition and were formerly called 'Old Face' and 'Old Style'.	Bembo, Garamond, Caslon, Vendôme
III	Transitional	Typefaces in which the axis of the curves is vertical or inclined slightly to the left; the serifs are bracketed, and those of the ascenders in the lower case are oblique. NOTE. This typeface is influenced by the letterforms of the copperplate engraver. It may be regarded as a transition from Garalde to Didone, and incorporates some characteristics of each.	Fournier, Baskerville, Bell, Caledonia, Columbia
IV	Didone	Typefaces having an abrupt contrast between thin and thick strokes; the axis of the curves is vertical; the serifs of the ascenders of the lower case are horizontal; there are often no brackets to the serifs. NOTE. These are typefaces as developed by Didot and Bodoni. Formerly called 'Modern'.	Bodoni, Corvinus, Modern Extended
V	Slab-serif	Typefaces with heavy, square-ended serifs, with or without brackets.	Rockwell, Clarendon, Playbill

No.	Name	Description	Examples
	Category		
BRITISH STANDARDS CLASSIFICATION OF TYPEFACES (BS 2961: 1967)			
VI	Lineale	Typefaces without serifs. NOTE. Formerly called 'Sans-serif'.	
	a Grotesque	Lineale typefaces with 19th century origins. There is some contrast in thickness of strokes. They have squareness of curve, and curling close-set jaws. The R usually has a curled leg and the G is spurred. The ends of the curved strokes are usually horizontal.	SB Grot. No. 6, Cond. Sans No. 7, Monotype Headline Bold
	b Neo-grotesque	Lineale typefaces derived from the grotesque. They have less stroke contrast and are more regular in design. The jaws are more open than in the true grotesque and the g is often open-tailed. The ends of the curved strokes are usually oblique.	Edel/Wotan, Univers, Helvetica
	c Geometric	Lineale typefaces constructed on simple geometric shapes, circle or rectangle. Usually monoline, and often with single-storey a.	Futura, Erbar, Eurostile
	d Humanist	Lineale typefaces based on the proportions of inscriptional Roman capitals and Humanist or Garalde lower-case, rather than on early grotesques. They have some stroke contrast, with two-storey a and g.	Optima, Gill Sans, Pascal
VII	Glyphic	Typefaces which are chiselled rather than calligraphic in form.	Latin, Albertus, Augustea
VIII	Script	Typefaces that imitate cursive writing.	Palace Script, Legend, Mistral
IX	Graphic	Typefaces whose characters suggest that they have been drawn rather than written.	Libra, Cartoon, Old English (Monotype)

Figure 4. British Standards Institution, *Typeface nomenclature and classification* (BS 2961:1967), table from pp. 10–11. This table shows the varying levels of descriptive detail afforded to category definitions. The extensive use of rules to divide categories reinforces their insularity, contrary to the note encouraging their use in combination. And while the information provided is essentially concerned with the visual, the plentiful opportunities for illustration have been ignored, resulting in a rather bleak document that is too text reliant.

categories were used to distinguish the most detailed levels of formal contrast between historical variations in the roman model. Given the quantitative significance of roman typefaces throughout history, the emphasis given to them in category allocation is perhaps not surprising. Yet, further consideration of the distribution of content across the whole schema, as used for example in BS 2961:1967 (figure 4), reveals that the allocation of categories does not consistently correspond to the quantitative significance of the typeforms being addressed. While distribution of a great many roman typefaces across individual categories is in part an information management exercise, the low numbers in some categories shows that this is not entirely the case. What the inconsistency does indicate is a focused level of descriptive attention directed towards roman typeforms, which is not directed towards others. The roman 'humanist' category, for example, covers so few examples that its very differentiation from 'garalde' could be called into question.[16] By contrast, typefaces included within the 'slab-serif' category – if differentiated with the same level of detail as that applied to romans – show

15. See L. T. Owens, *J. H. Mason, 1875–1951, scholar-printer* (London: Frederick Muller, 1976), pp. 49–52; and Harry Carter's review of Nicolette [sic] Gray, *Nineteenth century ornamented types and title pages*, in *Signature*, no. 10, November 1938, p. 50. Carter makes reference to 'writers on type founding [having] taken very little trouble over what are called "Victorian Monstrosities"'; he also notes Gray's attempt to take 'the output of English type founders from 1800 to 1890 perfectly seriously – a thing that has never been done before.'

16. When combined these two categories are generally referred to as 'Old face' (Britain) or 'Old style' (USA). There are many arguments for combining them: see, for example, Gerrit Noordzij, 'Broken script and the classification of typefaces', *Journal of Typographic Research*, vol. 4, no. 3, 1970, pp. 213–40.

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more than enough visual diversity to qualify for several categories of their own. For example, a formal distinction commonly drawn between examples of slab-serif types is not made. Slab-serif types without brackets are often referred to as egyptians while slab-serif types with brackets are termed clarendons or ionics. Here, though, attention to such subtleties is not observed and typefaces are broadly grouped using only a single visual common denominator.

An evaluation of current contexts reveals, that roman typeforms are no longer the central concern. Freed from the restrictive Trajan orthodoxy of the early twentieth century, a more open outlook upon lettering in general has encouraged a scholarly reconsideration of typeforms outside the Roman canon. As previously overlooked areas for study have been revisited, so perceptions of practice, both past and present, have broadened. Studies embracing the commercial lettering and display types of the nineteenth century, along with the photolettering and transfer type eras, for example, have revealed the extraordinary range of material that a historical overview of typeforms might also encompass.[17]

Display typefaces have not only encroached upon the scholastic exclusivity that roman faces enjoyed, but also upon the commercial monopoly they once held in book printing. Distinctions between text and display are, now increasingly irrelevant, with greater subtlety having been introduced into previously display-orientated sans serif and slab serif typeforms, leading to a wider application of such typefaces for text purposes. This situation has been compounded by the need for typefaces to satisfy new functions dictated by technologies and environments beyond 'hot-metal' and print. And while the type catalogues of the photosetting era often corresponded to a given typesetter's specialism in either text or display, the contemporary digital type catalogue brings together both markets. No longer the preserve of a select few, operating within the established foundries, typeface design has, with the advances made in digital programming and the introduction of PostScript, been made accessible to anyone with the right skills and software. Reduced overheads, combined with improved ease and speed of both production and distribution, have resulted in a significant rise in the number of smaller scale type design businesses and the quantities of new typefaces now available. In such a competitive climate, where traditional roman text typefaces have become so widely accessible – it seems almost every manufacturer now reproduces a version of Bodoni and Baskerville – the emphasis in the market place has shifted. And while the copying of successful type models abounds much as it ever did, the wider trend has been the pursuit of ever greater divergence in form.

Classified but not described
This shift in the approach to typeform production has not been matched by a similar shift in the approach taken to typeform classification. Updated alternatives to the existing systems have been put forward, but
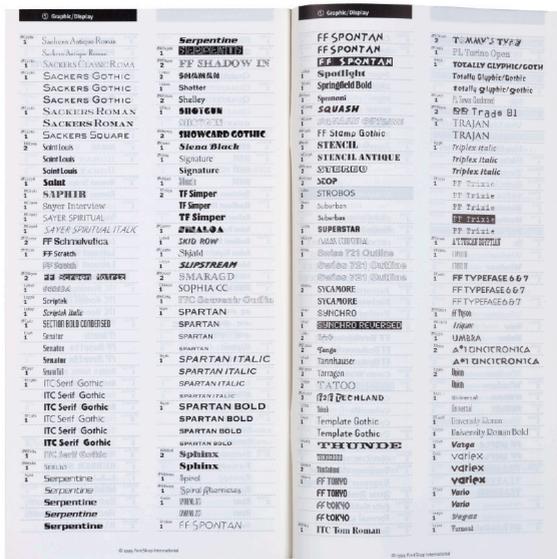
while these proposals have found admirers, they have generally lacked the support and following required for wider implementation. Authors of a German typography primer praise, for example, the classificatory approach of Gerrit Noordzij as being more intelligent than the Vox-derived DIN system; but, finding it hard to apply, they persevere with the limitations of the familiar schema.[18] There, as elsewhere, the ease of continuing with the familiar, if faulty, schema outweighed the upheaval any changes would necessitate. So failure to re-evaluate typeform classification in response to a changing practice has left a schema descriptively biased towards a market convergent on roman text forms struggling to cope with the sudden and broad-ranging influx of new forms.

An enforced, impractical and contrary classificatory convergence is the result – with a huge increase in the number of typefaces only able to be accommodated in the overspill category that existing schema typically provide. In the case of BS:2961 this area is, in effect, the 'graphic' category. Having come to operate as a junk-box for typeforms from other categories, its purposefully open-ended inclusion criteria – 'typefaces whose characters suggest that they have been drawn rather than written' – render it meaningless on any other descriptive level.[19] The troublesome nature of this 'graphic' category had been detected in an early review of the original Vox system by Ovink who criticized 'manuaires' – the category from which 'graphic' derives – for its vagueness.[20] While nominally a part of the system, such 'graphic' types effectively remain 'outside' any formal classification without explanation of their visual relationship either to one another or to the contents of the rest of the system (figure 5).

This increase in typefaces residing beyond the existing scope of classification has undermined previous assumptions: as Walter Tracy suggested, if a typeface could be classified then it could be described.

Figure 5. FontShop International, *StyleFinder* (1995), inside pages (left) and detail, 296 × 151 mm (page). This guide to the FSI font catalogue shows the seemingly random visual assortment of typeforms overloaded into the 'graphic' category.

17. See Gray, *Nineteenth century ornamented types and title pages* (London: Faber & Faber, 1938), and *Nineteenth century ornamented typefaces* (London: Faber & Faber, 1976); and James Mosley, 'English vernacular', *Motif*, no. 11, winter 1963–4, pp. 3–55.
18. Danial Sauthoff and others, *Schriften erkennen* (Mainz: Schmidt Hermann, 1997), p. 3.
19. British Standards Institution, *Typeface nomenclature and classification* (BS 2961: 1967), p. 11.
20. See Mosley, 'New approaches to the classification of typefaces', p. 95.

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In those instances where the comprehensiveness of classification systems failed, the notoriety of individual typefaces was relied upon to distinguish them from others. Such reliance upon the ability of these types to draw attention to themselves rather than their relative location within an overall system was dependent upon their numbers being small. But this solution is now unworkable. Numbers are so large that while 'accommodated', their description is no longer guaranteed. Individual typeforms are currently obscured by the inappropriately broad headings of the categories they have been stockpiled into. A more detailed level of descriptive attention is required to make explicit the range of formal distinctions actually present.

This problem has very practical implications. The limitations of the existing description languages affect not only the ability to identify and locate typefaces in ever-burgeoning sales catalogues but also the way that the history of typeforms is discussed: the range of forms that cannot be adequately described comprises an increasingly large percentage of typeface designs overall, effectively narrowing the view of practice that can be presented. While some efforts to redress this imbalance in representation have been made, more recent developments are generally omitted from the broader overview and considered in isolation, if at all. The 'not totally stringent from a scientific point of view, but fun and effective' classification developed by Erik van Blokland, Jürgen Siebert and Erik Spiekermann in 1996 for FontFont is applied only to this series of recent original type releases from FontShop International and not their wider catalogue.[21] Yet it is the published accounts and supposed overviews of practice where the exclusion or isolation of the contemporary is perhaps more obviously evident – and more concerning. Lawson's *Anatomy of a typeface*, for example, makes no reference to typefaces within twenty years of its publication date of 1990. Dowding's *Printing types* was originally published in 1961, when it could at least provide its audience with a more detailed consideration of display types than the *Type designs* of A. F. Johnson upon which it so heavily relies. Republished without revision in 1998, the evaluations of the field it sets out are at least forty years out of date. And while Heller and Fink adequately survey the contemporary in *Faces on the edge* in 1997, there is no point of connection to the field of practice that preceded, and would thereby have contextualized, their selected models of innovation.[22]

For many, the omission of changes in practice within such overviews and classificatory structures is entirely positive. The direction taken in the pursuit of formal novelty has at times proved so controversial as to call into question whether such types should even be acknowledged, let alone afforded detailed description. Lawrence Wallis voices the opinions of a more traditional older printing generation, when he complains that 'so much contemporary type design seems to be irrelevant, trivial, fatuous, flippant, clamourous, straining for effect and novelty, illegible, gimmicky, quirky and worthless'.[23]

Yet, regardless of opinion, failure to incorporate such types within historical surveys has created an artificial end-point in typeform history, resulting in the dislocation of contemporary practice from that of the past.

A RESPONSE

To address the problems that result from a selective approach to typeform description, an inclusive framework able to incorporate the requirements of all typeforms was required. Within this single comparative environment, the previously ignored 'platypus' could then be understood not only in terms of its relationship to other examples of contemporary practice, but also in its wider context of five and a half centuries of typeform design.

A revised categorization

The simplest, most obvious strategy, and the one initially adopted, was to modify the existing categorization schema and a working proposal for a revised set of categories was published.[24] The patterns of convergence around visual ideas such as roman text typefaces were seemingly catered for within the existing schema, with the divergence resulting from a greater freedom to experiment with form being more difficult to accommodate. So more attention was focused on the contents of the overloaded BS:2961 'graphic' category, effectively the inbuilt classificatory junk box, with these types dispersed across a series of newly added categories. But trying to modify only one category was to lead to failure. The problems were inherent throughout the schema, the instability of which only became more obvious in the process of trying to add to it. It became increasingly apparent that there were no fixed points upon which to build. Analysis only seemed to further undermine the absolute values and structural biases upon which previous classificatory assumptions and schema had rested.

Of no lasting value in itself, the failure of this early proposal did come to represent a turning point in the design process. Given the range of typeforms available, categorization did not present a practical or long-term solution for consistently describing them. Having already extensively mined type design history for inspiration, type designers now freely plunder the wider field of lettering. Indeed, any visual imagery, it would now seem, is acceptable as source material. The extra categories initially proposed scarcely scratched the surface of the problem. Yet to increase the number added would lead to an unwieldy system with too many categories each with too few typefaces. Acceleration in the field of typeface design/production means that to keep a system up-to-date would anyway be impossible. The inevitable shortfall in categories would still leave typeforms beyond existing scope and so the original problem would remain.[25]

21. *FontFont Library* (Berlin: FontShop International, May 1996), p. 13.
22. Steven Heller and Anne Fink, *Faces on the edge* (New York: Van Nostrand Reinhold), 1997.
23. Lawrence Wallis, 'Typographic chamber of horrors', *Baseline*, no. 18, 1994, p. 45.
24. Catherine Dixon, 'Why we need to re-classify type', *Eye*, vol. 5, no. 18, 1995, pp. 86–7.
25. The 'Typefinder' classification system (1983) adopted a strategy similar to my own early proposals by expanding the basic BS 2961: 1967 categories. While admirable in intent and execution, this system has quickly become outdated since it lacks the means of regular revision. See Christopher Perfect and Gordon Rookledge, *Rookledge's international typefinder* (London: Lund Humphries, 1983); the revised 1990 edition does not revisit the classification schema.

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Categorization has also been challenged by the ways in which designers make use of the broadening range of formal references at their disposal. Although the wholesale importing of historical models is still prevalent, formal elements are increasingly being selected from a range of sources and historical antecedents, employed outside their original context for the purposes of configuring new typeforms. How do we overcome the difficulties of describing these 'synthetic faces' is a question posed by Leonidas; Blackwell is similarly concerned by 'the rapidly increasing number of fonts that do not draw on one particular historical tradition or form of production, but are distinguished by being sports that draw on the varied visual culture of their time'.[26] Akin to the practice of 'sampling' in music production, a clear trend is identified by King in the merging of 'disparate typographic styles' and by Bringhurst as the use of 'templates lifted from other letters [...] mixed to create deliberate Frankensteins, or to create very subtly perplexing forms'[27] (figures 6–8). In this climate of reconfiguration, Tracy's likening of descriptively problematic types to platypuses seems especially apposite. These typeforms not only represent a classificatory challenge, but do so because they bring together in one 'species' the defining criteria of several others.

In part fuelled by what Bringhurst identifies as the 'surfeit of historical awareness and self-mockery' symptomatic 'of the phase we call postmodernism', the lifting and mixing of formal elements from other letters or sources within type design is, however, neither new nor transitory.[28] In her painstaking study of nineteenth-century display types published in 1938, Nicolete Gray revealed the origins of this 'new freedom' in the introduction of semi-ornamental letters, commenting that 'Every attribute of the letter may be altered or combined; categories become mixed and classification complicated.'[29] (figure 9)

Gray's attribution of the introduction of this process of reconfiguring existing formal ideas to developments in the nineteenth century offers some insight into the diffuse formal progress of typeface design into and throughout the twentieth century – even shedding light on more recent developments from the transfer lettering, photosetting and digital eras, though the earliest of these was under way some thirty years after her study (figure 10, opposite). This reconfiguration process helps us understand, for example, the current complexity of the idea of a sans serif type. No longer tied to a nineteenth-century vernacular source and other formal attributes of the grotesque pattern, the characteristic of terminals without serifs was free to be combined with geometric sources (see Futura), roman inscriptional capitals (Johnston and Gill), or whatever the designer has since seen fit to choose (Ad Lib, ITC Benguiat and Keedy sans), even seriffed faces (Rotis and Stone families).

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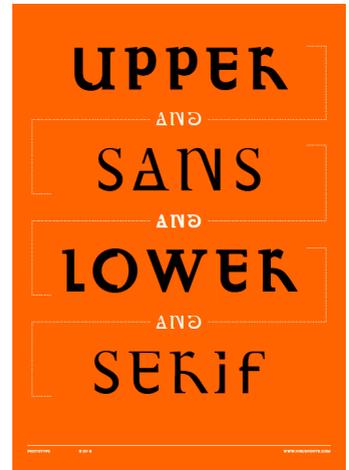
7

8

Figures 6–8. P. Scott Makela, Dead History (1990) (6); Jonathan Barnbrook, Prototype (1997) (7); Tobias Frere-Jones, FF Dolores (1991) (8). Dead History and Prototype make a feature of their elemental juxtapositions. However, the mixing together of very different visual references is not always so jarring. FF Dolores more smoothly blends into a lowercase roman the rhythmic informality of handwriting, irregular slab serifs, and a scissor-cut vernacular aesthetic.

Figure 9. Two-line English 'Union', as shown in Miller & Richard, *Specimens of book, newspaper, jobbing and ornamental types* (c. 1884). In its fusion of serif and sans serif styles this typeface is a clear forerunner of the digital sampling practices explored in digital type design over a century later.

As Gray intimates however, the infinitely variable possibilities promoted by this reconfiguration process are singularly at odds with a means of describing typeforms using only a limited number of category headings. In order to try and extend the useful application of a limited number of categories, combination strategies have been adopted. Vox, for example, suggested that his category terms be used in combination both with each other and with additional terms, which addressed secondary characteristics of weight, proportion and so on. This would, he claimed, provide his new system with flexibility enough even to classify the previously unclassifiable typeface.[30] But even this combined application of terms, launched with the full force of Vox's Gallic enthusiasm, could not introduce the detailed flexibility necessary to cope adequately with the ever-increasing emphasis on singularity within type design.

Figure 10. Author's visual mapping of Nicolete Gray's analysis of decorative and ornamental approaches to nineteenth century typeforms (1997), collage and pencil, 420 × 885 mm (detail). Gray's insight into the significance of the nineteenth century in terms of the reconfiguring of attributes within typeface design prompted an alternative mapping of the ornamental trends outlined in her text. This visual overview showing the evolution of styles of ornamentation and decoration facilitated a more immediate identification of formal patterns, with typefaces plotted using a vertical timescale and aligned with one of a series of horizontal columns allocated to key forms such as 'Tuscan' or 'shadowed'.

26. 'Annuals and perennials', p. 29; Lewis Blackwell, *Twentieth-century type* (London: Laurence King, 1998), p. 181.
27. Emily King, 'Digital type decade', in *Eye*, no. 40, 2001, p. 44; Robert Bringhurst. 'On the classification of letterforms', Serif, no. 1, 1994, p. 36.
28. Bringhurst, 'On the classification of letterforms', p. 36.
29. Nicolette Gray, *Nineteenth century ornamented types and title pages* , p. 60.

In the later revised and enlarged edition of this book, *Nineteenth century ornamented typefaces*, published in 1976, Gray reattributes this 'new freedom' in type design to the arrival from the continent of the Latin-Runic styles, commenting that 'although so far no very drastic changes have been made, categories are becoming blurred and classification complicated; a new era has begun'. It is worth noting that between the two editions of her book Gray changed the spelling of her name

from Nicolette to Nicolete; her preference for the latter has been followed in this essay.
30. See Maximilien Vox, *Pour une nouvelle classification des caractères* (Paris: École Estienne, 1954). See also British Standards Institution, *Typeface nomenclature and classification* (BS 2961: 1967): 'NOTE. The impossibility of placing every typeface into one of the categories above is recognized. In cases of difficulty the use of a compound term, e.g. humanist / garalde, is suggested.' (p. 11)

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CENTRAL LETTERING RECORD CLASSIFICATION PROPOSAL	BLACK LETTER FF BROKEN SCRIPT, 1991. JUST VAN ROSSUM	HUMANIST ITC LEGACY, 1992. RONALD ARNHOLM	GARALDE SWIFT, 1985. GERARD UNGER	TRANSITIONAL BITSTREAM CHARTER, 1987. MATTHEW CARTER	DIDONE ARCHITYPE BAYER, 1993. THE FOUNDRY; DAVID QUAY, FREDA SACK	SLAB SERIF CALVERT, 1980. MARGARET CALVERT	SANS SERIF: GROTESQUE FF HAARLEM, 1993. NEVILLE BRODY	SANS SERIF: NEO-GROTESQUE ARGO, 1991. GERARD UNGER	SANS SERIF: GEOMETRIC VARIEX, 1988. RUDY VANDERLANS, ZUZANA LICKO
SANS SERIF: HUMANIST CHARLOTTE SANS, 1992. MICHAEL GILLS	SANS SERIF: PROBLEMS LITHOS, 1989. CAROL TWOMBLY	WEDGE SERIF MATRIX, 1986. ZUZANA LICKO	CALLIGRAPHIC TEKTON, 1989. DAVID SIEGEL	ORNAMENTAL MISSIONARY, 1991. MILES NEWLYN	PROCESSED/ MANIPULATED CAUSTIC BIOMORPH, 1992. BARRY DECK	SAMPLED LUSHUS, 1992. JEFFERY KEEDY	INDUSTRIAL VERNACULAR FF TRIXIE, 1991. ERIK VAN BLOKLAND	CURVI-LINEAR ITC BENGUIAT, 1977. ED BENGUIAT	DINGBATS/SYMBOLS/ ORNAMENTS ADOBE WOOD ORNAMENTS, 1990. BUKER, LIND, REDICK

A remixed description

In many ways, the visual presentation of the initial working proposal towards a new set of categories highlighted what was most unsatisfactory about their function, leading not only to a rejection of categorization as a viable strategy but also to a re-evaluation of the role of graphic representation in the communication of typeform description (figure 11).

A messy drawing of the working proposal had been adroitly art directed by the publisher into an elegant graphic to accompany the printed text. Yet the regimented series of uniform, immutable and insular boxes belied the complexities of the narratives being drawn out between categories, as implemented in practice. A more accurate graphic representation of these narratives seemed an appropriate direction to follow, to achieve the required subtlety in approach to description.

Exercises in playing with the relative positioning of the categories, led to a more formalized diagrammatic representation determined by hierarchical and historical relationships[31] (figure 12). As it became clear that description for many types required a degree of focus beyond that offered by categories – something akin to an elemental breakdown of the compound category descriptions – so the emphasis in diagrammatic representation shifted towards a visual analysis of the criteria defining those categories.

While Bringhurst dismisses the remixing of formal elements within type design as nothing more than a 'surfeit of historical awareness and self-mockery' not qualifying 'as a serious taxonomic problem', the new description framework can be seen to have its origins in both recognizing and descriptively addressing the idea of formal remixing as an essential challenge.[32] In the same way as type designers were fragmenting visual elements from existing kinds of typeforms and remixing these in new contexts and new ways, so the existing definitions of typeface categories were fragmented to create a vocabulary of visual elements in type design, able to describe the new 'remixed' typeforms.

Figure 11. Table from 'Why we need to re-classify type', *Eye*, vol. 5, no. 19 (1995). The article's presentation of my classification proposal made clear the ineffectiveness of categorization as a description strategy. Particularly problematic was the art director's diligent translation of notes I supplied commenting on difficulties surrounding the idea of a sans serif type. These notes were made into their own category: 'sans serif: problems'. While an honest evaluation, the category was hardly helpful.
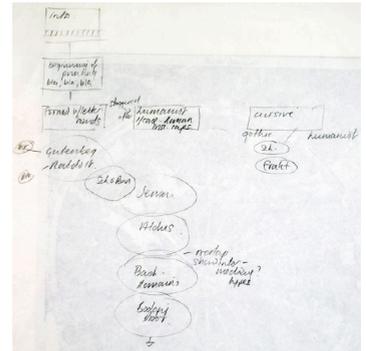
Figure 12. Author's sketch that encapsulates a shift in thinking away from the presentation of classificatory information in insular and finite boxes, as shown in *Eye*. The sketch explores the represention of categories as a sequence of columns. Each category/column is aligned with a vertical timescale at the point when the typeforms it describes were first introduced.

31. Work was in these early diagrammatic stages when Jonathan Hoefler featured the *Typeform dialogues* project (though not yet so named) and the work on description in 'On classifying type', *Emigre*, no. 42, 1997, pp. 55–70.
32. Bringhurst, 'On the classification of letterforms', p. 36.

From the vocabulary of visual elements three key description components were identified around which the new typeform description framework is based: 'sources', 'formal attributes' and 'patterns'.

Describing an individual typeform

The description framework operates on the assumption that the formal character of every typeface can be individually explained in terms of its specific configuration of sources and formal attributes. Determination of sources – the generic influences informing a typeform –grew out of the identification, early on in analysis, of the larger groups into which the existing categories could be ordered: roman, handwritten, nineteenth-century vernacular and so on. Sources describe the generic structural influences and rationales informing a typeform (see User's Manual, pp. 22–3, above).

Formal attributes were determined by exploding into individual units of description the previously grouped physical characteristics determining the categories. Formal attributes describe the detail of a given typeface's visual design. Eight main kinds of attribute were identified – construction, shape, proportion, modelling, weight, terminals, key characters, decoration – each of these with a sub-menu of its own. As a set of illustrated terms they usefully serve as a visual glossary of typeform (see User's Manual, pp. 24–5; also figure 13).

Figure 13. Table of formal attributes, from Phil Baines and Andrew Haslam, *Type & typography* (2002), pp. 50–1. This table illustrates a selection of formal attributes; while not comprehensive, it suggests the potential for such a visual glossary of typeform.

Given that the existing limited categorization schema did not reflect the scope of sources and formal attributes actually represented within typeface design, a broader examination of practice and related disciplines compensated for this shortfall. This broader examination revealed a growing prevalence of intellectual rather than aesthetic concerns within typeface design. However, wary of paying too much attention to the type designer's ideas and not enough to the appearance of the typeface itself, the selection of description components has been largely resticted to what can be seen, not what might be known. Describing typeforms in more emotive terms has been avoided altogether, especially because of the cultural subjectivity of interpreting mood.[33]

Granularity of description is difficult to calibrate. There is no universal understanding of descriptive focus. Rather, the appropriate level of descriptive focus is determined by purpose and therefore varies between systems. For example, a differentiation between serif or terminal structure is a priority within my framework but is of little relevance to the descriptive theories of translation and expansion constructed by Gerrit Noordzij.[34] Equally, I determined that the comparative level of differentiation made between typeforms at the level of each individual character as demonstrated, for example, in *Rookledge's international typefinder* or Mundie's *A field guide to the faces* would be unhelpful in the new framework.[35] It offers a micro-level of overly distracting differentiation in detail. Individual characters are referred to in the framework only when indicative of a broader formal trend. While differentiation in description has been important, so too has been maintaining a sense of what is shared.

Granularity of description is also essential for what might be understood as a distinct typeform in relation to the possible formal variations within a typeface family. The more traditional typeface family usually comprises italic, weight (e.g. bold/light) and proportional (e.g. expanded/condensed) variants, each of which would be considered distinct typeforms. And the stylistic members of the typeface 'super-family' such as serif, sans or monowidth, and, in turn, their italic, weight or proportional variants would also be viewed as distinct typeforms. Where the optical scaling of a typeface has resulted in clearly determinable modulations of form across different sizes of a particular variant, then it is possible that the description framework will be detailed enough to draw these out if required.

Nomenclature is also difficult. The idea of a roman type, for example, varies according to context. As used within the context of this framework, the term roman describes a very specific formal idea; yet in other contexts it can be applied far more loosely, to specify only that a typeform is upright or italic. To explain at length every term as it has been used (or not used) within the description framework would, however, require an essay in itself, if not several. In general the terms used within the description framework have been selected for reasons of clarity,

consistency and to some degree familiarity. Too great a departure from terms basically familiar was felt to be too disruptive, given the innovations implemented elsewhere. The widespread use of the term 'stroke' in typeface descriptions was, for example, found to be hugely problematic. This term recalls the pen so strongly that it seems not to apply to a growing number of typefaces whose form relies upon a range of sources far removed from the activity of writing. A total rejection of the term was considered but abandoned. There are areas of practice, which do demonstrate a strong correlation with writing. To replace the term with an unfamiliar alternative term was believed to be too disruptive, even hindering the possibilities for future extension of the description framework to encompass handwriting. The decision was therefore made to retain the term, but only in measured usage. Now clearly defined, it is found where reference to writing or the pen is essential to understanding a given typeform. To help further maximize the accessibility of terms both new and old, a visual illustration is intended to accompany verbal definitions.

Nomenclature is a favourite if controversial topic of debate among type designers and the decisions taken here – perhaps too cautious and too mindful of deadlines – may well provoke comment. This, and any future collaborations with users or interpreters of the framework, are to be welcomed. It is only then that the biases of the present author can be diffused and refined, so that terms and their consistency of use might be clarified across letterform-related disciplines and at an international level.[36]

Locating the individual within the field

Description of typefaces on an individual basis was well suited to the demands of the more divergent formal tendencies in type design practice, at the expense, however, of revealing the more convergent ones. For this reason there is a third element in the new framework. Identified as a pattern (see User's Manual, pp. 26–7), it describes an established recurrence of a given configuration of sources and formal attributes. Patterns identify pockets of visual coherence within type design practice; a pattern provides a point of reference, by which an individual type might be connected to others sharing the same description components.

33. Vox seems to have anticipated the move towards such an approach in his 1954 proposal, as reported in a printing trade journal that year. 'As for the classification of a sentimental nature … grouping typefaces according to their power of suggestion – Emphasis, Grace, Dignity, Elegance and so on – M Vox says they do in fact meet some requirements which will come one day; the necessity of creating a range of expressions for use with fancy or display types.' 'Maximilien Vox devises a new classification of typefaces', *Printing World*, 30 July 1954, pp. 120–2. For an example of

a system that follows a more intrepetative approach to type form description, see the FontExplorer tool provided by Linotype Library GmbH (1998).
34. 'Serifs are important to carry the contrast of a typeface along the different signs. Only protruding serifs could identify the contrast of a typeface in a single i. Only extremely low contrast would allow the type designer to omit the protruding serif. However, this knowledge has nothing to do with classification.' Gerrit Noorzij, 'Chiaconna in e flat, classifying type', *Typelab Gazette*, 27 September

1993, pp. 6–8, Antwerp: Association Typographique International.
35. See Perfect and Rookledge, *Rookledge's international typefinder*; David A. Mundie, *A field guide to the faces* (Pittsburgh: Polymath Systems, 1995), <www.anthus.com/Typography/Faces.html>, last accessed 4 July 2008; no longer online.
36. Systems of nomenclature, especially in relation to secondary attributes of weight and proportion, differ in terms of emphasis at an international level. Where British Standard terms existed, these were followed.

In general the most common of the possible recurrent configurations of sources and formal attributes have been selected to be patterns. Where related forms may be recurrent, but each one representing too few typefaces to warrant an individual pattern, or where a formal trend has proved too general to be outlined using a specific pattern, a summary area has been used. This is again an issue of focus: it was decided that to try and build into the framework too many obscure or diffuse formal trends would confuse rather than clarify. References can be made to patterns in the description of a given type where a strong correlation can be seen between its specific configuration of sources and formal attributes and one or more of these recurrent listings.

The overall approach to typeform description is then based on a model of adherence and divergence, with one of four methods of description being utilized: pattern only; pattern with moderators; individual description with reference to a pattern; individual description. Moderators would determine which formal attributes diverged from the original pattern. An individual description comprising a listing of appropriate sources and formal attributes, which also makes reference to a pattern, would usefully emphasize that a given typeform perhaps departs from its pattern referent more than it adheres to it, though it would still seem helpful to acknowledge a visual link.

Providing an overview

Accompanying this transformation in the method for describing types provided by the new framework came a transformation in the role of its visual presentation. The early exercises in playing with the relative positioning of the initial description categories shifted in purpose to a mapping of the visual elements used in the description of typefaces (figures 14, 15, opposite). Graphic means were used then 'to discover the idea itself: using the special properties of visual perception to resolve logical problems, as Bertin (1977/1981) would say, "Using vision to think".'[37]

As the new description strategy emerged, so the mapping of elements was formalized in a visual overview of the framework, with graphic means being used in their more typical role of communicating an idea. Originally a representational space for the categories in which types could be plotted physically, the new purpose of the diagram was to show the range and contextual relevance of these three description components, providing a table of reference against which individual types could be formally compared.

The use of an overview diagram is nothing new within the field of typeface classification; early instances such as the schema of Thibaudeau in 1921 gained something of an iconic status in the classificatory canon.[38] And, while aware of the flaws of many of these schemas, this overview aspect of their representation had always been attractive, offering a sense of manageable extent and of orientation (figures 16–18, overleaf).

Figures 14–15. Author's drawings of framework (sources and patterns) overview. July 1997, 420 x 594 mm (14); and as supplied to editor and programmer for application within the *Typeform dialogues* interface, 1997, 420 x 559 mm (15). These large-scale exercises in mapping description elements at first served as tools for thinking, and provided spaces to annotate in conversation with historical consultants (hence notes written in multiple directions). Later they served as specifications for implementation in the *Typeform dialogues* interface; as such, they record in places the interchange of ideas about how they should be interpreted within and adapted to the confined spaces of the interface.

37. S. Card, J. Mackinlay, B. Schneidermann, *Readings in information visualization: using vision to think* (San Francisco: Morgan Kaufmann, 1999), p. 1: '[Graphical inventions] serve two related but quite distinct purposes. One purpose is for communicating an idea … The second purpose is to use graphical means to create or discover the idea itself: using the special properties of visual perception to resolve logical problems, as Bertin (1977/1981) would say, "Using vision to think".' The reference is to Jacques Bertin's *La graphique et le traitement graphique de l'information* (Paris: Flammarion, 1977); translated as *Graphics and graphic information-processing* (Berlin & New York: De Gruyter, 1981).

38. Basic visual methods were in use in some of the earliest formal systems. The system devised in 1911–12 by H. L. Bullen, librarian for American Typefounders (ATF), and the schema set out by François Thibaudeau in 1921 (see figure 16, overleaf) provide the first of the more analytical typeform classifications. Both systems share a structural approach based on serif differentiation and both introduce a new consideration of presentation. Beatrice Warde advanced Bullen's 'morphological' ideas concerning the organization of typeforms, setting out her 1935 classification according to evolutionary principles (Warde, 'Typefaces, old and new'). Although a 'selective' classification in that it only deals with book types, the visual presentation of Warde's system not only sets out the principles of arrangement but also establishes the hierarchical relationship of these principles. And while she makes use of some existing category terms, Warde does not include sample types, so that the precise location of a given typeface within her system is only ever implicit. Warde's emphasis on representing description principles was significant in the development of my own framework.

14

15

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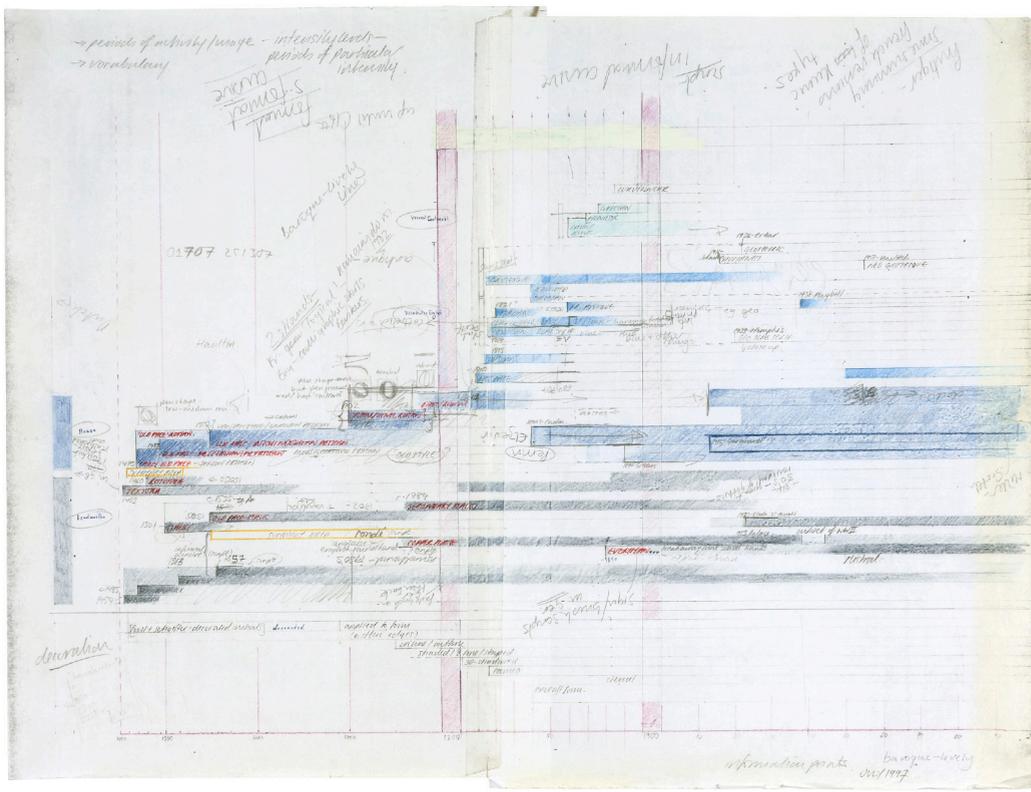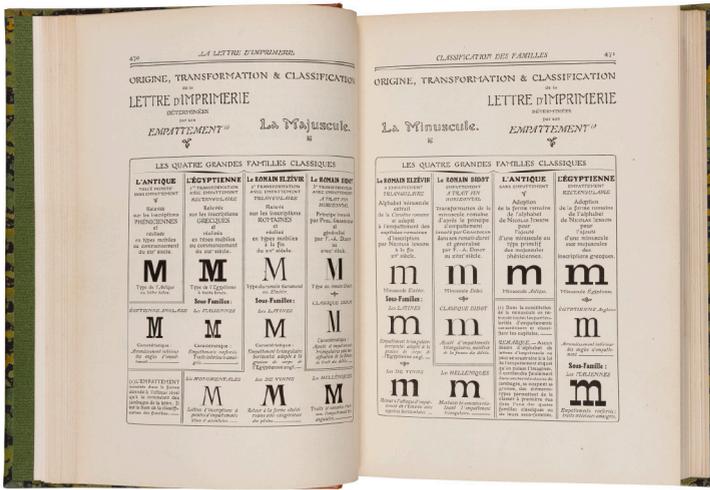
16
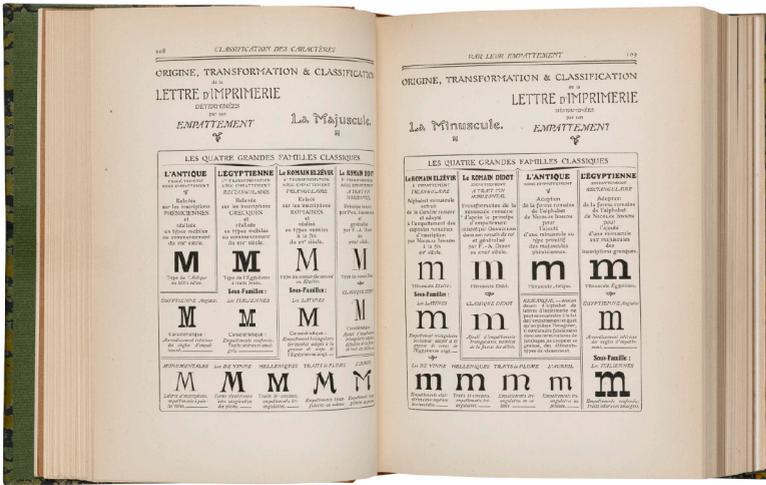
17

Figures 16, 17. François Thibaudeau. 'Origin, transformation & classification de la lettre d'imprimerie déterminées par son empattement', from *La lettre d'imprimerie …* (1921) (16) and *Manuel français de typography moderne* (1924) (17). Thibaudeau's tabular approach enabled him to present his classification as a whole, representing the full extent of the system and its organizational principles. A more detailed discussion of the graphic representation of Thibaudeau's system in relation to classificatory thinking can be found in Catherine Dixon, 'Understanding the bigger picture: the graphic representation of overviews of type form' (2013). Notable here are the differences between the two versions of Thibaudeau's diagram, which is generally referenced as though there was only one version. The 1921 version includes a rationale for the classification, a description of what a serif is, and a note on serif consistency across upper- and lowercases. The later version uses the space afforded to those elements to instead accommodate additional sub-categories of Elzévir Roman printing types, identifiable by their 'triangular' serif structure. The extension of the system allows for typefaces with serifs derived from the pen and brush, an important consideration in the contemporary commercial context of the classification. Yet the inclusion of such types alongside the basic Elzévirs feels compromised and illustrates the difficulty of trying to later amend a classification system and cater for greater complexity, when the organising principles were originally established in the boldest and broadest of terms.
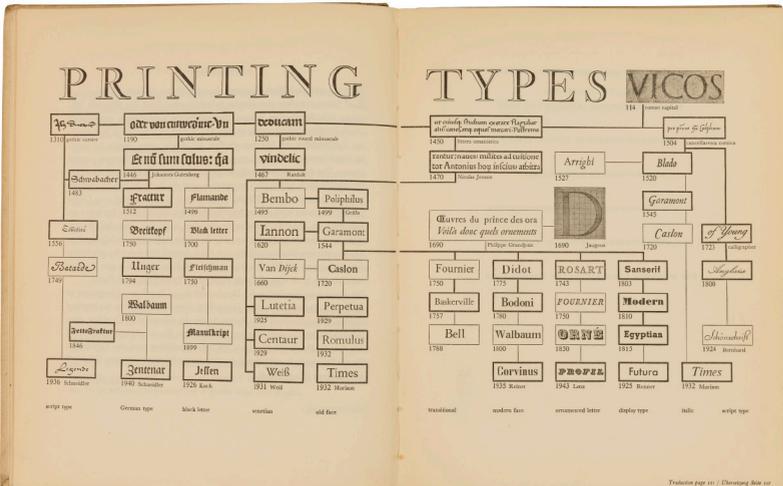
Figure 18. Rudolf Hostettler. *Type : a selection of types, une selection de caracteres d'imprimerie, eine Auswahl guter Drucktypen* (1949). Hostettler's mapping of the history of printing types at the start of his book is limited in the categories shown, but does offer a reassuringly ordered overview of the subject. The history represented by the map is in reality far less systematic and far more expansive, yet the clear visual structure of the overview serves to marshal and contain, and helpfully contextualizes constituent elements.

Typeform dialogues

Orientation was recognized as being hugely important in those description schemas that emphasize a degree of abstraction in the presentation of description information, especially in those that operate at the level of individual typefaces. The PANOSE System offers a summary style guide to aid familiarization, with common numerical description codes thereby offering an orientation overview to aid in the location of individual typefaces. Though as with the Mundie taxonomy, when progressing through increasingly detailed levels of description, so one's sense of a given typeface's location within the overall system becomes increasingly removed.[39]

Not simply implied but immediately visible: by providing the ability to locate the basic description components of the new framework within an overview I sought to correct exactly this potential for disorientation in typeform description, very much in accordance with the theory that,

> Having an overview is very important. It reduces search, allows the detection of overall patterns, and aids the user in choosing the next move. A general heuristic of visualization design, therefore, is to start with an overview. But it is also necessary for the user to access details rapidly. One solution is overview plus detail: to provide multiple views, an overview for orientation, and a detailed view for further work.[40]

In essence a map, the diagram uses two axes to form a grid in which are first plotted the series of patterns. One axis charts the sources, while the other charts the passage of time. Each pattern is then aligned with the relevant source it follows and its date of introduction. Around 1900 the diversity of practice was such that new formal precedents grew too many in number for their introductions to be charted. From this point on, typefaces (other than revivals) are increasingly described without reference to patterns. Instead a greater reliance is placed on individual configurations of sources and formal attributes, with additional reference to one of the general summary areas where appropriate. On the diagram therefore, this point is intended as an intersection between the pattern plane and the visual summary of formal attributes. Modifications made to my original drawings in response to the specific requirements of the *Typeform dialogues* environment explain why this intersection is in practice less distinct than originally imagined.

In laying out the list of patterns graphically, each aligned with its relevant source and along a timeline, a temporal context is afforded to the forms each describes. In so doing the history of typeface design practice is more accurately represented as a series of parallel developments rather than, as typically, a single sequential narrative. And while the new description framework is operating on essentially morphological principles, it is also able to offer synchronic and diachronic perspectives on practice. History is avoided elsewhere, however, especially as a reference within an individual type's description. To combine an historical

39. Bauermeister, *A manual of comparative typography: the Panose System*; Mundie, *A field guide to the faces.*
40. Card, Mackinlay, Schneidermann, *Readings in information visualization: using vision to think*, p. 285.

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approach with a morphologically-based description, although wide-spread, is problematic and can prove confusing. Particular forms do have strong associations with particular periods, however these relationships have been undermined by the revivalism popular since the nineteenth century. A type's visual appearance is no longer a guarantee of when it was actually produced, leading to conflict in those systems where types are classified on this basis. Such a system presupposes too much knowledge of the historical context of typeface design for users, so that they can understand why two fonts practically identical, yet produced several centuries apart, might be in separate categories.[41]

CONCLUDING COMMENTS

Although the origins of the new description framework lie in the boxes of an older classificatory approach, there has been a progression in thinking. Emphasis in description shifts from the use of inflexible structures within which typefaces are to be contained, either visually or conceptually, towards the development of a tool for knowledge-building and the facilitation of understanding.

Everything about the new framework – the organization, utilization and presentation of information – enforces the intention that it should constantly reveal how it is working. That revelatory ambition also extends to the field of practice the tool seeks to describe and not contain – opening that out for exploration and discussion, yet, recognizing the importance of an informed and accessible language with which to do so. Addressing conflicts and generally trying to unravel the complexities of a practice, which often operates on assumed ideas that are not always made clear, can be seen as the secondary spur towards making the description information within the framework as accessible as possible. The problems of an individual type being obscured through containment within an inappropriate larger concealing category have been overcome. Typefaces can now be brought to the framework and individually examined so that a description can be built to the requirements of each one. The flexibility of a description framework based on a model of convergence and divergence allows too for a more nuanced understanding of the continuum of practice, often problematically represented through category terms alone. And in the building of a visual vocabulary of typeform description, which incorporates both pattern descriptors and visual elements as yet unattributed to a particular pattern, so the fracture in the documentation of the history of typeform can be overcome. Contemporary types that borrow and remix elements from past exemplars in new ways and in new contexts can at once be connected visually to those exemplars and better understood in terms of their visual evolution from them.

As the subtitle of this essay suggests, presentation of the new description framework has focused upon the issue of typeface

classification. This work began firmly rooted in this field; but, such has been the departure in approach taken, it is perhaps questionable whether the resulting framework can continue to be identified as a system of classification. To fence in ideas of a classificatory approach, though, is to fall into exactly the pigeon-holing trap this work set out to escape from. What matters most about the framework is not whether it does or doesn't conform to an existing model for classification, but that it uses the tools necessary for it to function as intended. As was determined in the process of trying to modify the existing schema, there are no absolutes in this field. Rather, classification should be about creating 'a means to an end' and 'not the end itself'.[42]

Like any other, the new description framework is simply a product of its purposes and its time.[43] It represents a fixed point in what in reality needs to be an ongoing process of systematization. It is only a matter of time before new classificatory challenges will appear and our understanding of the typographic 'platypus' redefined. It is for this reason that the new framework, while operational, should not be considered a 'complete' system. In trying to overcome the 'closure' characteristic of the pigeon-hole approach to classification, an open-ended flexibility has been built in to the framework to try and address the issue of change and, given the length of time typically taken to formalize many category-based systems, their almost immediate obsolescence. The framework is able to respond to change, not be made redundant by it. Additional description components should simply be added as and when needed and without undermining existing content.

As mentioned earlier, nomenclature is an aspect of the new framework already intended for expansion. To this could be added other common type classification issues for debate, such as the possibility of including fonts for complex scripts or broadening the scope of the framework to establish something of the particular relationship of typeface design to writing. The opinion that a system of typeface classification is of limited use unless it also addresses handwriting is not uncommon and it is certainly one with which I have sympathies.[44] The objective of unifying the description of type- and letterforms may come to direct this work at a later stage. In addition, the summaries of type production methods and technologies, originally included within the overview diagram to provide a greater contextual understanding of form, might usefully be reinstated and extended to include references to functionality, especially in relation to changing contexts and digital environments. Certain environments have significant impact on the design of typefaces, such as the inclusion of sizable ink traps that enable typeforms for high-speed printing on low quality paper. As typeface design moves away from the print environment altogether, such formal features will only multiply.[45]

Typeface classification is then an ongoing story. It is certainly a subject of ongoing popularity within typographic discussion, holding a

41. See Bringhurst, 'On the classification of letterforms'.

42. Tracy, 'Type design classification', p. 63; His view, in full, referring to BS 2961: 1967: 'However, the classification is an aid to study, not a substitute for it; a means to an end, not the end itself.'

43. Given the debt his own system owed to turn-of-the-century values, it was ironically Vox who observed that a historical classification often says more about previous practice than that contemporary with it: 'Comme tout classement historique, il rend mieux compete des phénomènes ancient que des phénomènes récents.' Vox, *Pour une nouvelle classification des caractères*, no pagination [p. 4].

44. 'Current systems of typeface classification are fundamentally useless as they isolate type from other renderings of handwriting'. Noordzij, 'Broken Scripts and the classification of typefaces', p. 213. In his cube description model for letterforms constructed along axes of translation and expansion, increasing contrast and decreasing contrast, Noordzij brings together the ambitions of both non-Latin and writing-based inclusivity, arguing that his, 'cube has many advantages over any other attempt at classifying writing (not just type, but any writing of all times and of all places).' Noordzij, 'Chiaconna in e flat: classifying type', p. 7.

45. The few types designed specifically for screen use that are already in production indicate some of the many possible directions in which form could be taken. See, for example, Zuzana Licko's Base typeface family (*c.* 1995) from Emigre.

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curious attraction for many of those involved with or simply interested by letterforms.[46] Perhaps it is the dream of finding the illusory perfect and omniscient typeface classification system, as Jonathan Hoefler describes it, 'the Holy Grail of typography',[47] which proves so enticing.

Or perhaps it is simply the frustration of trying to use existing systems that leads someone to decide that there must be a better way. Yet, more often than not, such discussion fails to lead to action of a sustained kind. In presenting this work, the intention is to both prompt and provide a focus for such action. *Typeform dialogues* is underpinned by an approach to classification ripe for both adaptation and application across a range of contexts, not only in the present; as a 'living' framework, this new approach offers real possibilities for metamorphosis and growth in the future.

AFTERWORD (2017)

Revisiting this essay has been difficult, not least in being held to sad account by the zeal of my old ambition. But if such frameworks are products of their times, it is as well to reflect on how well the work towards minimizing obsolescence underpinning the approach of my description framework stands up, looking back from the future for which I was then writing.

Contemporary type design contexts

The contemporary typographic scene is arguably more convergent than the trajectory of practice from the 1990s would have suggested. The introduction of OpenType in the period 1997–2001 with an extended possibility for character set and language support in font files prompted a term of consolidation and caution, as foundries regrouped and existing font libraries were revisited and repositioned in a market characterized by ever-closer margins of difference between typeforms.[48] As Peter Bil'ak lamented in 2011, an increase in self-publishing in an era of limited formalized critical review has promoted an 'institutionalizing [of] the average'.[49] Perhaps it was ever thus – the difference now being the scale of production and so the extent of a sense of saturation in ever more familiar forms. Given the preponderance of familiarity, the grounds for distinction in typeface design have shifted towards new features of functionality. Glyph palettes now bulge in supposed servitude to the designer offering every kind of variant and support. (Apart from enhanced language support, it is arguable if such servitude is actually to the end-user of the typeface, or to the ego of the type designer who over-elaborates design decisions in the supply of unwieldy character sets, not always easy to access or employ.) Yet, an increase in character set extent and, more particularly, the option for additional numbers of formal alternatives, does bring with it the potential to complicate the already complex matter of typeform description and challenge

still further the formal specificity previously understood by the idea of a 'typeface'.

In spite of the more generic convergences in practice, designers do still seek out the cracks between classification categories, be they historically determined or, in the case of Andrey Krátky, structurally organized as in the national system of the former Czechoslovakia set out by Jan Solpera[50] (figure 19). The rationale given for the design of Krátky's typeface Nara is introduced as, 'the story of the search for gaps in type classification'. As he articulates, the structure of Solpera's system very clearly formed the starting point for his design investigations:

> In school we were taught to recognise which combinations of elements were typical for given periods .... Only later when I was studying Solpera's *Classification* did I realise that there could be alternative ways to combine formal elements in typefaces. More importantly, I realised that perhaps whole categories of type were missing from history![51]

Bil'ak's own History typeface presents no less of a classificatory challenge in following perhaps the opposite strategy (figure 20, overleaf). Rather than seek to explore a gap between existing classificatory categories, History rather swallows all categorizations. Inspired by the 'poly-historical' narrative model of Kundera, History sets out to encompass something of the formal breadth of twenty-one centuries of letterform evolution in one typeface 'system'.[52]

Is there also a challenge to our previous reliance on the dominant understanding of the idea of a typeform being anchored in its print incarnation? Perhaps not, given that many typefaces designed for digital environments are also intended for celebration in print. Though how appropriate is it to continue to rely on the idea of print as the referent for typeforms almost exclusively intended to be rendered variously and often crudely in pixels or sub-pixels on screens of varying granularity, perhaps even programmed with a set of instructions for adjusting forms on the fly to ensure consistency across basic features and proportions? Where is the referent for what is being described? Or, more to the point, is it still helpful to think in terms of there even being a particular referent?

Figure 19. Jan Solpera, diagram of tiered classification system, in *Classifications of typefaces of Latin origin*. Solpera says of this work: 'The world of typefaces is complicated; the system of their classification, therefore cannot be simple.'

46. Recurrent in typographic debate, classification is appropriately included in 'Annuals and perennials. A discussion of typographic research. University of Reading, 5 November 1996', pp. 24–47.

47. 'If there is a Holy Grail of typography it is surely the Omniscient Typeface Classification System, which will organize and index the complete typographic output of mankind.' Hoefler, 'On classifying type', p. 55.

48. A year span and not a specific introductory date is given for Open Type because of the gradual roll-out of support for the format,

including the first fonts available for complex scripts and European scripts. See <typedrawers.com/discussion/1134/what-were-the-first-opentype-font-releases-and-when>.

49. Peter Bil'ak, 'We don't need new fonts …', <www.typotheque.com/articles/we_dont_need_new_fonts>, posted 15 July 2011; originally published in *8 Faces*, no. 3, 2011, pp. 4–5 (reprinted in *8 Faces: collected*, pp. 488–9).

50. Jan Solpera, *Classifications of typefaces of Latin origin*, published as a special supplement to *Revolver Revue*, no. 77, in cooperation

with the Academy of Arts, Architecture and Design, Prague, December 2009. I am grateful to Radek Sidun for alerting me to Solpera's work and supplying me with a copy of this publication.

51. Andrej Krátky, 'Nara – the typeface that never existed', <www.typotheque.com/articles/nara_-_the_typeface_that_never_existed>, posted 14 September 2011.

52. Peter Bil'ak, 'The history of History', <www.typotheque.com/articles/the_history_of_history>, posted 9 March 2010.

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01 (800–2000 AD)
Inscriptional square Roman capitals (e.g. lettering on Trajan's column, Pantheon)
Illustrated: Trajan's column, 113 AD

02 (1470–1620)
Typeforms with low contrast and an oblique stress, modelled on pen-drawn forms (e.g. the work of Jenson, Garamond et al.)
Illustrated: Nicolas Jenson's Roman, 1470

03 (1700–1810)
Typeforms with increasingly high contrast and vertical stress, machine-like forms (e.g. Grandjean's Romain du Roi, the work of Caslon, Didot and Bodoni)
Illustrated: Bodoni's Manuale Tipografico, 1818

04 (1820–1920)
Sans serif typeforms with low contrast, popularised by the advertising boom accompanying widespread industrialisation (e.g. the work of Caslon IV, Benton, Erbar)
Illustrated: Johnston's Underground Lettering, 1916

05 (1920–1980)
Rounded graphic and display typefaces, popularised by instant lettering rub-down systems (e.g. the catalogues of Letraset, Mecanorma)
Illustrated: vernacular lettering

06 (1960–1980)
Rasterised typeforms and early grid typefaces found in computer phototypesetting systems from 1960–80s (e.g. Hell, Digiset)
Illustrated: Wim Crouwel's sketch, 1964

07 (1980–2000)
Pixelated and bitmapped typeforms, found in early low-resolution computer screen displays (e.g. Emigre type library, Apple screen fonts)
Illustrated: Apple System Software 6, 1988

08 (1470–1620)
Cupped and bracketed serifs (rounded and heavy) derived from pen-drawn forms and ink-spread on press (e.g. the work of Jenson, Garamond, Jannon et al.)
Illustrated: Jenson's Roman, 1470

09 (1700–1780)
Sharper, rationalised serifs with shapes resulting from metalsmithing and engraving advances designed to counter ink-spread on press (e.g. the work of Caslon, Baskerville)
Illustrated: Caslon's 1734 Broadside specimen sheet

10 (1760–1810)
Hairline or ultra-thin serifs with a horizontal stress perpendicular to the stroke, showing the impact of a machine aesthetic in engraving (e.g. the work of Didot and Bodoni et al.)
Illustrated: Pierre Didot l'aîné's Roman, 1818

11 (1810–1920)
Slab serifs completely without bracket or cup, of varying weight and perpendicular stress, popularised by the industrial revolution and among the first advertising styles (e.g. Clarendon)
Illustrated: Robert Thorne's Two Line Great Primer Egyptian, 1820

12 (1730–1850)
Ornate and decorated filligree types showing advances in engraving technique after the baroque period (Fournier, Bodoni et al.)
Illustrated: Bodoni's ornate capitals, 1771

13 (1820–1900)
Shadowed and three-dimensional display types show the rise of advertising accompanying widespread industrialisation (e.g. the work of Benton, Bernhard, Gill et al.)
Illustrated: Monotype Gill Sans Shadowed, 1931

14 (1960–2000)
Inline-outline types, originally achieved pantographically and now digitally, can be seen as a response to the increasing electrification of commercial signage in the 20th century
Illustrated: Rudolf Koch's Prisma, 1931

15 (1860–2000)
Display types featuring optical or filled patterns, originally machine-engraved, but later produced photographically and digitally, showing influences from commercial signage and experimental art photography
Illustrated: AM Cassandre's Bifur, 1929

16 (1860–2000)
Rounded and outline forms produced by both photographic and digital reproduction and perhaps suggested by neon signage (e.g. commercial signage world)
Illustrated: detail from an 1847 playbill, printed by woodblock, typeface unknown

17 (1560–1920)
Swashed and flourished types derived from humanist calligraphy of the 15th century (e.g. the work of Arrighi, Granjon's Civilité)
Illustrated: Giambattista Palatino, 1540

18 (1800–1900)
Bifurcated and tuscan serif styles, popularised in the 19th century, went beyond simple ornament and obscured letter form structures (e.g. advertising, display and commercial signage work)
Illustrated: skeletal Tuscan, 19th century

19 (1800–1900)
19th century typeforms decorated with outline and solid fill styles, again diverting attention from the essential structure of letterforms (e.g. advertising, display and commercial signage work)
Illustrated: detail, display and commercial signage work

20 (1800–1900)
Outline forms easily produced by mechanical and photographic reproduction (e.g. advertising, display and commercial signage work)

21 (1800–1900)
Machine engraving to pattern-fill display types, popular in the 19th century; later done photographically and digitally; evidence of the continuing demand for novelty in type appearance
Illustrated: Gothic Tuscan, 19th century

Figure 20. Peter Bil'ak, 'History' font system, *Typotheque Type specimen no. 5, History* (The Hague: Typotheque, 2008). Bil'ak's font system is based on skeletons of Roman inscriptional capitals and includes 21 layers and 21 independent typefaces, all of which share widths and other metric information, enabling them to be combined and recombined. As the specimen states: 'History has the potential to generate thousands of different unique styles through the superimposition of layers ranging from the humanist renaissance, transitional, baroque, script-like, early grotesque and 19th century vernacular to digital types.'

Typeform dialogues

A palpable atmosphere of excitement accompanied the launch of the OpenType font variations technology in September 2016, with the new possibilities for interpolation across the design space spurring typeface designers towards a re-engagement with formal experimentation and enhancements in responsive functionality. If 'type systems' and so-called 'super families' – that is those 'collections of coordinated type families that cross type classifications' while sharing 'a common architecture' – present some taxonomic discomfort, how much harder might it become to describe, 'a single font file that behaves like multiple fonts', allowing for an as yet uncharted capacity for variability.[53]

New classificatory models

While description languages in use at a digital parsing level may have evolved as design technologies have advanced, with verbal description we are still wrestling with some familiar problems, not least the difficulty of navigating ever-larger catalogues of typefaces. A recent shift in approach from simply amassing fonts in libraries follows a shopping analogy, the knowable negotiability of the model of a curated boutique finding favour over the impractical density of the discount department store. Yet, limiting or delimiting the scope of catalogues aside, we are still wrestling with categories, whether too few or, perhaps more problematic, too many.

The Vox system in a variety of modified and often extended guises continues as a stalwart reference in many a typographic textbook.[54] Representing newer ways of thinking, Indra Kupferschmid identifies two more practical approaches: the 'classification according to form' model and micro-classification or tagging.[55] Kupferschmid's form model is inspired by the teaching of Noordzij and applies his calligraphic contrast theories of expansion and translation within a layered category-based model, which allows for differentiation at the level of serif and even decorative detailing. Yet, even with the additional conceptual flexibility of the different description levels, a system is only as agile as the storage database and the interface through which it is delivered. On the implementation of her form-based model in the development of the classification for the FontBook for iPad in 2011, Kupferschmid noted

53. Yves Peters, 'New FontFonts: FF Yoga, a type system for the new decade', ‹fontfeed. com/archives/new-fontfonts-ff-yoga-a-type-system-for-the-new-decade/›, posted 9 February 2010; no longer online; John Hudson, 'Introducing OpenType variable fonts' ‹medium.com/@tiro/https-medium-com-tiro-introducing-opentype-variable-fonts-12ba6cd2369›, posted 14 September 2016. It is also worth noting Blackwell's acknowledgement of the descriptive challenge that the variation technology of Multiple Master fonts presented. While Multiple Master fonts never actually took off commercially, and

Open Type font variations technology is not the same, Blackwell's earlier speculations very much anticipate the challenge of current contexts. 'In the near future, as Adobe's multiple master-fonts push out designs that can be altered by the user, classifiers will be challenged to find new methods of describing typefaces that are not defined visually but by a range of oppositional axes with increasingly numerous permissible variations'. Blackwell, *Twentieth-century type*, p. 232.
54. Joep Pohlen offers an extended version of the Vox categorization in *Letter fountain*, originally published in Dutch (Roermond, NL:

Fontana, 1994) and later in English (Cologne: Taschen, 2011). Pohlen's rationale in using Vox is that it has been 'widely accepted', though he acknowledges that '[a]s a large number of typefaces are ignored in this classification, we have amended and extended it at various points to do justice to typefaces that were designed after 1954'. See ‹www.letterfountain.com/classification.html#C17›.
55. Kupferschmid, 'Type classifications are useful but the common ones are not', ‹kupferschrift.de/cms/2012/03/on-classifications/›, posted 31 March 2012.

'That a typeface can only belong to one class was a restriction in the database which made the sorting very difficult at times'[56] (figure 21).

Offering far more flexibility are the self-assembly micro-classification or tagging systems and the huge, often user-generated vocabularies for describing type employed by retailers. Bulk online retailers of typefaces are invariably not producers of the fonts they sell, rather they act as a point of distribution for many different foundries and independent producers. Yet each of these foundries and producers may have their own very particular terminologies for describing their fonts, with very limited consistency between them. Pooled collectively in online tagging systems there is considerable capacity within these combined vocabularies for multiplication and overlap. To add to the potential for descriptive confusion the contemporary 'user' of retail fonts represents a far broader set of possibilities than previously, when the trade contexts for type were limited, not least, by the link of font sales for proprietary typesetting machinery. Within the current commercial sector, typefaces are ever more accessible to those with no trade experience, training or education in printing, design practice or scholarship – that is to say, to people outside the once guarded practices of typesetting with its own formal vocabularies. In such an environment commercial vocabularies for type design, and especially user-centred vocabularies and folksonomies, have tended towards an emphasis on intended application and a more subjective and emotively-driven approach to description.

As established in the main essay, reference to use is far from new in the categorization of typefaces. However, while the terms 'text' and 'display' offer broad parameters for the requirements of a typeface, grouping typefaces by using headings or tags such as 'wedding' or 'condolences' suggests something far more specific, and arguably limiting, in application.[57] Surely the prescriptiveness of such terminologies has implications for design practice more widely. Are these user-centred descriptive categories for typefaces part of a democratic language tool or in fact an example of a vehicle for lowest-common-denominator design ideas, which will result in increasingly bland design outputs? I am reminded here of much older marketing strategy of showing intended use in a type specimen, with foundries such as Bauer, Klingspor and Ludwig & Meyer producing often delightful folders of pieces of printed ephemera that demonstrate the potential for application of a given typeface in as broad and often unexpected a range of contexts as possible.[58]

Without guidance, folksonomy can quickly result in users interpreting even standard tags and headings on their own very different terms, resulting in chaotic and contradictory search environments. The highly subjective, often formally imprecise nature of category headings or tags too reliant on 'mood' also does little to facilitate transparency of category content. The vagueness of a tag such as 'friendly' cannot work to distinguish formal variety, and use of a term such as 'sensible' (meaning quite different things in different languages) can result in some
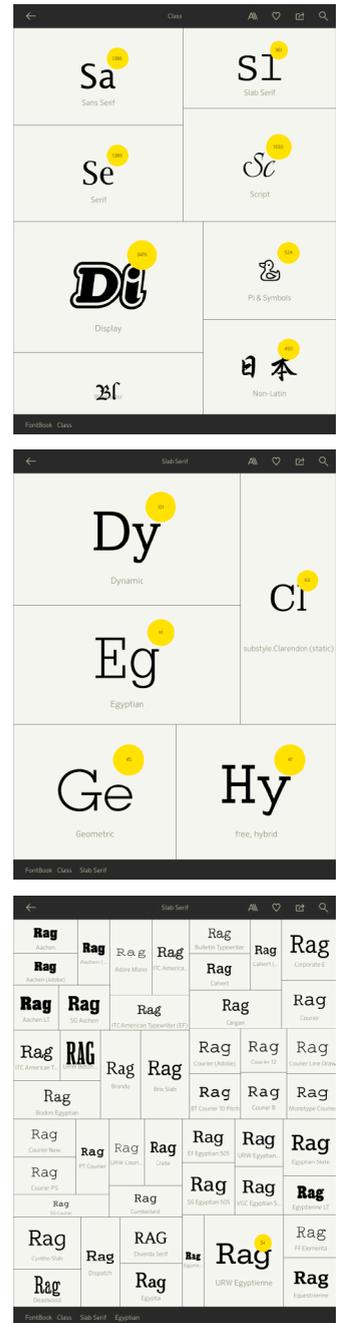
Figure 21. FontBook App (for iPad) classification, 2015. This sample sequence of screens shows a progression through the classification's different levels. The first screen (top) shows eight 'class' options; numbers in yellow circles give quantities of typefaces in each class. Having selected 'slab serif', the second screen (middle) shows five slab serif sub-categories. The third (scrollable) screen shows in alphabetical order some of the 91 typefaces in the 'Egyptian' sub-category.

Typeform dialogues
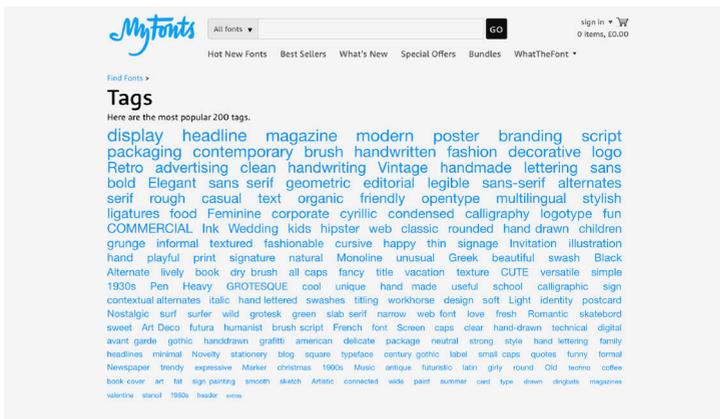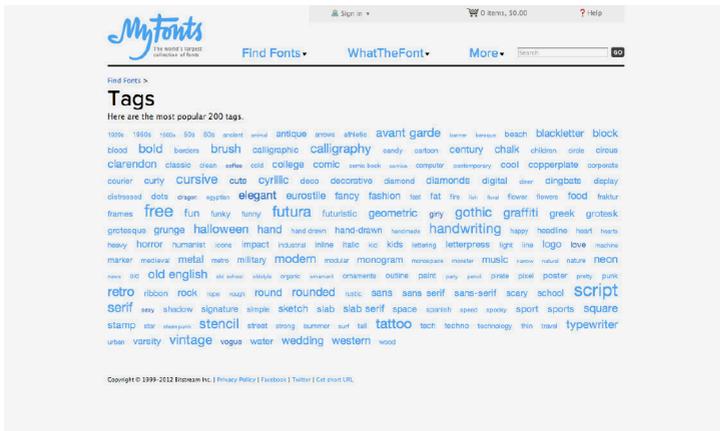
Figure 22. Tag clouds, 'the most popular 200 tags' used on the MyFonts website, <www.myfonts.com>, generated in 2012 (upper) and 2017 (lower). Decontextualized, non-visual and with considerable overlap between them, such tags are limited in their ability to enhance an understanding of type-face forms. Comparison across the five-year period, however, is revealing; it shows (for example) a decreasing concern for 'free' fonts, an increasing concern for 'friendly' fonts, and a consistent concern for 'coffee' fonts.

unexpected search results. In an algorithm-driven world there can be a place for the wild card of unexpected delight. Though there is a place too for efficiency in finding what you need, especially under pressure. And while searching, the typically arbitrary relationships between tags or category headings can also prohibit awareness of the field as a whole, with the overview for visually understanding the scope of formal possibility being limited if not lost (figure 22).

The potential for overwhelming users with seemingly arbitrary tags is perhaps less of a risk for foundries than it seems from the outside. Conversations with type designers themselves confirm that the addition of the more informal tags, especially, directly enhances sales. As Kupferschmid observes: 'So, what to do if people apparently find

56. Indra Kupferschmid, <fontfeed.com/archives/fontbook-the-team-behind-the-new-app/>, posted 28 July 2011; no longer online. See 'Appendix', pp. 131–3, below, where the text is reproduced in full.
57. See Linotype FontFinder, <www.linotype.com/catalog/categories.html>. Here fonts are listed according to category, use or theme. Categories are sans serif, script, serif, symbol, text, arabic, handwriting, calligraphy,

blackletter; uses are celebration, book, corporate, magazine, newspaper, poster, screen, comic; themes are business, casual, cool, fun, techno, Old West, Easter, Halloween, Christmas, condolences, certificates, birthday, wedding, celtic, mediaeval, valentine.
58. A Bauersche Gießerei specimen folder in the Central Lettering Record (CLR) contains over 30 printed examples of Futura in use, including sample airline schedules, items of

business stationery, advertisements and sample pages from childrens' books. Also in the CLR are smaller specimen folders produced by Ludwig & Meyer for display typefaces such as Diplomat and Hallo Kursiv, which most likely date from the mid 1960s. The practice of producing folders of printed samples of potential uses for typefaces was recently revived in the specimen produced by Jeremy Tankard for his Pembroke font released in 2014.

Systematizing the platypus Catherine Dixon

the typefaces they want this way. Should you force educate them, force your classification on everyone if it may not even be helpful to them?'[59]

The impracticality of an overall flattening out of structural and connotative descriptive tags and keywords into mere lists or at best 'clouds' has, however, become a focus for improvement, and so has emerged perhaps a third classificatory approach. Offering a hierarchical structure for tagging and different 'levels' of keywords, this approach is situated somewhere between the restrictiveness of a single-category form model and the overwhelming tendencies of a micro-tagging system.

This idea of a tiered system is what Kupferschmid originally sets out, though by her own admission recognizes as not always being easy 'to adapt for real-life applications.'[60] In 2016 a 'real-life' collaboration with the Fontstand application team did offer an environment in which to test out the potential agility of this hierarchical approach. The result was an example of a curated tagging system, in part manual but in part cleverly automated through the use of parametric font filtering tools.[61] Offering consistency with descriptive agility, attention was paid to structural simplicity. As Andrej Krátky notes, 'There were lively discussions because we needed to find the right balance between the complexity of the system and ease of use for the user. It would be easily possible to make the number of criteria twice as large, but we really tried to skip everything that could not be used by the majority of users and keep only what is important, helping our system to remain simple and accessible.'[62] This literal 'regrouping' of approach reminds me of the positive stance taken by Jaspert, Berry and Johnson in the preparation of the fourth edition (1970) of their *Encyclopaedia of typefaces*.[63] Rather than be overrun by contemporary trends and categories, they decided to reduce the categories used in previous editions to just three: romans, lineales and scripts. The Fontstand system has cut back to a basic level of five categories: serif, sans, slab, display and script[64] (figure 23). Complexity is addressed through the introduction of an advance font filtering system,
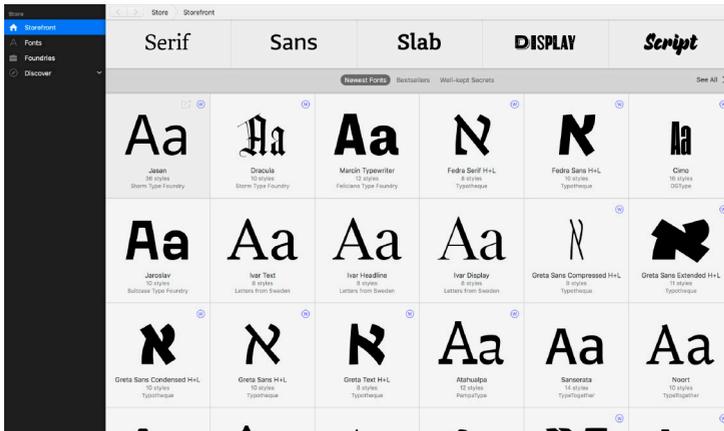

Figure 23. 'Storefront' feature, FontStand website <fontstand.com>, 2017. The sophisticated search mechanism that underpins the website's font catalogue is given a simple structure in the 'Storefront', which uses only five basic categories.

which adds levels of search criteria to describe proportional variation, intended use, features and language support. In recognizing environment and functionality this system helpfully responds to a widening classificatory critique, including my own earlier voice, of the absence of such contextualization; it also addresses concerns about the need to select typefaces on grounds of functionality, beyond a role as aesthetic vehicles or connotative signifiers.[65]

Back to the particular

Twenty years on and I find much of the conceptual framework for my approach to description still intact and far from obsolete. Though there is, of course, plenty of scope for refinement not least in those areas I had previously identified: nomenclature, complex scripts, lettering more broadly, and aspects of functionality as just discussed.

Nomenclature. A benefit of engaging with the field of type design over a period of time is to realize that nomenclature is not fixed. Shared ideas about the idea of weight in typeface design can for example change. Our expectations of what might be considered a 'regular' weight will almost certainly change as reading habits and environments shift.[66] As with any large project there are of course also smaller things that hindsight draws one's attention to. I would gladly, for example, exchange the term 'stroke' for the less pen-oriented 'stem' or 'spine'. My experience of living overseas and teaching typography in another language alerted me to the importance of using terms that can be translated easily.

Complex scripts. The focus on European scripts within both the description framework and the *Typeform dialogues* environment is a reflection of a time when complex script type design was far less mainstream. Given the limited complex script expertise within the original *Typeform dialogues* team, such a focus also made practical sense. Now, the idea of the multi-script type family is ever more common, with, for example, Arabic versions having been developed to match classic European fonts such as Frutiger and even Helvetica, perhaps the most mainstream European typeface of them all. Increasingly typefaces are being conceived of as multi-script families from the outset, so that it is not necessarily the European script that leads in the design process. My previous assertion that it might be possible to simply add complex script typefaces to the framework at a later stage then betrays not only a lack of knowledge of how scripts beyond my own actually operate, but more uncomfortably, the erroneous assumption that what I then viewed in terms of 'non-Latin' description would automatically follow the 'Latin'. The perspective that sees other scripts only in relation to their orbit of Latin is manifest in the terms themselves. It is a perspective that has dominated much of Western typographic history, at its colonial worst in use of terms such as 'exotic' to describe complex script typefaces. A script-agnostic description system would be the ideal, the potential

59. This is based on my own conversations with type designers about the benefits of the tag 'friendly'. It is confirmed by Kupferschmid, who relates that, 'Speaking with several type manufacturers though I got an additional view. Some told me that sales went up significantly after they added more tags, more informal tags that is.' Kupferschmid, 'Type classifications are useful but the common ones are not'.

60. Kupferschmid, 'Type classifications are useful but the common ones are not'. See also Kupferschmid's manual of typography, *Buchstaben kommen selten allein* (Sulgen: Niggli, 2004).

61. The hierarchical approach echoes that of the classification system of Jan Solpera, in which a four-tier description is rendered as a four-digit numeric code (see n. 50, above).

62. Interview with Andrej Krátky, <medium.com/type-thursday/categorizing-type-7c3b068fdffc>, posted 27 August 2016.

63. W. P. Jaspert, W. T. Berry, A. F. Johnson, *The encyclopaedia of typefaces* (London: Blandford, 1970).

64. See <fontstand.com/fonts>.

65. On the need to recognize use and functionality in typeface classifications, Ben Archer writes: 'Dixon and Baines are joined in this critique by Karen Cheng (2005) in the introduction to *Designing Type*: "Today, type ... requires classification on the basis of several additional factors, including, notably, function and intent. Ideally, fonts designed for specific media (newspapers or low-resolution digital screens, for example) should be grouped together; placing them within the historical Vox categories prevents designers from understanding their intended use."' Ben Archer, *www.100types.com*, p. 7.

66. This follows remarks made by Gerry Leonidas at 'Designing sans today', a round table discussion between Leonidas, Cyrus Highsmith, Jean-Baptiste Levée, Christina Poth, Alice Savoie and Indra Kupferschmid (moderator), 20 October 2016, part of the 'Sans everything' conference, École supérieure d'art et de design d'Amiens, 19–21 October 2016.

of which is hinted at in Leonidas's working proposal for 'A description framework for Cyrillic, Greek, and Latin typefaces'.[67] When determining the specific descriptors across a range of scripts, the devil will lie in the detail. The scale of this task is perhaps more suited to parametric programming than to a verbally based description framework that engages with historical narratives. A more positive step forwards for my own work would be to see if my methodology for description might usefully be applied to other scripts discretely, to determine whether overviews of patterns of practice and defining sources and formal attributes are discernible and even comparable.

Lettering. My previously stated objective of at some stage unifying the description of type- and letterforms similarly seems rather naïve. As with the inclusion of complex scripts, it is now clear that this should be an ambition of a description framework at the outset, rather than a simple expansion of an emergent system. Though there seems to be scope for expanding the visual overview of practice to identify patterns in the evolution of letterforms more generally, perhaps rendering these in a multi-layered three-dimensional illustrative space. This would offer an opportunity to show the parallel formal developments across different lettering contexts, providing a rich visual contextualization for the typographic form, so often viewed in isolation. Others have also found a use for my basic description methodology and simply applied this within lettering contexts, identifying the relevant sources and formal attributes with which to build descriptions as required.[68]

Classification systems that cover both type- and other letterforms include the categorization for the 'typographic landscape' as proposed by Gouveia, Farias and Gatto.[69] Such breadth in scope is facilitated by the native Portuguese of the authors, in which 'tipográfia' is a far more encompassing term than the seemingly equivalent 'typography'. The scheme however finds its focus in the purposes of the different forms of 'typography' it identifies, not in their varying forms.

Focus is crucial here. The drive to be inclusive is also a part of a fundamental classificatory trap: the temptation to think about the subject universally. Criteria for the scope of the ideal system are too often set out with suggestions for embracing additional writing systems or the study of handwriting or the field of lettering in its entirety. As ideals such ambitions are laudable; but in practice the development of such a system lies beyond the capabilities of an individual or indeed of any probable circumstances. Rather, it is important to ask who is a given system for and what is its purpose? A description system does not have to include everything to be useful to those who need it. Some of the more interesting recent classificatory work has been that which has remained focused within very particular boundaries, such as the categorization created by David Shields for the nineteenth-century typefaces in the Rob Rob Kelly American Wood Type Collection at the University of Texas at Austin (figure 24).[70]

67. Gerry Leonidas, 'A description framework for Cyrillic, Greek, and Latin typefaces', unpublished seminar notes, University of Reading, 24 October 1996 (author's copy).
68. See, for example, Fátima Finizola, *Tipografia vernacular urbana, uma análise dos letreiramentos populares* (Urban vernacular typography, an analysis of popular lettering), (São Paulo: Blucher, 2010).
69. 'Typography is here understood in a broad sense, including reference to alphabetic and para-alphabetic characters obtained from processes that would be better described as lettering (painting, engraving, casting, etc.) and not only from automatic or mechanic processes that characterize typography in a more restricted sense.' Anna Gouveia, Priscila Farias, Patrícia Gatto, 'Letters and cities: reading the urban environment with the help of perception theories', *Visual Communication*, vol. 8, no. 3, 2009, pp. 339–48.
70. The original website presenting the Rob Roy Kelly American Wood Type Collection, shown in figure 24, is no longer online. An updated version with a reworked catalogue is available at <dev-rrk.pantheonsite.io/?page_id=176>. For insight into the process informing Shields' original categorization, see David Shields, 'Unpacking obscurity: categorizing 19th century decorative types', *Design Inquiry Journal*, Summer 2009; and 'Considering Rob Roy Kelly's American Wood Type Collection', *Printing History, the Journal of the American Printing History Association*, new series, no. 7, January 2010.

Antique

Clarendon

Latin

Tuscan

Runic   Bevel

Gothic Tuscan

Antique Tuscan
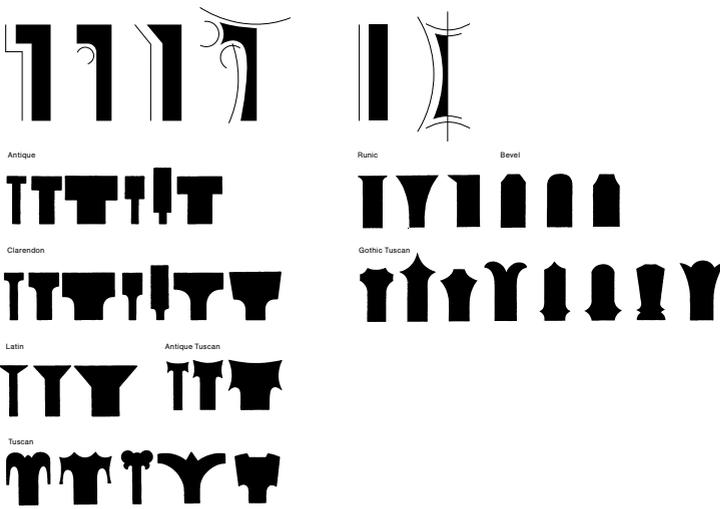
Figure 24. (a) Reconfiguration of Rob Roy Kelly's analytical charts characterizing the derivative nature of nineteenth-century wood type design, from Rob Roy Kelly, *American wood type 1828–1900* (1969); (b) screen from original website for the Rob Roy Kelly American Wood Type (July 2009); (c) David Shields, matrix for nineteenth-century wood type classification (2017). Shields's approach in cataloguing the Rob Roy Kelly American Wood Type Collection was underpinned by Kelly's own observations concerning the derivative nature of many nineteenth-century wood type designs.

(a) Kelly identified three primary typeface categories (Roman, Antique, Gothic), from which derivative secondary styles allowed typefaces to be further differentiated. Tertiary-level descriptors could then detail specific visual attributes of the typeface 'body', its terminals, and any ornamentation it may have. Kelly's analytical charts shown here illustrate secondary styles derived from Antique (left column) and Gothic (right column).

(b) Shields used Kelly's conceptual approach as a starting point for the construction of an organizational framework for cataloguing the physical collection and structuring the collection website. To Kelly's three primary categories Shields added a fourth (Script) to group typefaces of this kind later discovered in the Kelly collection. (This website and its cataloguing approach have since been updated; see n. 71. For an account of the original website, see Nick Sherman, 'The Rob Roy Kelly American Wood Type Collection website', 14 July 2009 <http://woodtyper.com/292>.

(c) Shields later configured his system as a matrix, which (as he notes) 'provides a convenient visual tool to determine what is – and, just as importantly, what is not – in the collection stylistically.' (Quotation from Shields, 'Unpacking obscurity: categorizing 19th century decorative type' (2009).

| Plain Face | Serif | Roman | Fat Face | | | | | | | | | | | | | | |

Aside from these detailed elaborations, the new description framework sits perhaps more comfortably within contemporary classificatory contexts than when first introduced. Though in order to appreciate better the wider significance of the contribution it continues to make, it is necessary to step back in time still further.

Rather optimistically and perhaps in anticipation of the British Standard revisions of 1967 published the following year, Thomas Tanselle was of the opinion that 'there is every reason to expect that standardized methods for measuring and classifying typefaces will eventually be agreed upon.'[71] He was rather more accurate in determining that the merit of a given proposal, would not 'lie in their details', but rather 'in their general pragmatic drift', and more particularly in offering 'a multiple-level plan for classification'. Only a few years later Herrick similarly anticipated the significance of a 'hierarchical' or 'graduated' approach in listing his five essential characteristics of a given taxonomy – the others principles being useful, exhaustive, precise and tolerant.[72]

So it is interesting that it is only recently that there seems to be a degree of consensus around the idea of a multi-level approach to description. Though Vox had suggested the compound use of his terms, and systems such as that of Solpera had formalized a mechanism for tiering typeface descriptions, the tendency has been to shy away from the perceived complexity of a multi-level approach. It is only since tagging has found favour over single-form categorization models, with the need to manage the unwieldiness of the resulting keyword lists, that impetus has shifted towards acceptance of using layered description structures.

The *Typeform dialogues* description framework contributes just such a multi-layer view through the combined use of descriptors, which operate at different levels of focus; the generic 'source' attribute setting a scene, with detail embellished in the particular combinations of 'formal attributes' listed either as individual sequences or through reference to the normative 'pattern' groupings. Yet, it distinguishes itself from other hierarchical models, such as Kupferschmid's 'form model' or Fontstand's Advance Font Filtering System, in its intent. Whereas my system seeks to build multi-layered descriptions for individual typeforms, Kupferschmid and Fontstand set out to build sequences of multi-level search criteria.

That is not to negate the search-oriented ambitions of Kupferschmid and Fontstand. Given the organizational confusions in the world of commercial font sales, Kuperschmid is right to identify a useful classification as being 'one that helps the user to find and select typefaces and which is structured accordingly'.[73] By contrast, the ambitions underpinning my own description framework and the *Typeform dialogues* environment were more pedagogical and explanatory than commercial and search-driven in their determination. And it is interesting to observe
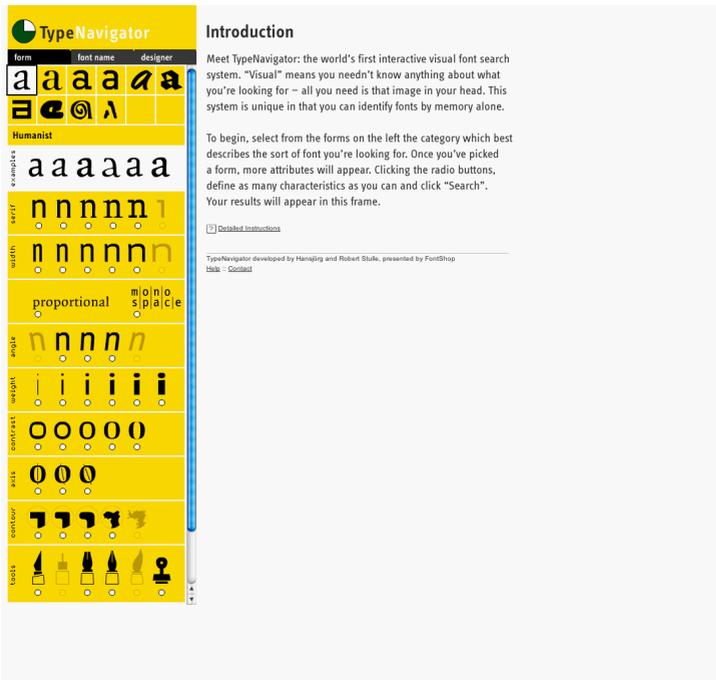
Figure 25. Hansjörg and Robert Stulle, TypeNavigator (introduction page), as implemented by FontShop International (FSI) <typenav.fontshop.com>; no longer online. TypeNavigator was originally developed for use in CD-rom format (not published); it was later adapted for online use and published by FSI in 2004. TypeNavigator was claimed to offer 'the world's first interactive visual font search system', based on an elemental and layered approach to building typeface descriptions.

that the TypeNavigator, a more pedagogically-oriented description tool that used a means of formal interrogation to identify and locate fonts, has been commercially abandoned by its host FontShop International (figure 25).[74] The facilitation of an 'I'll know it when I see it' retail experience and an exercise in formal knowledge-building are, it seems, distinct activities – though perhaps not mutually exclusive?

However one tries to structure typeform identification, people will order and find things the way that they want to. And while, as already intimated, you cannot foist education on uninterested users, should that prohibit any attempt at education? (see n. 60, above). As Kupferschmid acknowledges there is an element of learning implicit in any form-based description model.[75] Authorship of that learning experience is something the early machine type manufacturers identified as an important factor in their market competitiveness, investing significantly in the production of teaching materials and publications for the purposes of educating potential customers. Might not similar strategies now

71. G. Thomas Tanselle, 'The identification of type faces in bibliographical description', *Papers of the Bibliographical Society of America*, vol. 60, no. 2, 1966, p. 202.
72. Earl M. Herrick, 'A taxonomy of alphabets and scripts', *Visible Language*, vol. 8, no. 1, 1974, pp. 7–8.
73. 'The aspect of finding a typeface though is crucial to many more people, every day, than the act of classifying them. You sort through your CDs once and then only look at the respective shelf when you want to listen to Jazz for example. This is why I think a (more) useful classification is one that helps the user to find and select typefaces and which is structured accordingly.' (Kupferschmid, 'Type classifications are useful but the common ones are not'.)
74. Robert Stulle, 'TypeNavigator' <robert-stulle.com/projects/typenavigator.html>, posted 2006; no longer online. In 2008, I commented enthusiastically on how this application demonstrated the potential for expanding the context for my own framework; see Catherine Dixon, 'Describing typeforms: a designer's response', *InfoDesign: Revista brasileira de design da informação* [Brazilian Journal of Information Design], 5 (2), 2008, pp. 21–35.
75. 'The form model was – not surprisingly – the most advanced, hence most difficult thing to recognise. It is obviously a fact that distinguishing typefaces must be learned.' (Kupferschmid, 'Type classifications are useful but the common ones are not'.)

enhance a more informed typeface selection rationale for bemused end-users? This would not only help them to see the differences between the typefaces available, but would let them understand better what such differences might mean for potential design applications.

My description framework informs my own teaching practice and it is encouraging to see others finding in it a useful educational model for framing discussion of both typeform variety and history.[76] Though while the framework is pedagogic in ambition, it was not designed as a specific teaching and learning tool within the context of a particular curriculum.[77] Rather it can be seen as informed by the broad pedagogical ambitions, which underpinned *Typeform dialogues* and which shaped the Central Lettering Record itself. Its intention is not only to record letterform diversity, but to articulate the position of such diversity within the continuum of a historical narrative.

A greater knowledge of where things – shapes, in this case – have come from and how this might inform a greater understanding of the possibilities for their improved use is not new in typography. Updike, elaborating on his call for printers to be more informed in the choices they make concerning their type stocks, emphasizes the need to have a knowledge 'of how their shapes originated, were elaborated or simplified, were improved or deformed, why these changes were made, and, in short, the reason for types being in the forms that they now are.'[78] Nearly a century later and the need for a consumer to understand the context of a made object is no less important. As Laura Potter argues:

> Consumers need to understand an object's context of production, its embedded skills and knowledge and the quality of its materials – its complexity – so that they can develop an understanding of how and why similar things may be differently valued. The digital playing field can make life appear more level than it really is, and I am not convinced that this contextual flattening at a reductive visual junction (screen) is entirely positive for those trying to earn a living through their making.[79]

Engaging with the complexity of typeform description has been a central concern throughout the evolution of the *Typeform dialogues* framework. The use of graphic representation and the emergence of the overview diagram has been a significant contributory tool in both managing and communicating that complexity, while also continuing to distinguish this description approach from others. The emphasis on mapping the contextual description references, and not the typefaces themselves, is an essential aspect.[80] As Archer acknowledges in quoting Richard Saul Wurman: '"Understanding is a path, not a point. It's a path of connections between thought and thought; patterns over patterns. It is relationships" '.[81] The overview diagram however does more than offer a graphic representation of the extent of the description framework. Within the context of *Typeform dialogues* especially, the diagram

also locates the typeform knowledge it presents within the historical continuum of typeform knowledge generation. Again I find prescience in Updike's observations, that in knowledge building it is important to be mindful of the field of study as it has evolved, and more particularly in relation to the use of an overview diagram, to have set out before one 'a conception of how much there is to know, and an idea of how to know it.'[82]

Maintaining a connection in the new framework to the typeform vocabularies of past has therefore been important, a position commended by Hilary Kenna in her observation that 'It respects the existing classification but creates a flexible framework that builds on past experience and accommodates new additions without creating gimmicky categories.'[83] Yet, looking back from a purely theoretical perspective, I find it too easy to see the compromises here, as already indicated in the notes on nomenclature (see pp. 119–20 above). Against keeping past vocabularies for the sake of continuity is Leonidas, who calls instead for a more 'rational' eschewing of 'established distinctions based on cultural or subjective principles'.[84] While I am sympathetic to this argument, perfect rationality is not always pragmatic. Here the Neurath metaphor of rebuilding a ship at sea, quoted as the epigraph to this essay, offers a better way of looking at the complex design space from which the description framework emerged and the basis for the decision-making that underpinned it. At sea, the new necessarily has to combine with the old, given that complete and immediate renewal is impossible. Similarly the historical narratives to which the *Typeform dialogues* environment and this description framework sought to contribute to are already a work in progress. As Kupferschmid argues: 'We cannot abandon all old systems, and even less so, the different terminology established over the years. We have to come up with a way to integrate all this and explain it comprehensibly.'[85]

The danger is that without consistency and fluency the language of contemporary typeforms moves further from that used in previous accounts of the field; so grows the dislocation, identified early on in this project, between an understanding of past practice and the contemporary scene. To offer a space in which to critique existing letterform practices, as a way of invigorating work in the present, was a key premise in the establishment of the Central Lettering Record archive within which this framework first emerged. So it was important that the approach to description should similarly echo these contextually driven critical ambitions in the determination of a generative and future-facing

76. See, for example, Phil Baines & Andrew Haslam, *Type & typography* (London: Laurence King, 2002; 2nd edn, 2005); and Kate Clair & Cynthia Busic-Snyder, *A typographic workbook: a primer to history, techniques and artistry* (Hoboken, NJ: Wiley, 2005).
77. Ben Archer, by contrast, in his 'www. 100types.com: making a computer-mediated model to teach a history of type design', focused on the development of a curriculum-based classificatory tool, emphasising pedagogic practice and student-centred and active modes of learning (see p. 24).
78. Updike, *Printing types*, vol. 1, pp. xxvii–xxviii.

79. Laura Potter, contribution to 'By hand and brain: an essay by seven people', <medium.com/hand-brain/laura-potter-9cfc5bbb17f9>, originated by Beeker Northam, posted 28 July 2015
80. 'It is apparent that to map the location of a typeface, to pin it down in history and in formal properties, requires a system of multiple criteria, plotting the nature of a design on more than one axis. It is no longer credible to propose a closed system of classification, because we can now see that the creative nature of the subject determines that new forms will seek to step outside existing structures. There is no rule book, only a series of possible readings to be made of each new font and from which its coordinates may be plotted. But these are never fixed.' Lewis Blackwell, *20th-century type [remix]* (London: Laurence King, 1998), p. 183.
81. Archer, 'www.100types.com …', p. 32.
82. Updike, *Printing types*, vol. 1, p. xxviii. The sense of what Updike is trying to convey, in relation to an awareness of the field of study as it has evolved, may be more clearly conveyed by quoting him in full. 'By the time these pages have been read, and the books alluded to have been examined, one should be able to distinguish the various great type-families from one another, with the ease with which we recognize English, French, or Italian, when printed; and to choose intelligently the form of the letter which allowing for diversity in taste, is the most suitable to employ in any particular kind of printing; and should have, too, some knowledge of the skill and learning which, in successive centuries, men have devoted to this subject – a conception of how much there is to know, and an idea of how to know it.'
83. Hilary Kenna, 'Typeface classification', <www.type4screen.com/?p=90>, posted 11 April 2007; no longer online. See 'Appendix', pp. 133, below, where the text is reproduced in full.
84. 'Of course, we cannot accept simple "de gustibus …" proclamations. It must be a necessary condition that descriptions are put forward in such a way that they can withstand scrutiny and argument. The requisite authority to fulfil this condition can only stem from a rational, consistent, and complete approach to the task.' Leonidas, 'A description framework for Cyrillic, Greek, and Latin typefaces'.
85. Kupferschmid, 'Type classifications are useful but the common ones are not'.

tool. As Denise Gonzales Crisp acknowledges: 'Descriptive systems in typography influence what is producible, sometimes even what is thinkable.'[86] And while classifications often originate as theoretical tools, David Shields reiterates the benefits to design practice, finding in his own description framework 'a surprisingly useful tool for generating new forms' and 'a conceptual method for "programming" new type designs.'[87]

That the new framework is very clearly 'a means to an end' and 'not an end in itself' is, to return to Walter Tracy, a positive sign.[88] And while I have at times described the framework as a knowledge-building tool, the intention is to step beyond the provision of information to be assimilated as knowledge, and rather, as Noordzij sets out, 'to persuade us to understanding.'[89] Leonidas's understanding is helpful here: a 'description system' can be 'a procedural guide' or a '"user's manual" for evaluating letterforms', where, to evaluate can be understood as 'to analyse, to label, to correlate'. My description framework offers just this kind of space for evaluative engagement, offering a set of description tools as 'an aid to thinking' and not a substitute for it.[90]

A key part of the problem is that typeform description is a subject of little concern for those who already spend a good part of their time thinking about type. The knowledgeable have no need for a strategy to make sense of the subject and will happily consider types on an individual basis – mapping new discoveries against extensive internal knowledge banks, managed according to an understanding of similarities and difference already assimilated through experience or learned organizational structures. As John Hudson notes of his own descriptive practices, 'I tend to avoid classifying type, on the basis that every design is its own category: what makes us interested in a particular typeface is the way in which it differs from all other typefaces, not the way in which it belongs to a class of similar typefaces.'[91] Yet, while description on a type-by-type basis is important, some mechanism for pattern recognition is needed to determine how a typeface is different from all others. This is what is offered within the new framework. The potential is for focused individual typeform description, though with the description elements contextualized within the wider field of practice, and with possibilities for describing a degree of formal convergence and divergence from established typeform norms.

Accessibility is the key to this. As Indra Kupferschmid sets out the ambitions for her own classificatory work, she echoes many of my own:

> The historically savvy expert has sophisticated language and methods to describe letterforms of the past and maybe even present. But I, too sometimes forget that others don't easily see those unique features in typefaces that I can make out in seconds. I want to find a tool that also helps entry-level users of type to recognize the differences and similarities among typefaces and find clues about their potential use.[92]

The difficulty in working in this field for any length of time is that one's own knowledge starts to inhibit identification of the esoteric, those languages, for example, rich in the 'cultural or subjective' bias against which Leonidas warns, and which can all too easily exclude an intended audience.[93] A more inclusive approach would be to engage directly with that audience: 'to step back every now and then and ask the actual user'.[94] This is good advice, though not as yet put into action with my own framework. This is a failing. While the *Typeform dialogues* environment offered a tailor-made test environment for implementation of the description vocabulary and principles, the halt in the programming of the CD-Rom occurred before the point of any more formal beta testing with particular user-groups. As already indicated, others have implemented aspects of my description framework within primers, publications and research projects, though user feedback from these is also limited. And a further failing, all too obvious in revisiting my description of work for the-future-that-is-now, is that the intentionally open-ended framework has not been tested with typefaces designed in the interim. Thus the 'possibilities for metamorphosis and growth' as conceptualized within a 'living framework' still remain a hope rather than a certainty.

It seems clear to me that it is worth persisting in realizing such hope. In the absence of a 'Bible for classification', Blackwell wonders if we might not 'just remember what we like … and then ask why?'[95] Yes, but we can also do that in an informed, contextualized and participatory way, with the right tools. In such a way, too, that we might be able to share with someone else. If the all-purpose universal typeface classification, made once and for all time, has been laid to rest as an idea – a burial long overdue – that is not to say that some attempt at commonality is not still needed. The team working on the Advanced Font Filtering System for Fontstand struggled with the descriptive individualism now prevalent, with Kupferschmid being very clear on the continuing need for 'a common understanding and a common language to know what we are talking about.'[96] A common language of form will help to articulate differences between typefaces, and will also encourage greater convergence in related languages of description in a seemingly standard-resistant commercial field. The annotation systems used, for example, to indicate the language support included with fonts or the contorted legalese of end-user license agreements are widely recognized as being unhelpfully un- or anti-common.

With progress made in the determination of plausible description models, the challenge now is communication. This is certainly my challenge: to identify the necessary and 'versatile visual form' for my description framework outside the *Typeform dialogues* environment, as a means of enhancing accessibility, and to encourage application and adaptation even beyond typeface design.[97]

86. Denise Gonzales Crisp, *Typography* (London: Thames & Hudson 2012), p. 228.
87. Shields, 'Unpacking obscurity: categorizing 19th century decorative types' <http://designinquiry.net/contributions/test-10/>.
88. Tracy, 'Type design classification', p. 63.
89. 'A classification is a binary tree …. It wants to persuade us to understanding that supercedes knowledge.' Noordzij, 'Chiaconna in e flat: classifying type', p. 8.
90. John Hudson cautions against systems of classification that 'cease to be an aid to thinking about a subject'; in so doing, he echoes Walter Tracy (see n. 43 above). Hudson quotation from online forum discussion, 'Typeface classification', <http://typophile.com/node7957>, posted 15 March 2005; cited in Gonzales Crisp, *Typography*, p. 239.
91. John Hudson, <www.typophile.com/node/9757>, posted 15 March 2005.
92. Kupferschmid, 'Type classifications are useful but the common ones are not'.
93. See Leonidas, n. 84, above. John Hudson warns of the dangers of classificatory exclusivity: 'The system becomes problematic when it "forces people to think in a particular way or … is an esoteric means of excluding outsiders."' Gonzales Crisp, *Typography*, p. 240.
94. Kupferschmid, 'Type classifications are useful but the common ones are not'. The quotation, in full, is: 'The problem with research in any field is that you dive into a subject on such specialized and detailed level that you forget that your distance to the language and knowledge gets greater and greater. It helps to step back every now and then ask the actual user. A classification should help them to find, select and combine typefaces, and not the scholar in the first place.'
95. 'There is no longer a Bible for classification, if there ever was. And should we miss it? We can just remember what we like … and then ask why?' Blackwell, *20th-century type [remix]*, p. 183.
96. As Krátky relates: 'We were trying to look around for a good categorization system, because we understood from the start that we cannot really count on foundries themselves to provide us with this data. Each foundry uses their own terminology or their own ways to sort the fonts. We needed to find something universal and open for any future inclusion in the Fontstand library.' Interview with Andrej Krátky, <medium.com/type-thursday/categorizing-type-7c3b068fdffc>. See also Kupferschmid, 'Type classifications are useful but the common ones are not'.
97. The quotation is from Kupferschmid, 'Type classifications are useful but the common ones are not': 'The challenge is now to translate a collection of tags into a versatile visual form that can be used in teaching, talks and publications.' In 2013, my own work, as set out in this essay, was presented at 'Putting design in boxes: the problems of taxonomy', College Arts Association Annual Conference, New York, 15 February 2013, where it informed discussions with colleagues working in architectural history and other design history contexts.

It was my intention in drafting the original essay revisited here to 'both prompt and provide a focus' for much needed action. Unpublished as it was, at least some of my ideas have circulated in other ways, finding a receptive audience for which I am grateful, and especially to those so generous over the years in sharing sources. Though in acknowledging the benefits of such constructive dialogue, the intention is not to suggest that it is my ideas that have prompted any of the sustained and pragmatic application of classificatory thinking that has followed, only to note how encouraging it is that such work is in progress.

Published as it now stands, I would welcome further conversation and contributions. We are at a point when it is not so much that new classificatory challenges will appear and our understanding of the typographic 'platypus' will necessarily be redefined; rather we face a future in which interpolation challenges the very relevance of Tracy's lovely metaphor. As ever, there is more work to be done.

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Figure 1: The Wellcome Library, London

Figures 2, 3, 18: Reading University Library, University of Reading

Figures 4, 5, 8: Central Lettering Record, Central Saint Martins College of Art & Design, London

Figure 6: Luc Devroye

Figure 7: Barnbrook Fonts

Figure 9: St Bride Library, London

Figures 10, 11, 12, 14, 15, 19, 21, 22, 23, 25: the author

Figures 13, 16, 17: private collections

Figure 20: Typotheque

Figure 24: David Shields

Object photography

Figures 2, 3, 5, 10, 12, 14, 15, 16, 17, 18: Laura Bennetto

The opening note to this essay argues for greater consideration of classificatory ideas about typeface design in context. Yet in reflecting back on the period of work set out it has been noticeable just how difficult it is becoming to adequately reference the contextual thinking and the accompanying voices from within the field, that help to locate this work and the ideas it represents. So many thoughts are now shared online, an often more ephemeral information environment than we realize. Records of the output of an established global business suddenly disappear in an online makeover, or worse as a result of a digital cleanse following a corporate buyout. Small experimental websites of individuals are just as vulnerable to obsolescence as technologies move on and 'back-ends' cannot be supported. Each thread of reference that can no longer be followed is relatively insignificant in and of itself, but combined, there is the potential for a much greater gap to begin to emerge in our understanding of how and why we are where we are now.

The first of the two articles reproduced here offers a snapshot of a small but intelligent classificatory step (see n. 56). The second text offers a contemporary commentary on my doctoral classificatory work (see n. 83). The original contexts of these articles, however, render them both difficult to locate, with no certainty as to how long retrieval from the Web Archive might be possible. It seemed appropriate to make use of the opportunity to capture these voices here (both are reproduced as text only, without images or links), so that they might be carried forward together with the thoughts set out in the essay above.

FontBook, the team behind the new app
News / Yves Peters / July 28, 2010

The new FontBook app is a group effort, developed by long-standing editorial team members Andreas Pieper (code) and Mai-Linh Truong (database), with the collaboration of designer Jan Rikus Hillmann (user experience), and FontShop Germany General Manager and Fontblog editor Jürgen Siebert (chief editor). Additional assistance on the type classification came from type historian, typographer, author, and professor for Typography and Communikation Design at the Hochschule der Bildenden Künste Saar Indra Kupferschmid. It is quite amazing what a well-rounded, accomplished app FontBook has become, especially since this is only the inaugural 1.0 version. I had the distinct privilege of interviewing all the members in the FontBook app team.

When and why was it decided that there was never going to be a printed FontBook any more, and how did that evolve into the plan to create an iPad app?

JÜRGEN SIEBERT   The problems already started with FontBook 4 which was published in 2006. The number of fonts had increased dramatically by 30% to 32,000 samples from 90 foundries (25 more than the previous edition), and 100,000 additional references were included. We had to seriously compromise to make all those typefaces fit into one single volume. For example the showings of FF Meta (26 fonts) had to be downsized from three pages in FontBook 3 (published in 1998) to one page in FontBook 4, although in the meantime the type family had actually grown to an impressive 300 weights. We managed this by squeezing all the stylistic sets Reg/SC/LF/EXP/SC LF/SC EXP into only four lines of sample text; not very user-friendly.

Yet this didn't prevent FontBook 4 from ending up 6,5 cm (2.6") thick and weighing over 3 kg (6.5 lbs) heavy. A little known anecdote is that the binding had to be redone because the actual book was so heavy it 'fell' out of the hardcover in the first tests.

After its publication five years ago the future of the printed FontBook became an on-and-off discussion without ever coming to any satisfactory conclusion. Eventually it became clear it was very unlikely there would ever be a new printed FontBook, and for a while it looked like the FontShop website would remain the only way to browse, search and purchase fonts from FontShop. Expanding FontShuffle to become a FontBook for iPhone seemed impractical because of the limited screen size. However the emergence and rapid adoption of the iPad by the general public last year offered unprecedented new options. In December 2010 Joan Spiekermann and myself decided to explore the possibility of an iPad version of our catalogue. One month later we had established a development team comprised of FontBook veterans Mai-Linh Truong, Andi Pieper and me, plus UX-designer Rikus Hillmann. Within 10 days – which was record timing – we developed a working prototype that we presented at a board meeting by the end of January 2011, in order to get a development budget. The board was thrilled with the concept, and approved the project. From there on everything went smoothly, even faster and better than estimated, as we did the job in just five months, and with ten times more content than was originally planned.

On a conceptual level – and regardless of the fact that FontBook is an actual book and the iPad app an application – what are the major differences (and similarities) in approach of the data that needs to be treated?

Systematizing the platypus Catherine Dixon

JÜRGEN SIEBERT   Our initial challenge was that the FontBook database needed to be fundamentally rearranged. Our first concern was to make the style classification much more detailed. For practical reasons the FontBook only had 8 very broad classes. Sans, Serif, Slab, Blackletter and Script were pretty much straightforward, though the latter was very eclectic; Display, Symbols and Non-Latin were collections of wildly varying designs all lumped together. I had already developed a far more detailed classification system for FontShuffle, our free iPhone app. Using this as a basis, and with the help of professor and type historian Indra Kupferschmid we created a similar system for the FontBook app v 1.0: 7 main type categories with 5 subclasses each.

How did you go about fine-tuning the type classes?

INDRA KUPFERSCHMID   The classification is based on earlier research I had done, as well as the classification that was derived from that for the Fontshuffle app. The idea behind the sorting according to form model is that finding and comparing/combining fonts is made easier. We tried to make the subclasses consistent; for example we now have a humanist serif, sans, slab and script group. Agreeing on the right names for the groups in both German and International English turned out to be quite hard though. Once that was done I assigned every single typeface by hand in a Filemaker database. Yes, umpteen evenings. I wish I had had the time to go through them all again and check them a second time, so I guess we will still find the occasional typeface among the almost 7500 which doesn't sit quite right.

Every typeface was assigned to only one sub-classification. Were there many difficult choices?

INDRA KUPFERSCHMID   That a typeface can only belong to one class was a restriction in the database which made the sorting very difficult at times. Is a typeface with sturdy serifs and stroke contrast a serif or already a slab (e.g. FF Tisa, FB Ibis)? Also deciding when a typeface does have so much flavour that it belongs to the display category or not was tricky. I had to constantly imagine by which means a potential user would want to find this particular font, because the categories will mainly be used for browsing. If someone is looking up a specific typeface he will probably do this via a search for the name or designer.

You have completely left behind any references to FontBook as a 'book'. How did the concept for the characteristic interface originate and evolve?

MAI-LINH TRUONG   FontBook, even in its printed format, has always been about innovation. Even with all the technology available today, it would still be a huge challenge to produce, since you'd still have the problem of having to load thousands of fonts and generate them in a printable format. In the mobile version, we had to address all of the same problems, i.e.: how do you crunch an immense amount of editorial information and visual data into a compact format that is easy to navigate and elegantly designed? We were very lucky to get veteran FontBook programmer Andi Pieper and UI-designer Jan Rikus Hillmann to join forces creatively and come up with this idea of treemapping to solve the problem of cumbersome item lists. They also drew some inspiration from the realm of gamification, and from the iPad itself as a medium. So in addition to its straightforward lookup functions, the 'spirit' of the navigation also consciously incorporates a playful facet that encourages you to hop around and explore through quantum leaps and non-linear pathways.

JAN RIKUS HILLMAN   Even on the iPad, there's no way to swipe your way through a 1700-page bible like the FontBook. Even hardcore type fanatics would end up in the hospital because their fingers would fall off, and the touchscreen would be dripping with blood (ever tried to clean one of these sonofabitches?). So we had to find another way to access the font info. We kept asking ourselves: 'how do you find a needle in a typestack?' Should we just dive right into the stack? But in the end it was simple to find the trick. Ultimately, we didn't question, we simply did: while researching visual idea resources for FontShop,

I found plenty of systematic approaches that could apply to the problem of structuring font families visually, for example periodic tables, cool abbreviations, and all that good scientific-looking stuff that could be used to win typographic hearts and minds … yes, we are talking real science here.

I've also always been a fan of info-viz tile systems, but at the same time I kept thinking how I could extend this to incorporate a substantial interaction approach and a visual representation of information. Plus simple usability, playful interaction and good navigation clues. At the same time, Andi Pieper, who was in charge of the native programming, also needed some creative coding challenges to keep him calm and stop him from being all grumpy from having to battle day and night with the huge amount of information and the insane complexities of the database. So he came up with some very amusing and witty stuff including the spangly star visual that ripples out when you tab a favorite, and the 'dive-into' animations.

Our first meeting was hilarious. Andi, being Austrian, and Austrians being a totally reticent bunch, and me being a Frisian (North German), and Frisians also being not terribly talkative, got together and had a very un-talkative kick-off meeting, trying to persuade each other with image-based interaction moods, screenshots of websites and lots of wild gestures that we both learned from our iPad-savvy kids. So there we were, developer and programmer, watching pictures at an exhibition, and bang, boom, we were somehow inspired to build the biggest book on the planet containing things like Chinese and Arabic text!

Don't ask me how we came up with the idea for the interactive tree-map. All I can remember is that we had a couple of beers and concluded that lists suck, but that this is normal. The rest is tree-map history. And there you have it.

ANDI PIEPER   Rikus came up with a few examples of treemaps. one of them was a Flash-based news aggregator. Then I remembered a small app that visualising the contents of your hard disk which I always found to be a valuable tool for getting rid of hidden cruft. It originated on MS Windows (SequoiaView) but there are implementations for the Mac as well (GrandPrespective). Doing some research on treemaps I found a bit of theory and code. Armed with this information and a small test database I implemented a proof-of-concept app demonstrating the interaction on the actual device. It worked really well and got everyone excited.

There were of course problems. For example, if there are huge differences between the largest and the smallest items in the dataset, small items tend to be too small to touch. I solved that by doing some pre-processing of the value set. As a result the tile sizes that you see are not exactly proportional to the real values; they are skewed for usability. Another thing is the actual number of tiles shown on a single screen. There is a maximum of about 120 items per screen, beyond that the tiles get too small for a touch interface. At first we tried to solve this by adding more layers to the interface. You would tap on Designers, then S, then Sp, and then Spi to finally get to a map showing Erik's tile. So for some crowded letters like S you had to go through four or five navigation layers before you saw a single font. In the end (actually at the last minute) we decided completely scrap that idea and do larger, horizontally scrollable treemaps for the larger datasets instead. It was a real cliffhanger down to the last second.

How are the fonts rendered?

ANDI PIEPER   For obvious reasons, there are no fonts packaged in the app itself (except the interface font FF Good). It is all png images. Luckily, FontShop already has a sophisticated render farm in production for their website, so we just load everything we need from there. The app also manages a local cache to make sure we request samples only once and store them locally once we have them.

Does this mean the app can't be used without an internet connection?

MAI-LINH TRUONG   Sure it can. Although all font displays are rendered online in real-time through the dedicated font-rendering servers, the editorial metadata is contained in the app. If you're on the go,

the app includes a special 'offline' setting that enables you to browse a reduced selection of specially prepared offline content temporarily, until you can get back online again and access the full content.

One of the drawbacks of the printed FontBook is that the content of each edition was outdated quite soon. How is this addressed in the app?

ANDI PIEPER   Obviously we wanted to have live database updates, but this was one of the things we had to stop working on and set aside for a future update in order to meet the looming deadline. So currently, database updates have to go through an appstore update cycle – whenever new material is added to fontshop.com, we can publish it shortly after as appstore updates. This works perfectly fine, yet it's not ideal, given the size of the app with all the offline content. In an upcoming version we will definitely have the mechanism in place to distribute database content updates directly. Appstore updates will only be necessary for functional enhancements, and there are quite a few in the pipeline.

MAI-LINH TRUONG   Actually it's astonishing how many people still consider the FontBook to be the best font reference in the world. And as far as I know, nobody has had the balls to come up with something better or more comprehensive. Still, the mobile version is a huge improvement in many ways, since app data can be drawn from our regular fontshop.com webupdates. One of the great things about the mobile FontBook is that we can easily squeeze in vast amounts of data, far more than you could ever fit into one printed volume. The last FontBook was big enough to crack open your skull, but the new FontBook app will totally blow your mind.

Typeface classification

Understanding the relevance of traditional typeface classification is difficult in a contemporary context. Students often glaze over with boredom when the subject comes up and it can be difficult to explain why understanding typeface classification is directly applicable to design practice. If you consider the choice of typeface akin to the selection of raw materials, quality and appropriateness for the job at hand are key. The critical ability to make the best selection is invaluable. In the context of screen typography, where the range of other factors that affect publication on screen are so complex (platform, resolution, software compatibility, licensing etc), this initial design task is a crucial one.

The Vox Classification (1954) was the first really comprehensive attempt at classifying a diverse and ever increasing range of typefaces. Developed by French typographic historian Maximilien Vox, it was later adapted in the development of the British Standard of Typeface Classification (1967). Other more simplified versions can be found in the numerous typography handbooks published in the last decade, for example in John Kane's *Type Primer* and Ellen Lupton's *Thinking with Type*.

The addition of typefaces designed for all types of screens, from early examples such as Wim Crouwel's New Alphabet to Cornel Windlin's Dot Matrix, has prompted some rethinking in the area of classification. Most notable is Catherine Dixon's PhD research which developed a new framework for typeform description that 'seeks to provide a comprehensive but expandable method for describing all typeforms, both historic and contemporary'. Though it is yet unpublished, Phil Baines and Andy Haslam incorporate it into their book *Typography* [*sic*], in the section on type classification. Dixon's proposed method seems to make a lot of sense, it is based on description, on the formal attributes of type design, rather than on categorisation. It more accurately reflects the subtleties of type design practice, rather than an abstract theoretical system that seems divorced from practical use. Dixon's approach certainly seems applicable – I plan to use it in the course of my research. It respects the existing classification but creates a flexible framework that builds on past experience and accommodates new additions without creating gimmicky categories for 'computer' or 'digital' typefaces.

I recently came across an MA project from Nick Sherman, also looking at new possibilities for typeface classification. Interestingly, like Dixon, he attempts to create a software tool to facilitate access and understanding to the proposed new system.

Systematizing the platypus Catherine Dixon