Making Books Beautiful Again

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I. THE BACKGROUND

In Britain and Australia the quality of book design and production has fallen to a low ebb. No longer do books that are printed in the Commonwealth inspire lust or even admiration. Too often the books are printed on poor quality paper, to design and typographic standards that would have seen them rejected by the master craftsman of only twenty years ago. Here I wish to show how this trend may be reversed in at least one crucial area: typography.

But first a little reflection on how we have reached this point.

The striking feature of contemporary book production is that the high values now exist on the other side of the Atlantic, in the U.S. It was not always so. In the 1960's and '70's the book trade in the U.S. could not compete with Penguin books from the U.K. Penguin books were cheap, contained scholarship of a very high order, and had a masterful design template that had been adapted from the post 1946 design guide of Jan Tschichold. Tschichold was one of the founders of the European austere 'new typography' school who had, by 1946, considerably mellowed as a result of his war experience. Though he was only at Penguin for two years he put in place a design philosophy that would carry through to the sixties and seventies, when the books would be visually enhanced by the cover designs of Germano Facetti.

One of the innovations of Penguin was the way they chose the typeface to suit the content of the book. For example if a book was a penguin classic whose original had been published in France at the end of the Eighteenth Century, the typeface was likely to be Monotype Fournier—because this typeface originated in the period immediately preceding the French Revolution. If the book was from an original that appeared in the Sixteenth Century then they would likely choose Garamond or Bembo. The effect of this was subtle, and likely invisible to the general public, but it was a commitment to the idea that form should, as far as possible, match content. A book had a time and place as its birth, and this origin should be remembered in at least certain aspects of its design. But no book produced in this way was obviously antiquarian; the effects were always subtly—one might say, invisibly—achieved.

The other noteworthy aspect of the typography was the skill with which it was composed. Given the small trim size of the books the typefaces always remained legible, even in the footnote size. Pages were even in colour—with judiciously applied hyphenation—with artfully applied kerning, and folios—which were usually at the bottom the page—are given the correct amount of space.

In this way Penguin became an exemplar of design skill. By its example it showed other publishing houses how to use the page with maximum economy, while maintaining perfect readability. As a training ground for designers and compositors it fed the publishing industry with people who knew their craft. By contrast book design in the U.S. in this period was hardly

competitive. One need only look at the sixties and seventies U.S. equivalent of Penguin, the Signet Classic, to see that it is markedly inferior in almost every respect. The design attempts to cram too much on to a page, so that the inside edge of the text block almost disappears into the glue binding, and the folio is placed too close to the text, which is itself too close to the bottom of the page; the composition is loose, with excessive inter-word spacing, and lacks readability. And of course there was no attempt to match the typeface to the time and place of the book. The same things could be said of the other quality mass paperback series, Bantam Books.

This extraordinary disparity across the Atlantic has now, I suggest, been decisively reversed. It is unclear (to this writer, at least) why Penguin's design sense unravelled so quickly in the mid-eighties, but unravel it did. The standard paperback became larger—under the lead from Picador—and this allowed the paper to become far coarser, which required the body font to become larger, which required a complete redesign of the format. But this redesign was only rarely able to produce books of genuine quality. By contrast the U.S. publishers were able to afford higher quality paper, with now very skilful composition, and produced books that were remarkable for their style. Thus in the mass paperback market the books from Vintage have taken over from Penguin as the imprint that puts a unified look onto the canon of modern classics. Even the U.S. arm of Penguin is able to make more attractive books than its British counterpart. And then there is the new imprint The Modern Library Classics series that brings a new level of beauty to the inexpensive paperback.

But where the U.S. has made the greatest leap forward is in the quality book market. Titles from Farrar, Strauss, and Giroux, and Knopf have taken the book to its highest point in the last century. There are no publishers in the U.K or Australia who seem willing to rise to the challenge that these publishers have thrown down. (A noteworthy exception, even if it is but a single title, is HarperCollins edition of Anthony O'Neil's *The Lamplighter*—this is a genuine attempt to produce a high quality book that may compete with the American product.)

Now if one asks why books outside the U.S. have declined so markedly there are likely to be many answers. However, giving an answer to this question is no part of my present task. Rather, I want to offer a practical solution to something that constitutes one part of the problem facing British and Australian publishers: this is the *software* problem for digital typography. This is a problem that even those who use the software do not often fully appreciate. Thus what follows is part diagnosis and part the offer of a cure.

2. DIGITAL TYPESETTING

It is not widely known that the commercial software available in the U.K. and Australia for typesetting books with quality typography is, in important ways, inferior to the same software that is available in the U.S. Quark Xpress is both more expensive outside the U.S. (in Australia by a very large margin) and, since it has a plug-in architecture, is much less extensible here. For example, in the U.S. there is a plug-in that automates the setting of footnotes. In Australia this

task involves such difficult manual labour that almost all publishing houses refuse to do books that have footnotes.[1] This is hardly good news for local academic publishing!

However there is a solution to this problem. It is called LaTeX and, though it has the potential to significantly improve the output of any publishing house, its benefits would be particularly felt by small publishers. Moreover, not only will it do proper footnotes, It has a number of other features that are the hallmark of quality typesetting. For example it allows one to do 'hanging punctuation', in which the glyphs that are punctuation marks—such as commas, semi-colons, exclamation marks, but also hyphens—are automatically set to protrude very slightly into the margin, so that the margin edge looks even.[2]

There are, however, many other aspects of LaTeX that facilitate high quality typesetting. For one, the lines are not justified individually, as they are in Pagemaker and Quark, but in entire paragraph blocks. This simulates the decision making of the master typesetters of old, who would set a page so as to get the greatest evenness of word spacing. LaTeX—or rather the underlying TeX hyphenation-justification algorithm—is able to produce that evenness automatically (see fig. 1). This has been so successful an implementation of this old technique that it has been borrowed now for Adobe's InDesign program, where it is called the *multi-line composer*.

Another area where quality typesetting can be achieved, is in the automatic inclusion of ligatures. Thus not only the 'fi' and 'fl' ligatures can be used but also 'ff', 'ffl', etc. This happens automatically with any font, including the default font, if it has been properly installed, and, of course, if the glyphs are present. Thus one does not need to do a complicated find/replace in order to use the ligatures that are ordinarily buried in expert sets. They are present as a matter of course. Indeed with some effort one can set up a font so that more exotic ligatures—such as the many extra ligature pairs in Monotype Garamond italic—are also automatically used (see figure 2). This permits LaTeX to achieve a level of typesetting beauty not seen since the beginnings of digital typesetting (and not *much* in evidence since the seventeenth century).

But if ligatures are a typesetting luxury that should be afforded but so often aren't, then kerning is typesetting bread-and-butter. LaTeX kerns automatically and reads the kerning pairs that are defined in the font metrics (afm) file. So often, of course, these metric files, supplied with the font, contain mistakes. Fortunately they are in human-readable form and can be edited quite easily with a text editor (such as BBedit). So if one wishes to change the kerning data then that can be done—which is important, since few typographers would be happy with the kerning data that is supplied with many very popular digital fonts. But once one has the kerning data right then LaTeX will kern the text automatically. Thus kerning is not done painstakingly (but also painfully) on individual letter combinations in the text, but for the text as a whole.

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[1] There is an unconvincing rationalisation that is often given for this rejection of footnotes: that they distract the reader from the main text. But there is no evidence that this is so, and end-notes are very much more intrusive in the reading flow. The fact is that publishers know that footnotes push up the cost of type-setting. When their typesetting programs import footnotes, they import them as end notes.

[2] Strictly this 'margin kerning' is only available if one processes directly to pdf, by-passing the production of a post script file. The program for this is called *pdftex*.

All of the above presupposes a point that is worth stating explicitly, and that is that postscript (Type 1) fonts can be used with LaTeX. This is important because these are the fonts that would typically be used in book production. Many RIP devices at a print shop will not work properly with TrueType fonts, and printers dissuade people from submitting files with them. Because of this the standard LaTeX system uses postscript fonts, and if one wishes to use TrueType then there is a conversion path that will transform the fonts into Type 1. But all forms of Type 1 fonts are usable, including multiple master fonts. Going along with this, as a consequence, is that all aspects of Type 1 fonts—small caps, titling fonts, swash caps, and the alternate glyphs that we have already touched on—are able to be included in LaTeX documents.[3]

Of course, there is more to books than fine typography, and it is important to be able to prepare a book with graphics and tables included, with formulae and displayed symbolic expressions, with footnotes, or endnotes, with indices and glossaries, and properly formatted bibliographies. It is also important to be able to convert the whole, if necessary, to HTML. All of this can be done, and frequently with far more ease than with commercially available software. For example, one can put a reference to a footnote on one page—with the footnote itself on another—so that the reference reads 'see footnote 10 on p. 47', and have the reference footnote number and page number update automatically if there is a change. (So that, after the revision, it reads, say, 'see footnote 12 on p. 49.') And one can do the same thing with index entries. Indeed the ease with which all of this can be done makes any other choice of software difficult to justify.

Traditionally, though LaTeX has been highly customisable, it has been necessary to alter the basic style packages (for book, article, report, or whatever) to accommodate the designer's idea of what the publication should look like—for example, how the headers and subheaders should look. However this idea of essentially reprogramming a style has seemed restrictive to some and there have been moves to liberalise it. One significant move in this direction has been the invention of a new, highly flexible, class style called 'memoir'. Designed by Peter Wilson of Boeing, this is explicitly constructed for publishers of non-scientific books who want to be able to master and use a single style package for all their publications. A more radical step, however, has been taken by Hans Hagen of the Netherlands, who has created a new macro package called ConTeXt.[4] This promises to be even more flexible than LaTeX—since here one would be programming rather than reprogramming—and an ideal tool, once it is mastered, for creating documents of all kinds.

3. A WORKFLOW FOR PUBLISHERS

One of the burdens of publishing—and a major concern for all publishers who want to produce high quality product—is the cost of professional typesetting. But despite the layout of large

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[3] The *locus classicus* for details on the full use of postscript fonts in LaTeX is Alan Honig's *TeX Unbound*, (Oxford: Oxford University Press, 1998).

[4] Strictly LaTeX is a macro package assembled over TeX. So ConTeXt is an alternative macro package assembled over the same instruction language, whereas the memoir class is merely a more flexible style package within LaTeX.

sums of money, the end product is frequently inept and ugly. Basic mistakes are made: genuine small caps are not used, ligatures are not used, corrections are not made to the line justifications, etc. The use of LaTeX can, I've been urging, produce significantly better results. And—perhaps the greatest surprise of all—it is free. Unlike commercial software, it can be downloaded and used for nothing.

This is why I have been suggesting that this should be a particularly attractive route for small publishing houses or those looking to self-publish. So what I wish to do here is to describe a workflow for the typesetting of a novel, or a work of historical research, from the receipt of the Word document (thus I am assuming that the author has not typed the manuscript in LaTeX, in which case it is already in the final stage for sending to a publisher.)

1. Save the Word document down as an rtf document. Some initial find and replace can be done at this stage—for example em dashes should be replaced by three hyphens, no ligatures should appear in the rtf itself, left quotation marks should be replaced by '' glyphs.

2. There is a little free program available for all platforms called *rtf2latex2e*. One runs the rtf file through this program. Processing times are on the order of seconds.

3. The resulting LaTeX file may need to be cleaned up because the program *rtf2latex2e* converts more of the rtf layout than one actually needs. Thus another round of find and replace is usually required. In my experience this is the task that requires the most time, and a book may take as much as two or three hours to 'clean'.

4. Write the style file and insert it into the preamble of the document. With some practice—and since one is building up a collection of reusable individual styles—this should eventually take a negligible amount of time.

5. Process in either LaTeX or pdflatex to create either a postscript file or a pdf file. Of course the postscript file can then be distilled to give a pdf as a separate step. Send the resulting file to the printers.

In all of these steps there is no reliance on commercial software; everything one needs is free. And of all the steps only the find and replace repetitions require any amount of time. But this task does not itself require a great deal of knowledge, and can be done by anyone with even low level word processing skills. Thus the whole thing should be able to be done, for a simple work, in half a day, perhaps less.

Of course, to get to the point where the workflow is that smooth and effortless there must be an initial period of acquiring the skills. But it must not be forgotten that this is true for any software. And there is an additional advantage that working with LaTeX has over commercial software: it is effectively crash free. The underlying TeX language base is now completely bug-free, and LaTeX itself only slightly less so. In the time that I have used the program it has not once crashed, or caused a document to become corrupted. To one who is accustomed to the unreliable character of even the most well-written commercial software the advantages of working in a safe environment will be hard to comprehend.

Robert Bringhurst, in that inestimable classic work *The Elements of Typographic Style*, has noted that '[t]ypography is the craft of endowing human language with a durable visual form, and thus with an independent existence.'[5] What is missing from the design of most modern books, however, is precisely that sense of *durability*. Rather, much modern book production is ruled by an aesthetic of disposability that insults the author and ultimately limits his/her chance of lasting success. The reason is that the aesthetic of disposability creates the expectation in the mind of the book buyer that the book they have purchased is not meant for keeping or rereading; it is destined for the book exchange or the bin. This places an upper limit on how much the publisher can charge for the book—since the book buying public will only spend so much on something that they must soon be rid of—which means a limit on profitability and author's royalties. Though it is not to be doubted that there are some books for which this *read once and throw away* attitude is right, the book publishing business is in deep trouble if it comes to regard this as the appropriate model for almost all books. For then the disposability of books comes to be equivalent to the disposability of all literary culture. And a literary culture that is disposable is no culture at all.

I have tried to suggest in this essay a positive way forward for book publishers, a way forward that is highly appropriate even for small publishers with a small budget. But before one can be convinced of the desirability of using better tools, one must first be convinced of the need for a better designed product. Poor quality paper, with low typographic standards, and shoddy design will inevitably mean shrinking profits. It was this lesson that U.S. publishers learned so well from the success of Penguin in the mid-century. The problem that we find ourselves in is that we have forgotten the lessons that we taught others so successfully.

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[5] *The Elements of Typographic Style*, second edition, revised and enlarged, (Vancouver: Hartley and Marks, 1997).

taken place along two different dimensions. In the first place I think that Hume's concerns about causation have been rendered less than fully intelligible by removing them from the frame of late Seventeenth, and early Eighteenth, Century discussions of physics. In the second place there has been an alteration in the statement of Hume's position, at least since the 1920s, which has shifted the focus of attention from causation to laws and then to statements about laws, and created a false presumption as to what an answer to Hume would look like. The consequences of these misrepresentations entwine together to shape our received philosophy of causation, shifting Humeanism vertically from physics to metaphysics, and then sideways into semantics and the conceptual analysis of laws. It is possible to read many recent anthologies on causation and never encounter anything more than a passing reference to physics—the semantics of nomic statements and their attendant metaphysical burdens being decoupled from our changing views about what those laws say. It is a conviction of this book that physics is of central concern to the problem that Hume bequeathed us, and it is in the hope that others will share this conviction that this book has been written.

In fact the scene for what follows is best set by a brief sketch of Hume's relations to his predecessors' views in natural philosophy. This will serve to lay out the historical background to Humeanism, but also dispel any idea that the preceding paragraph might have encouraged that my point depends upon a novel interpretation of the relation of Hume's philosophy to physics. My view is rather that metaphysicians (as opposed to historians of Seventeenth and Eighteenth Century science and philosophy) have treated Hume's views on causation as though they were immaculately conceived, unrelated to the known historical background. The resulting Humeanism is an anæmic metaphysical reminder of a very sanguine Hume, a man who, if he didn't always have Newton's philosophy uppermost in his thoughts, at least believed that his philosophy was capable of making a contribution to a live problem in the intellectual currents of his day. Putting the physics back into the metaphysical Hume helps us to reorient the discussion in useful ways.

1   The Legacy of Physics and Philosophy

During the latter part of the Seventeenth Century, and the first part of the Eighteenth, the great intellectual debate over Newton's account of gravitational force centered on the reality of this mysterious intermediary between bodies. Earlier Mechanist philosophers—both Cartesians and Corpusculareans—had accepted the idea that one thing could exert a force on another by impact but Newton was proposing something altogether unfamiliar: a force of attraction that operated apparently over empty space. He was thus seen to be proposing something quite 'occult' and therefore scientifically retrograde, something that defied mechanical modes of explanation. When Christiaan Huygens heard rumours of the contents of the forthcoming *Principia* he wrote (in a

Figure 1: Even text due to hyphenation algorithm. Also note margin kerning and ff ligatures. (Font: Adobe Garamond)

Shake-speare's Sonnet 147

My love is as a fever longing ſtill
For that which longer nurseth the disease,
Feeding on that which doth preserve the ill,
Th' uncertain sicklie appetite to please:
My reason the physician to my love,
Angry that his prescriptions are not kept
Hath left me, and I deſperate now approve
Desire is death, which physic did except.
Past cure I am, now reason is past care,
And frantic-mad with evermore unreſt,
My thoughts and my discourse as mad men's are,
At random from the truth vainly expressed.
For I have sworn thee fair, and thought thee bright,
Who art as black as hell, as dark as night.

fig. 2 Monotype Garamond with the additional ligature forms.
Some are of purely antiquarian interest but most are perfectly usable.