THE PUBLIC IS MORE FAMILIAR WITH BAD DESIGN THAN GOOD DESIGN. IT IS, IN EFFECT, CONDITIONED TO PREFER BAD DESIGN, BECAUSE THAT IS WHAT IT LIVES WITH. THE NEW BECOMES THREATENING, THE OLD REASSURING.

PAUL RAND

A DESIGNER KNOWS THAT HE HAS ACHIEVED PERFECTION NOT WHEN THERE IS NOTHING LEFT TO ADD, BUT WHEN THERE IS NOTHING LEFT TO TAKE AWAY.

ANTOINE DE ST-EXPUREY

...THE DESIGNER OF A NEW SYSTEM MUST NOT ONLY BE THE IMPLEMENTOR AND THE FIRST LARGE-SCALE USER; THE DESIGNER SHOULD ALSO WRITE THE FIRST USER MANUAL...IF I HAD NOT PARTICIPATED FULLY IN ALL THESE ACTIVITIES, LITERALLY HUNDREDS OF IMPROVEMENTS WOULD NEVER HAVE BEEN MADE, BECAUSE I WOULD NEVER HAVE THOUGHT OF THEM OR PERCEIVED WHY THEY WERE IMPORTANT.

DONALD E. KNUTH

# A TUFTE-STYLE BOOK

# Contents

*Dedicated to those who appreciate LaTeX*

*and the work of Edward R. Tufte and Donald E. Knuth.*

# *Introduction*

This sample book discusses the design of Edward Tufte's books[1] and the use of the `tufte-book` and `sample-handout` document classes.

[1] Edward R. Tufte. *The Visual Display of Quantitative Information*. Graphics Press, Cheshire, Connecticut, 2001. ISBN 0-9613921-4-2; Edward R. Tufte. *Envisioning Information*. Graphics Press, Cheshire, Connecticut, 1990. ISBN 0-9613921-1-8; Edward R. Tufte. *Visual Explanations*. Graphics Press, Cheshire, Connecticut, 1997. ISBN 0-9613921-2-6; and Edward R. Tufte. *Beautiful Evidence*. Graphics Press, LLC, first edition, May 2006. ISBN 0-9613921-7-7

# The Design of Tufte's Books

THE PAGES of a book are usually divided into three major sections: the front matter (also called preliminary matter or prelim), the main matter (the core text of the book), and the back matter (or end matter).

THE FRONT MATTER of a book refers to all of the material that comes before the main text. The following table from shows a list of material that appears in the front matter of *The Visual Display of Quantitative Information*, *Envisioning Information*, *Visual Explanations*, and *Beautiful Evidence* along with its page number. Page numbers that appear in parentheses refer to folios that do not have a printed page number (but they are still counted in the page number sequence).

|                       | Books  |      |      |      |
| --------------------- | ------ | ---- | ---- | ---- |
| Page content          | VDQI   | EI   | VE   | BE   |
| Blank half title page | (1)    | (1)  | (1)  | (1)  |
| Frontispiece[2]       | (2)    | (2)  | (2)  | (2)  |
| Full title page       | (3)    | (3)  | (3)  | (3)  |
| Copyright page        | (4)    | (4)  | (4)  | (4)  |
| Contents              | (5)    | (5)  | (5)  | (5)  |
| Dedication            | (6)    | (7)  | (7)  | 7    |
| Epigraph              | –      | –    | (8)  | –    |
| Introduction          | (7)    | (9)  | (9)  | 9    |

[2] The contents of this page vary from book to book. In *VDQI* this page is blank; in *EI* and *VE* this page holds a frontispiece; and in *BE* this page contains three epigraphs.

The design of the front matter in Tufte's books varies slightly from the traditional design of front matter. First, the pages in front matter are traditionally numbered with lowercase roman numerals (e.g., i, ii, iii, iv, ...). Second, the front matter page numbering sequence is usually separate from the main matter page numbering. That is, the page numbers restart at 1 when the main matter begins. In contrast, Tufte has enumerated his pages with arabic numerals that share the same page counting sequence as the main matter.

There are also some variations in design across Tufte's four books. The page opposite the full title page (labeled "frontispiece" in the above table) has different content in each of the books. In *The Visual Display of Quantitative Information*, this page is blank; in *Envisioning Information* and *Visual Explanations*, this page holds a frontispiece; and in *Beautiful Evidence*, this page contains three epigraphs.

The dedication appears on page 6 in *VDQI* (opposite the introduction), and is placed on its own spread in the other books. In *VE*, an epigraph shares the spread with the opening page of the introduction.

None of the page numbers (folios) of the front matter are expressed except in *BE*, where the folios start to appear on the dedication page.

THE FULL TITLE PAGE of each of the books varies slightly in design. In all the books, the author's name appears at the top of the page, the title it set just above the center line, and the publisher is printed along the bottom margin. Some of the differences are outlined in the following table.

| Feature | *VDQI* | *EI* | *VE* | *BE* |
|---|---|---|---|---|
| Author | | | | |
|   Typeface | serif | serif | serif | sans serif |
|   Style | italics | italics | italics | upright, caps |
|   Size | 24 pt | 20 pt | 20 pt | 20 pt |
| Title | | | | |
|   Typeface | serif | serif | serif | sans serif |
|   Style | upright | italics | upright | upright, caps |
|   Size | 36 pt | 48 pt | 48 pt | 36 pt |
| Subtitle | | | | |
|   Typeface | – | – | serif | – |
|   Style | – | – | upright | – |
|   Size | – | – | 20 pt | – |
| Edition | | | | |
|   Typeface | sans serif | – | – | – |
|   Style | upright, caps | – | – | – |
|   Size | 14 pt | – | – | – |
| Publisher | | | | |
|   Typeface | serif | serif | serif | sans serif |
|   Style | italics | italics | italics | upright, caps |
|   Size | 14 pt | 14 pt | 14 pt | 14 pt |

THE TABLES OF CONTENTS in Tufte's books give us our first glimpse of the structure of the main matter. *The Visual Display of Quantitative Information* is split into two parts, each containing some number of chapters. His other three books only contain chapters—they're not broken into parts.

*Edward R. Tufte*

The Visual Display
of Quantitative Information

SECOND EDITION

*Graphics Press · Cheshire, Connecticut*

*Edward R. Tufte*

*Envisioning Information*

*Graphics Press · Cheshire, Connecticut*

*Edward R. Tufte*

Visual Explanations

Images and Quantities, Evidence and Narrative

*Graphics Press · Cheshire, Connecticut*

EDWARD R. TUFTE

BEAUTIFUL EVIDENCE

GRAPHICS PRESS LLC

*Contents*

*Contents*

*Contents*

*Contents*

## Typefaces

Tufte's books primarily use two typefaces: Bembo and Gill Sans. Bembo is used for the headings and body text, while Gill Sans is used for the title page and opening epigraphs in *Beautiful Evidence*.

Since neither Bembo nor Gill Sans are available in default LaTeX installations, the Tufte-LaTeX document classes default to using Palatino and Helvetica, respectively. In addition, the Bera Mono typeface is used for `monospaced` type.

The following font sizes are defined by the Tufte-LaTeX classes:

| LaTeX size | Font size | Leading | Used for |
|---|---|---|---|
| \tiny | 5 | 6 | sidenote numbers |
| \scriptsize | 7 | 8 | — |
| \footnotesize | 8 | 10 | sidenotes, captions |
| \small | 9 | 12 | quote, quotation, and verse environments |
| \normalsize | 10 | 14 | body text |
| \large | 11 | 15 | B-heads |
| \Large | 12 | 16 | A-heads, TOC entries, author, date |
| \LARGE | 14 | 18 | handout title |
| \huge | 20 | 30 | chapter heads |
| \Huge | 24 | 36 | part titles |

Table 1: A list of LaTeX font sizes as defined by the Tufte-LaTeX document classes.

## Headings

Tufte's books include the following heading levels: parts, chapters,[3] sections, subsections, and paragraphs. Not defined by default are: sub-subsections and subparagraphs.

[3] Parts and chapters are defined for the `tuftebook` class only.

| Heading | Style | Size |
|---|---|---|
| Part | roman | 24/36×40 pc |
| Chapter | italic | 20/30×40 pc |
| Section | italic | 12/16×26 pc |
| Subsection | italic | 11/15×26 pc |
| Paragraph | italic | 10/14 |

Table 2: Heading styles used in *Beautiful Evidence*.

## Environments

The following characteristics define the various environments:

| Environment | Font size | Notes |
|---|---|---|
| Body text | 10/14×26 pc | |
| Block quote | 9/12×24 pc | Block indent (left and right) by 1 pc |
| Sidenotes | 8/10×12 pc | Sidenote number is set inline, followed by word space |
| Captions | 8/10×12 pc | |

Table 3: Environment styles used in *Beautiful Evidence*.

# On the Use of the `tufte-book` Document Class

The `tufte-book` document class is modeled primarily on *Beautiful Evidence,* since it's the most recent of Tufte's books and the design is (presumably) more refined.

This choice of book design has a few important implications: 1. there are no parts—the highest heading level is the chapter; 2. the use of a sans serif font for many design elements (especially the title page and epigraphs); and 3. *something else—yyy.*

# Bibliography

[1] Edward R. Tufte. *Envisioning Information*. Graphics Press, Cheshire, Connecticut, 1990. ISBN 0-9613921-1-8.

[2] Edward R. Tufte. *Visual Explanations*. Graphics Press, Cheshire, Connecticut, 1997. ISBN 0-9613921-2-6.

[3] Edward R. Tufte. *The Visual Display of Quantitative Information*. Graphics Press, Cheshire, Connecticut, 2001. ISBN 0-9613921-4-2.

[4] Edward R. Tufte. *Beautiful Evidence*. Graphics Press, LLC, first edition, May 2006. ISBN 0-9613921-7-7.