

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 REASURING.

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

THE TUFTE-LATEX DEVELOPERS

A TUFTE-STYLE BOOK

PUBLISHER OF THIS BOOK

Copyright © 2009 The Tufte-LaTeX Developers

PUBLISHED BY PUBLISHER OF THIS BOOK

TUFTE-LATEX.GOOGLECODE.COM

Licensed under the Apache License, Version 2.0 (the “License”); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>. Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an “AS IS” BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

First printing, May 2009

Contents

The Design of Tufte's Books 11

On the Use of the `tufte-book` Document Class 17

*Dedicated to those who appreciate L^AT_EX
and the work of Edward R. Tufte and Donald E. Knuth.*

Introduction

This sample book discusses the design of Edward Tufte's books¹ 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).

Page content	Books			
	<i>VDQI</i>	<i>EI</i>	<i>VE</i>	<i>BE</i>
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.

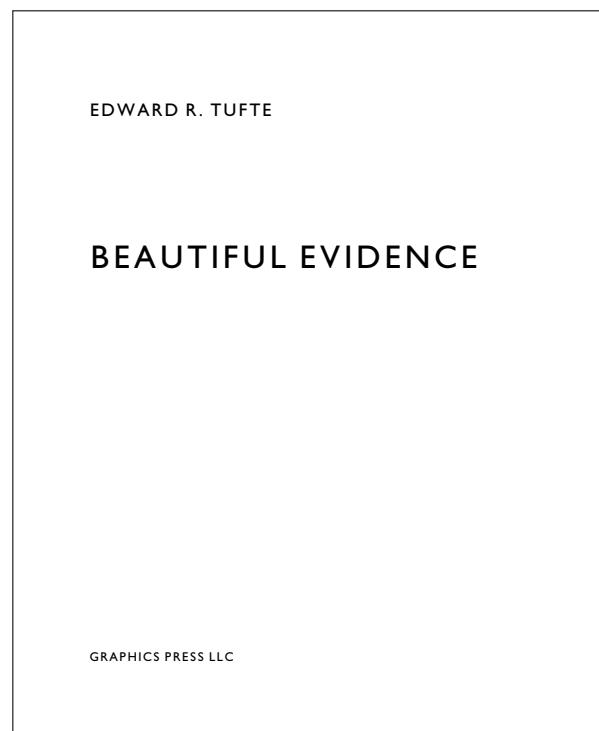
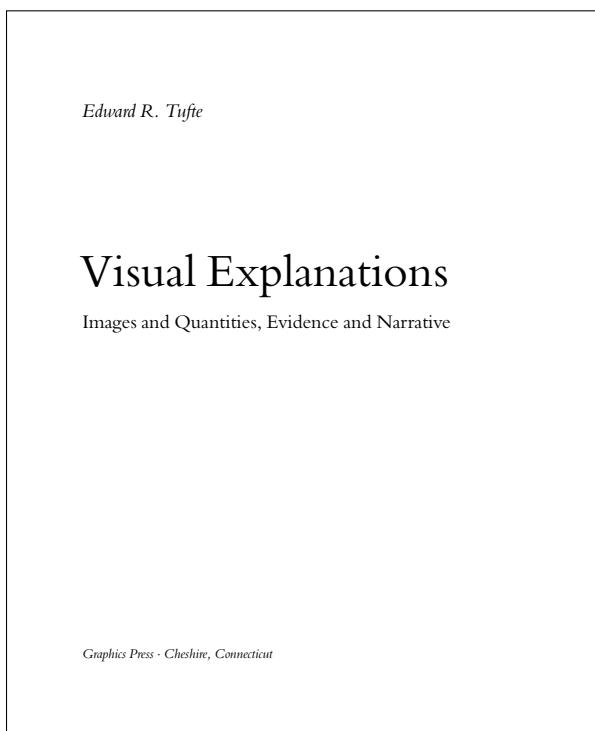
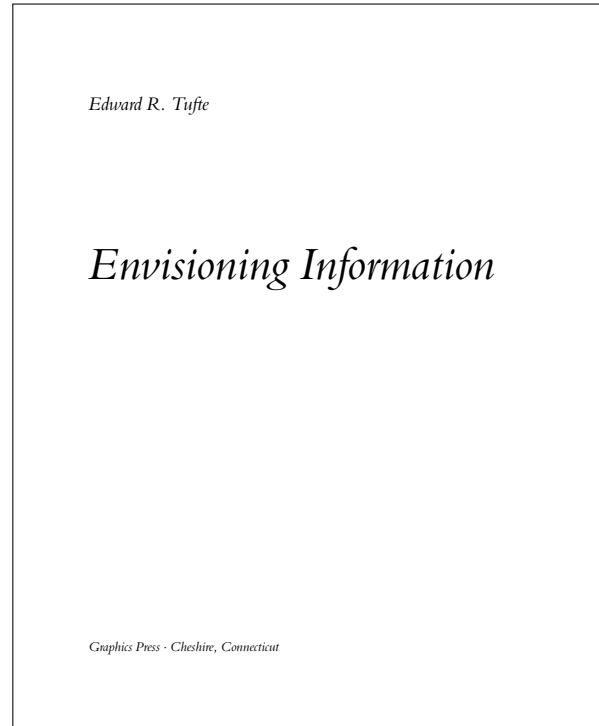
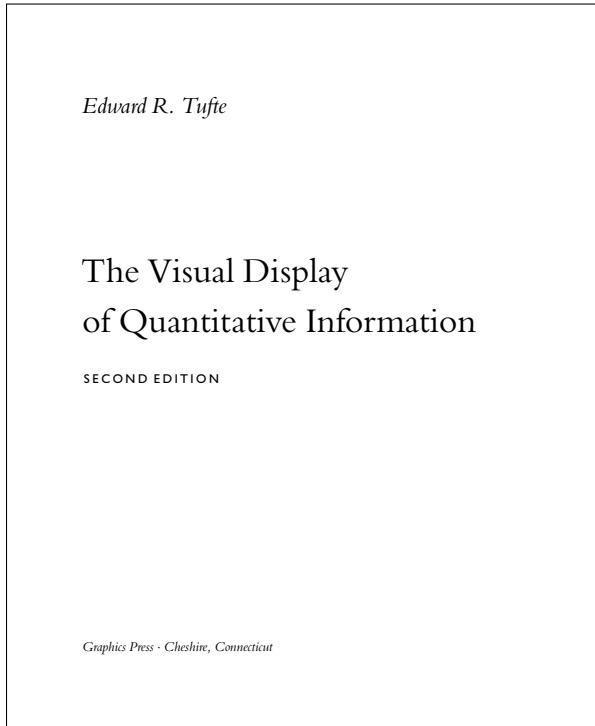
The dedication appears on page 6 in *VDQI* (opposite the introduction), and is placed on its own spread in the other books. In *VE*, an epigraph shares the spread with the opening page of the introduction.

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 is 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	<i>VDQI</i>	<i>EI</i>	<i>VE</i>	<i>BE</i>
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

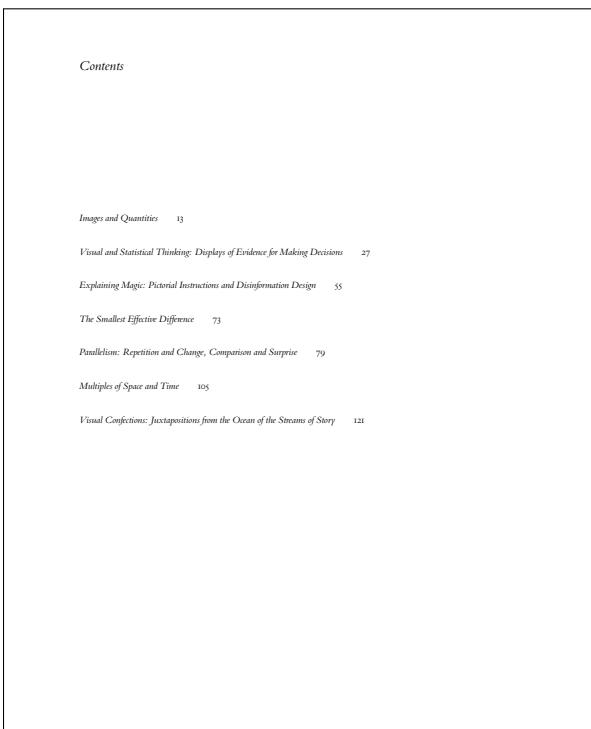
THE TABLES OF CONTENTS in Tufte's books give us our first glimpse of the structure of the main matter. *The Visual Display of Quantitative Information* is split into two parts, each containing some number of chapters. His other three books only contain chapters—they're not broken into parts.





Contents

ESCAPING FLATLAND	12
MICRO/MACRO READINGS	37
LAYERING AND SEPARATION	53
SMALL MULTIPLES	67
COLOR AND INFORMATION	81
NARRATIVES OF SPACE AND TIME	97
EPILOGUE	121



Contents

<i>Mapped Pictures: Images as Evidence and Explanation</i>	12
<i>Sparklines: Intense, Simple, Word-Sized Graphics</i>	46
<i>Links and Causal Arrows: Ambiguity in Action</i>	64
<i>Words, Numbers, Images — Together</i>	82
<i>The Fundamental Principles of Analytical Design</i>	122
<i>Corruption in Evidence Presentations: Effects Without Causes, Cherry Picking, Overreaching, Chartjunk, and the Rage to Conclude</i>	140
<i>The Cognitive Style of PowerPoint: Pitching Out Corrupts Within</i>	156
<i>Sculptural Pedestals: Meaning, Practice, Depedestralization</i>	186
<i>Landscape Sculptures</i>	196

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 L^AT_EX installations, the Tufte-L^AT_EX 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-L^AT_EX classes:

L ^A T _E X 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 L^AT_EX font sizes as defined by the Tufte-L^AT_EX 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.

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

³ Parts and chapters are defined for the *tuftebook* class only.

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.