

# An Essay Worthy of a Title

Doug Rattmann

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**Summary** Morbi tempor congue porta. Proin semper, leo vitae faucibus dictum, metus mauris lacinia lorem, ac congue leo felis eu turpis. Sed nec nunc pellentesque, gravida eros at, porttitor ipsum. Praesent consequat urna a lacus lobortis ultrices eget ac metus. In tempus hendrerit rhoncus.

## Paragraphs & Notes

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Aliquam arcu turpis, ultrices sed luctus ac, vehicula id metus. Morbi eu feugiat velit, et tempus augue. Proin ac mattis tortor. Donec tincidunt, ante rhoncus luctus semper, arcu lorem lobortis justo, nec convallis ante quam quis lectus. Aenean tincidunt sodales massa, et hendrerit tellus mattis ac. Sed non pretium nibh. Donec cursus maximus luctus. Vivamus lobortis eros et massa porta porttitor.

“Some trees flourish, others die. Some cattle grow strong, others are taken by wolves. Some men are born rich enough and dumb enough to enjoy their lives. Ain’t nothing fair.” — John Marston, 1911

Fusce varius orci ac magna dapibus porttitor. In tempor leo a neque bibendum sollicitudin<sup>2</sup>. Nulla pretium fermentum nisi, eget sodales magna facilisis eu. Praesent aliquet nulla ut bibendum lacinia. Donec vel mauris vulputate, commodo ligula ut, egestas orci. Suspendisse commodo odio sed hendrerit lobortis. Donec finibus eros erat, vel ornare enim mattis et. Donec finibus dolor quis dolor tempus consequat<sup>39</sup>.

In hac habitasse platea dictumst. Curabitur mattis elit sit amet justo luctus vestibulum. In hac habitasse platea dictumst. Pellentesque lobortis justo enim, a condimentum massa tempor eu. Ut quis nulla a quam pretium eleifend nec eu nisl. Nam cursus porttitor eros, sed luctus ligula convallis quis. Nam convallis, ligula in auctor euismod, ligula mauris fringilla tellus, et egestas mauris odio eget diam. Praesent sodales in ipsum eu dictum<sup>3</sup>.

Maecenas consectetur metus at tellus finibus condimentum. Proin arcu lectus, ultrices non tincidunt et, tincidunt ut quam. Integer luctus posuere est, non maximus ante dignissim quis. Nunc a cursus erat. Curabitur suscipit nibh in tincidunt sagittis. Nam

<sup>1</sup> One of the most prominent and distinctive features of this style is the extensive use of side notes. There is a wide margin to provide ample room for side notes and small figures. Side notes can be created using the standard `\footnote` command or using the custom `\sidenote` command and are automatically numbered.

Ancillary information can be placed in the margin using the `\marginnote` command. Margin notes are unnumbered in the text where they are added and in the margin.

<sup>2</sup> The `\sidenote` command can take two optional arguments as follows: `\sidenote[<number>][<offset>]{<text>}`

<sup>39</sup> This side note has a custom number using the `<number>` parameter.

<sup>3</sup> This side note has been moved up using the `<offset>` argument. Positive offsets move down, negative move up. This is useful if notes clash with other margin content.

malesuada vestibulum quam id gravida. Proin ut dapibus velit. Vestibulum eget quam quis ipsum semper convallis. Duis con-  
sectetur nibh ac diam dignissim, id condimentum enim dictum. Nam aliquet ligula eu magna pellentesque, nec sagittis leo lobortis. Aenean tincidunt dignissim egestas. Morbi efficitur risus ante, id tincidunt odio pulvinar vitae.

Margin notes can also take an `<offset>` argument to move them up or down. This margin note has been moved up to avoid clashing with the text below.

## Full-width Text Blocks

*Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent porttitor arcu luctus, imperdiet urna iaculis, mattis eros. Pellentesque iaculis odio vel nisl ullamcorper, nec faucibus ipsum molestie. Sed dictum nisl non aliquet porttitor. Etiam vulputate arcu dignissim, finibus sem et, viverra nisl. Aenean luctus congue massa, ut laoreet metus ornare in. Nunc fermentum nisi imperdiet lectus tincidunt vestibulum at ac elit. Nulla mattis nisl eu malesuada suscipit. Aliquam arcu turpis, ultrices sed luctus ac, vehicula id metus. Morbi eu feugiat velit, et tempus augue. Proin ac mattis tortor. Donec tincidunt, ante rhoncus luctus semper, arcu lorem lobortis justo, nec convallis ante quam quis lectus. Aenean tincidunt sodales massa, et hendrerit tellus mattis ac. Sed non pretium nibh. Donec cursus maximus luctus. Vivamus lobortis eros et massa porta porttitor.*

## Section Types

This style provides A- and B-heads (that is, `\section` and `\subsection`) only. The Tufte- $\text{\LaTeX}$  classes will emit an error if you try to use `\subsubsection` and smaller headings.

## Referencing

### Referencing Sections

Sections can be referenced by name using the `\nameref` command, provided they have been given a label with `\label`. For example, we can output the name of the first section in this document<sup>4</sup> using its label<sup>5</sup> like this: Paragraphs & Notes.

<sup>4</sup> Section names output in this way are clickable links that take the reader to the section.

<sup>5</sup> `\label{sec:notes}`

### Referencing Citations

References are placed alongside their citations as side notes<sup>6</sup>. This is accomplished using the normal `\cite` command. The complete list of references (i.e. bibliography) may be printed automatically using the `\bibliography` command.

<sup>6</sup> Edward R. Tufte. *Visual Explanations*. Graphics Press, Cheshire, Connecticut, 1997. ISBN 0-9613921-2-6

To enter multiple citations at one location<sup>7</sup>, you can provide a list of keys separated by commas: `\cite{Tufte2006,Tufte1990}`. You can also use the same optional vertical `<offset>` argument to move them up or down: `\cite[<offset>]{<bibkey1,bibkey2,...>}`.

<sup>7</sup> Edward R. Tufte. *Beautiful Evidence*. Graphics Press, LLC, first edition, May 2006. ISBN 0-9613921-7-7; and Edward R. Tufte. *Envisioning Information*. Graphics Press, Cheshire, Connecticut, 1990. ISBN 0-9613921-1-8

## Figures & Tables

The standard figure and tabular environments are available to place your figure or table within the text body with the caption appearing in the margin. Full-width figures and tables may be placed in `figure*` or `table*` environments with captions again appearing in

the margin. Figure 1 is an example of the `figure*` environment and Figure 2 is an example of the normal figure environment.

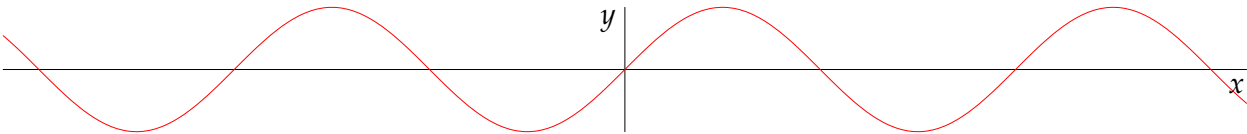


Figure 1: This graph shows  $y = \sin x$  from about  $x = [-10, 10]$ . Notice that this figure takes up the full page width.

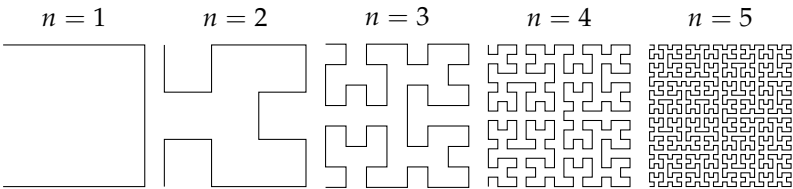


Figure 2: Hilbert curves of various degrees  $n$ . Notice that this figure only takes up the main textblock width.

The style contains two new environments called `marginfigure` and `marginfigure` which allow you to place a figure or table entirely in the margin. Like side and margin notes, the `marginfigure` and `marginfigure` environments accept an optional `<offset>` argument that adjusts the vertical position of the figure or table. Figure 3 is an example of a margin figure that has been moved up due to a clash with Figure 2 above it.

Table 1 shows a table created with the `booktabs` package. Notice the lack of vertical rules—they serve only to clutter the table’s data.

Margin	Length
Paper width	8 <sup>1</sup> / <sub>2</sub> inches
Paper height	11 inches
Textblock width	6 <sup>1</sup> / <sub>2</sub> inches
Textblock/sidenote gutter	3 <sup>8</sup> / <sub>8</sub> inches
Sidenote width	2 inches

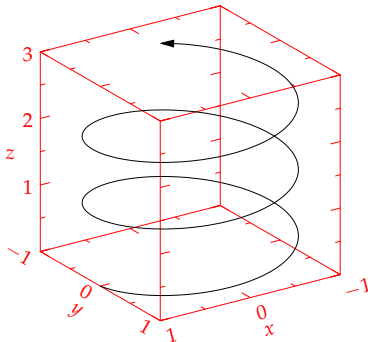


Figure 3: This is a margin figure. The helix is defined by  $x = \cos(2\pi z)$ ,  $y = \sin(2\pi z)$ , and  $z = [0, 2.7]$ . The figure was drawn using Asymptote (<http://asymptote.sf.net/>).

Table 1: Here are the dimensions of the various margins used in the Tufte-handout class when using letterpaper.

Typography

Typefaces

If the Palatino, Helvetica, and Bera Mono typefaces are installed, this style will use them automatically. Otherwise, it will fall back on the Computer Modern typefaces.

Letterspacing

This style includes two new commands and some improvements on existing commands for letterspacing.

When setting strings of ALL CAPS or SMALL CAPS, the letterspacing—that is, the spacing between the letters—should be increased slightly<sup>8</sup>. The `\allcaps` command has proper letterspacing for strings of FULL CAPITAL LETTERS, and the

<sup>8</sup> Robert Bringhurst. *The Elements of Typography*. Hartley & Marks, 3.1 edition, 2005. ISBN 0-88179-205-5

`\smallcaps` command has letterspacing for SMALL CAPITAL LETTERS. These commands will also automatically convert the case of the text to upper- or lowercase, respectively.

The `\textsc` command has also been redefined to include letterspacing. The case of the `\textsc` argument is left as is, however. This allows one to use both uppercase and lowercase letters: THE INITIAL LETTERS OF THE WORDS IN THIS SENTENCE ARE CAPITALISED.

## *Support*

The website for the Tufte-L<sup>A</sup>T<sub>E</sub>X packages is located at <https://github.com/Tufte-LaTeX/tufte-latex>. On the website, you'll find links to the SVN repository, mailing lists, bug tracker, and documentation.

## *References*

- Robert Bringhurst. *The Elements of Typography*. Hartley & Marks, 3.1 edition, 2005. ISBN 0-88179-205-5.
- 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.
- Edward R. Tufte. *Beautiful Evidence*. Graphics Press, LLC, first edition, May 2006. ISBN 0-9613921-7-7.