The personal disquiet of

# Mark Boulton

April 13th, 2005

Five simple steps to better typography

Typography, I find, is still a bit of mystery to a lot of designers. The kind of typography I'm talking about is not your typical "What font should I use" typography but rather your "knowing your hanging punctuation from your em-dash" typography. Call me a little bit purist but this bothers me.

So, in an attempt to spread the word here's the first of five simple steps to better typography. To kick it off, part one is about the Measure.

Measure the Measure.
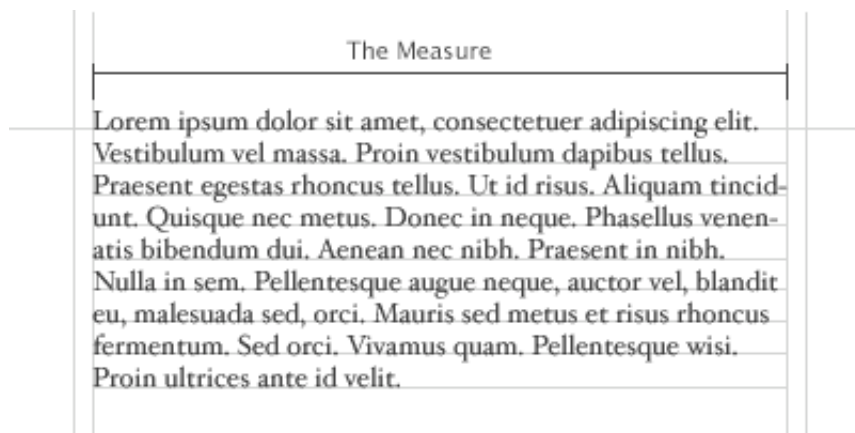
The Measure is the name given to the width of a body of type. There are several units of measurement used for defining the Measure's width. The three basic units are:

- One point = 1/72 of an inch
- One pica = 12 points
- One em = The distance **horizontally** equal to the type size, in points, you are using. Eg. 1em of 12pt type is 12pt. (Thanks to Joe for correcting me on this.)

But, with the advent of DTP packages and the website design the following are also now used:

- Millimetres
- Pixels

There is an optimum width for a Measure and that is defined by the amount of characters are in the line. A general good rule of thumb is 2–3 alphabets in length, or **52–78 characters (including spaces)**. This is for legibility purposes. Keep your Measure within these guidelines and you should have no problem with legibility. Please note that this figure will vary widely with research, this is just the figure I use and it seems to work well as a generally rule of thumb.

CSS and fluid?

What is interesting here is fluid designs on the web. How can a Measure react to an increase and decrease in size. The entire grid would have to adapt to that change. An interesting discussion point and challenge.

The Measure and leading.

A simple rule is your leading should be wider than your word spacing. This is because when the balance is correct, your eye will move along the line instead of down the lines.

If your measure is wider than the guidelines for optimum legibility then increase the leading, or line-height as it's sometimes wrongly called. This will have the effect of increasing legibility. Your leading should increase proportionally to your Measure. **Small Measure, less leading. Wide Measure, more leading.** It's a simple but effective rule.

Reversing out?
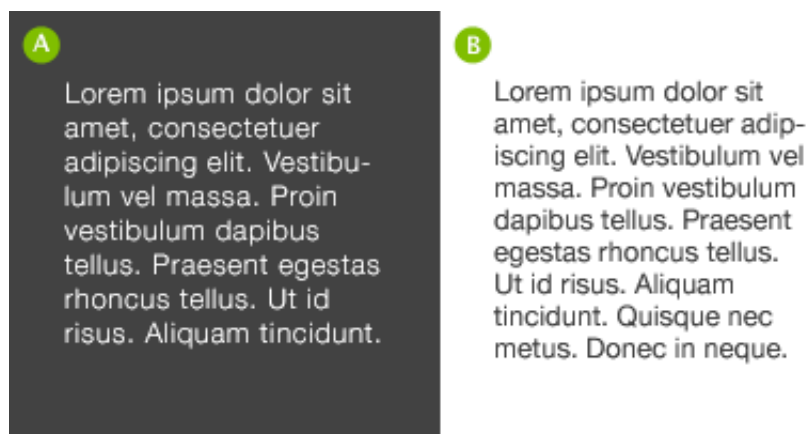
When reversing colour out, eg white text on black, make sure you increase the leading, tracking and decrease your font-weight. This applies to all widths of Measure. White text on a black background is a higher contrast to the opposite, so the letterforms need to be wider apart, lighter in weight and have more space between the lines.

Tracking

The general rule of thumb in tracking your words (not the characters) is that the shorter the line length the tighter the tracking, the opposite is also true.

Your responsibility

Following these simple rules will ensure your bodies of text will be as legible as they can be. These rules come from a typographic craft background which unfortunately, for our industry in particular, aren't being taught as much as they should be in the art schools around the world. As a result they aren't being practiced and correct, well-considered typography is taking a nose-dive.

It's our responsibility, as designers, to embrace the rules which are born of a craft which goes back hundreds of years.

Hopefully, this series of quick, sure-fire ways of improving your typographic craft will help in some way make sure computers and DTP doesn't kill it off. That would be a great shame.

The series

This is the first installment of this "Simple Steps…" series. Next up we have Hanging punctuation

1. **Measure the measure**
2. Hanging punctuation
3. Ligatures
4. Typographic Hierarchy — size
5. Typographic Hierarchy — weight

This entry was posted on Wednesday, April 13th, 2005 at 2:20 pm and is filed under Design, Simple Steps, Typography.

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The personal disquiet of

Mark Boulton

April 18th, 2005

Five simple steps to better typography — Part 2

Hanging punctuation is an area of typographic design which has suffered at the hands of certain software products. It's a term which refers to glyph positioning to create the illusion of a uniform edge of text.

It's most commonly used for pull-quotes, but I feel the most neglected is that of bulleted lists.

With the advent of desktop publishing it became suddenly very easy and cost-effective to produce bodies of text. The problem was these bodies of text work within a box. Every character in this box had to be within the box, Hanging Punctuation requires characters to be out of the box. This was a problem for the software and as a result was ignored. An important aspect of typesetting just swept under the carpet like that. It's a great shame.

Things are now getting better with Adobe Indesign offering support for Hanging Punctuation, I think the latest version of Quark may do it as well. Not sure about Word — probably not.
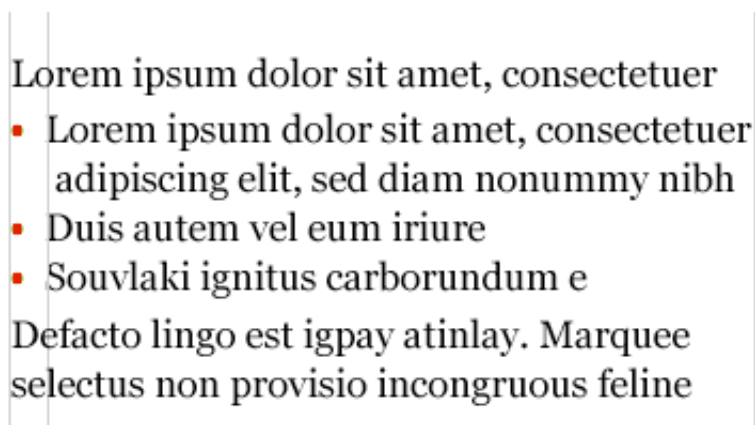
Well enough of the talk, let's get down to some examples.

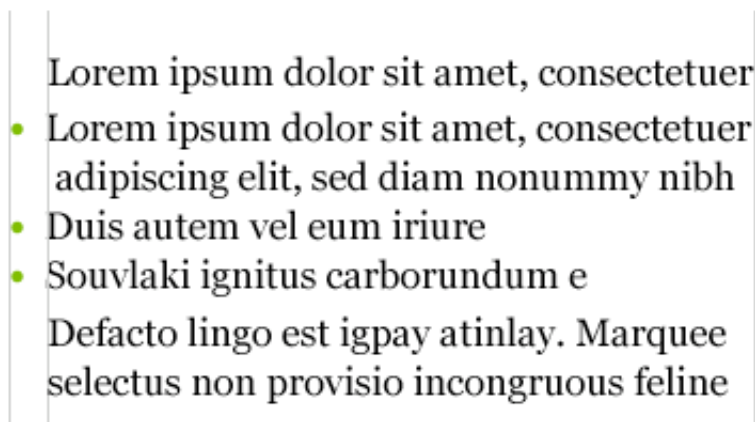# Examples of Hanging Punctuation

Lists

Without Hanging bullets

Indented bullets - Incorrect

Lorem ipsum dolor sit amet, consectetuer
- Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh
- Duis autem vel eum iriure
- Souvlaki ignitus carborundum e

Defacto lingo est igpay atinlay. Marquee
selectus non provisio incongruous feline

A ranged left body of type is pretty much destroyed, aesthetically, when punctuation isn't hung. The eye looks for straight lines everywhere, when type is indented in this way, it destroys the flow of text.

With Hanging bullets

Hanging bullets - Correct

Lorem ipsum dolor sit amet, consectetuer
- Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh
- Duis autem vel eum iriure
- Souvlaki ignitus carborundum e

Defacto lingo est igpay atinlay. Marquee
selectus non provisio incongruous feline

With hanging punctuation the flow of text on the left hand side is uninterrupted. The bullets, glyphs or numbers sit in the gutter to highlight the list. This representation of a list is more sophisticated visually and more legible.

Pull-quotes

Without Hanging Punctuation

Indented quotation marks - Incorrect

Lorem ipsum dolor sit amet, consectetuer
" Lorem ipsum dolor sit amet, consectetuer
adipiscing elit, sed diam nonummy nibh "

Defacto lingo est igpay atinlay. Marquee
selectus non provisio incongruous feline

Nothing is more irritating than badly typeset quotes. The interruption to flow is considerable and the overall effect is pretty unsightly

With Hanging Punctuation

Hanging quotation marks - Correct

Lorem ipsum dolor sit amet, consectetuer
" Lorem ipsum dolor sit amet, consectetuer
adipiscing elit, sed diam nonummy nibh "

Defacto lingo est igpay atinlay. Marquee
selectus non provisio incongruous feline

Quotation marks should be 'hung' — See diagram below. In this example the quotation marks are hung either side of the quote. Once again this allows uninterrupted reading for the audience.

Hang it!

So, in short. Hang lists and hang quotation marks, when using pull quotes and quotes within a body of text.

And before you say "Mark, you don't hang your lists on this site", I will be, soon. The comments list is hung, I just need time to hang the bulleted lists… I get to it ok?

The series

The personal disquiet of

Mark Boulton

April 25th, 2005

Five simple steps to better typography — Part 3

I'm pleased this series is turning out to be so popular and it's somewhat confirmed what I suspected. A bit of a thirst for simple typographic design theory.

As I've been writing this series i've deluged by email and comments from people agreeing, disagreeing, asking for more information etc. What's great is designers are thinking and *talking* about typography again. Designers are questioning typography and not just letting the font and the software do the work. It's nice to hear. But enough back-slapping Mark, on with the next in the series…

The third installment of this series is dedicated to just one typographic element — **Ligatures**.

Ligatures are combinations of letters — some of them are functional, some are decorative. They are more commonly seen in serif faces, although ligatures in sans-serif faces such as Gill Sans and Scala Sans are important to the typeface and should be used.

They are generally comprised of certain characters which are created to stop collision of elements of letterforms. Take the letter f of a serif typeface. In lower case, especially italic, the top and tail of the f move into the character space next to it. These overlaps are what typographers call *kerns*.

A Set in Mrs Eaves Roman.
f and i collision clearly present
on the left

B Set in Mrs Eaves Italic.
f and i collision clearly present
on the left

It's when these overlaps collide with letters next to them that we have problems. Take lower case f and lower case i, probably the most widely used ligature. When set in Roman (A, above), the

ascender of the f collides with the dot of the i, the effect is much worse when set in italic (B, above). Type designers therefore combined the character into the fi ligature. As you can see, the dot from the i is simply removed.

Five standard latin based ligatures found in most good serif character sets.

fi fl ffi ffl ff

Ligatures and language have been closely tied throughout typographic history. Typographers in the sixteenth century devised ligatures to cope with common occurrances of letters in latin — fi, ffi, fl, ffl, ff (shown above). You will find at least a couple of these in most fonts. But, as langage has changed to encorporate different words, especially english, the need for more obscure ligatures has grown.

Take the word fjord for example. The ascender of the f will collide with the dot of the lower case j. This is resolved the same way as the fi ligature in that the dot is removed from the j. The trouble with less common ligatures like this is that they generally aren't in the standard character set of a font, so we kind of have to make do or if setting type in a program like Adobe Illustrator, make them by hand. And this brings me neatly onto practical usage of ligatures.

Usage in print

I tend to use ligatures specifically for headlines. Occasionally, if the job demands it, I will use ligatures for body copy as well but this does tend to make typesetting a little time consuming.

If for example I'm creating a logotype for a coffee shop called "Flow's fine beans" (a convenient amount of ligatures present there!). The name could simply be set in a font which does not require ligatures, but this could make the logotype quite plain. The font chosen could be serif, but special care must be given to the kerning and overall appearance when setting logotypes that use ligatures.

"Flow's fine beans" logotype set in un-kerned Mrs Eaves Roman
and Italic with no ligatures. Note the collision between the 'fl' of
'flow's' and the 'fi' of 'fine'. Also poor kerning between the
apostrophe and letter's either side of it.

flow's fine beans

This logotype, shown above, is simply typed using Mrs Eaves. See how the ligatures appear too
close to each other creating dense areas of type. The gaps between certain letterforms are also
unsettling to the eye. This needs to be manually kerned.

The logotype is now kerned and includes ligatures for the 'fl' and
the 'fi'. The apostrophe is comfortably set between the w and s and
an overall balance is created with the ligatures.

flow's fine beans

If the type is set carefully the ligatures add typographic interest to the words. They add character
and begin to tell a story about Flow's shop — it's a classy place, nice coffee too!

So, careful attention to detail at this stage can help define a logotype and go a long way to help
define brand message — all through the simple use of ligatures.

But what about on the web?

Usage on the web

Ligature usage on the web is a bit tricky. Functionally there are special characters for the following
ligatures — these are needed for linguistic reasons.

`Æ`	Æ	Capital AE
`æ`	æ	Lower-case ae
`Œ`	Œ	Capital OE
`œ`	œ	Lower-case oe
`Ð`	Ð	Icelandic upper-case eth

`ð`	ð	Icelandic lower-case eth
`ß`	ß	German double-s
`Þ`	Þ	Icelandic upper-case thorn
`þ`	þ	Icelandic lower-case thorn

They should be present in body copy and headline copy for those languages that require them. What HTML doesn't cater for is the use of the five main ligatures — fi, ffi, fl, ffl, ff within the special character codes. The fonts generally do have these ligatures present but it's debatable whether they needed to be used on screen or not.

I tend to only use ligatures for on screen use if I'm creating logotypes, or graphical headers or elements that require them. In this instance all use of ligatures is fine. There are many people who disagree, stating that ligatures are a relic of by-gone age. I disagree. The use of ligatures in your typesetting, for print or on screen, shows a typographic maturity and an understanding of the craft.

The series

This is the third installment of this "Simple Steps…" series. Next up we have Typographic Hierarchy

1. Measure the measure
2. Hanging punctuation
3. **Ligatures**
4. Typographic Hierarchy — size
5. Typographic Hierarchy — weight

This entry was posted on Monday, April 25th, 2005 at 11:35 am and is filed under Design, Simple Steps, Typography.

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37 Responses to "Five simple steps to better typography — Part 3"

1. *Jon Hicks* said on: *April 25th, 2005 at 1:13 pm*

The personal disquiet of

Mark Boulton

May 9th, 2005

Five simple steps to better typography — Part 4

I've struggled a bit with the latest addition to this 'simple steps' typography series. Mostly because it's not so simple and it's a bit more of a grey area than the previous three articles.

Typographic hierarchy, put simply, is how different faces, weights and sizes of typefaces structure a document. Some of these hierarchical devices are well-established conventions, such as cross heads and folios, so I'm not going to touch on them in this post. To keep it simple I'm going to concentrate on two things — size and weight. The first of which is size.

First off a bit of history.

Early typographers created their manuscripts by using one font, one size, one colour mostly, interspersed with hand painted illuminations. The products of such typographers has a flat quality to the information, almost mesmeric.

Take a look at some early manuscripts and the typefaces themselves, especially the older Black letter styles, appear similar — m's look like u's, y's look like p's and so on. As beautiful these manuscripts are, other than the illuminations, they are devoid of structure within the content. There is no typographic hierarchy.

Evolution of the scale

In the sixteenth century, European typographers developed a series of typeface sizes, a scale (the musical analogy is a good one — stick with me). As shown in the diagram they are sizes we're are all familiar with. Six point through to Seventy-Two point type has remained pretty much intact for over four hundred years. In fact, they are the default font sizes in many applications (give or take a few.).

So, what's so special about these sizes? Well, because this scale of sizes has been used for centuries, if set correctly, type set in this scale will appear more pleasing to the eye and therefore more legible.

An interesting point. Originally the sizes in the scale were referred to by name instead of by point size. here's a few examples of some of the older names:

- 6pt: *nonpareil*
- 7pt: *minion*
- 8pt: *brevier* or *small text*
- 9pt: *bourgeois* or *galliard*
- 10pt: *long primer* or *garamond*
- 11pt: *small pica* or *philosophy*
- 12pt: *pica*
- 14pt: *english* or *augustin*
- 18pt: *great primer*
- 21pt: *double small pica* or *double pica*
- 24pt: *double pica or two-line pica*
- 36pt: *double great primer* or *2-line great primer*

New software, and modern methods of typesetting, has allowed character heights which fall outside of, and within, this scale. this freedom has resulted in a typographic free for all, allowing designers to pick sizes which may not be related to one another as according to this scale. Is this a bad thing? I'd argue that it is.

Let's go back to the music analogy. It's like composing a discordant piece of music. Clashing notes, clashing type. but, if it's clashing you're after, that's fine. If, however, you're after harmony and melody that stands the hairs up on the back of your neck, stick to the notes in the scale folks!

Application of the scale

So let's put some of this into practice. I'm going to be using this very website as an example.

I started off designing this website with something very specific in mind — typography. I wanted to make sure this site would work by a simple, clear hierarchy of typography set against a simple modular grid, with plenty of white space on which to 'hang' a number of design elements (in my portfolio for example).

Following the typographic scale described in the previous section, I set about applying this to the CSS based design.

These are the elements for the typographic hierarchy. Note, I'm using pixels as my base measurement, not points. And yes I do know the pixel's are different on different platforms.

The thing about type sizes in CSS is if you want to remain true to typographic tradition, you have to specify em's or percentages based on an absolute unit of measurement, in this case a pixel. If you use the relative — small, x-small etc. — there aren't enough declarations to complete the scale and the sizing of each increment is fixed at 1.5 going up the scale or 0.66% going down. (apparently this depends and was also changed to somewhere between 1.0 and 1.2 in CSS2.) But anyway, I don't want to get fixated on the best CSS approach to this. This article is about typography.

These are the pixel sizes for my main headings:

1. 11px /16.5px — Body copy and leading.
2. 24px — Main heading used as section headings on the Homepage, Portfolio homepage and entries.
3. 18px — Headings for journal entries and portfolio subheadings.
4. 16px — All navigational and content tertiary headings.
5. 13px — All other headed elements.

This would give me the following styles visually

Section headings - H1

Entries headings - H2

Navigation and tertiary headings - H3

All other headed elements - H4

Body copy and leading

These translate into the following way into CSS, using percentages for scaling purposes.

1. 11px /1.5em — Body copy and leading.
2. 218% — Main heading used as section headings on the Homepage, Portfolio homepage and entries.
3. 164% — Headings for journal entries and portfolio subheadings.
4. 145% — All navigational and content tertiary headings.
5. 118% — All other headed elements.

So, within my CSS file, it looks like this:

```
body {
font: 11px/1.5em "Lucida Grande";
}
```

```
h1, h2, h3, h4, h5, h6 {
font-family: helvetica, arial, verdana, sans-serif;
font-weight: normal;
}

h1 {
font-size: 218%;
}

h2 {
font-size: 164%;
}

h3 {
font-size: 145%;
}

h4 {
font-size: 118%;
}
```

Using these values for the size of the headings creates a natural relationship between them. The typography is harmonious as a result and it only took about five minutes to implement. Not long at all.

Size really does matter

It really does. If you take anything away from this series, please let it be this. Stop and think about your type sizes, just for five minutes. Plan them, don't just choose whatever you feel like from the dropdown in Photoshop. Make sure they are 'in tune' and then apply the theory to whatever medium you are designing to.

Next up the series we follow on from this with weight.

The series

This is the fourth installment of this "Simple Steps…" series. Next up we have Typographic Hierarchy — weight

1. Measure the measure
2. Hanging punctuation
3. Ligatures
4. **Typographic Hierarchy — size**
5. Typographic Hierarchy — weight

This entry was posted on Monday, May 9th, 2005 at 3:17 pm and is filed under Articles, Simple Steps, Typography.

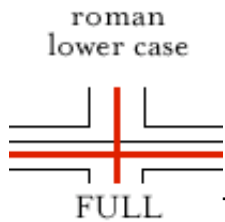You can follow any responses to this entry through the RSS 2.0 feed.

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The personal disquiet of

Mark Boulton

May 18th, 2005

Five simple steps to better typography — Part 5

The final part in this series, I'm glad to say is a little more cut and dry than the last in the series. It's more about historical typographic theory but with a simple, practical guide to ensuring a balanced use of typeface weights.

Typeface weight, and the choice of weight, is perhaps one area of typography that to most designers is simply a matter of choice. That choice is dictated by answering a design problem which is aesthetically, or content, motivated. What many designers do not realise is that there are rules which should govern the choice of weight — a typographic pecking order — which when followed, aids the designer's typesetting and can produce stunning results.

Solving the design problem

Let's start by addressing the root of the decision to set type in different weights — solving a design problem. I mentioned that this problem stems from two main areas:

1. An aesthetic problem. This is where the designer sets type differently to add style or solve some kind of visual or compositional issue.
2. A content problem. The designer needs to set a different weight because the content dictates it. The language of the content may dictate special typographic treatment, the tone of voice may be different, it may be a quote, it may be a structural device such as folios.

There may be other reasons as well, but I believe these are the main cause.

First off a bit of history

I like these history bits, they really are informative. To research where the rules came from and why they should be followed goes a long way to ensuring they are used.

Uppercase and Lowercase, and the relationship between them, have been around for over twelve hundred years. Small Caps, ornamentals and arabic figures were early additions to the roman.

Italics were a strange bunch to begin with. They didn't associate themselves with lower case

roman, as we usually see today, but with roman caps and small caps. It's only in recent times that usage of italic, within roman, was deemed to be typographically correct.

Some of the newest additions to the weights of typefaces came with bold, and condensed, as late as the early nineteenth centry. These were generally used in place of italics and small caps. Bold typefaces have now become a standard way of differenciating in typesetting, particularly on screen where italics are a little more difficult to read.

A type family with all of these weights forms a balanced series which is no only historically accurate but creates harmonious typography. If the setting of copy was reversed, so italics were used as body copy, Caps was used as pull-quotes and bold was used as access structure (folios, running heads etc) not only would the body of text look terrible, it was also be very difficult to read.

The practical bit

So, we have these weights of a typeface and they all relate to each other, and there's a hierachy. How is this practical in everyday use?

First off we need to show the different weights and how they are related to each other. Then we categorise them into a hierachical list, from primary to sextary. This is shown in the diagram below.

Primary	roman lower case
Secondary	Roman Upper Case ROMAN SMALL CAPS roman text figures: 1 2 3 *italic lower case*
Tertiary	*True Italic (Cursive) Upper Case* *italic text figures 1 2 3* *SLOPED SMALL CAPS* roman titling figures: 1 2 3 **bold lower case**
Quaternary	*False Italic (Sloped Roman) Upper Case* **Bold Upper Case** **BOLD SMALL CAPS** **bold text figures: 1 2 3** ***bold italic lower case***
Quintary	*Italic Titling figures 1 2 3* ***Bold Italic (Sloped Roman) Upper Case*** ***bold italic text figures 1 2 3*** **Bold Titling Figures: 1 2 3**
Sextary	***Bold Italic Titling Figures: 1 2 3***

Execution of diagram inspired by Robert Bringhurst's 'Elements of Typographic Style'

This list, as it stands, may not be that useful. It does illustrate however the relative importance of certain typeface weights. It comes into practical use in the following diagram.
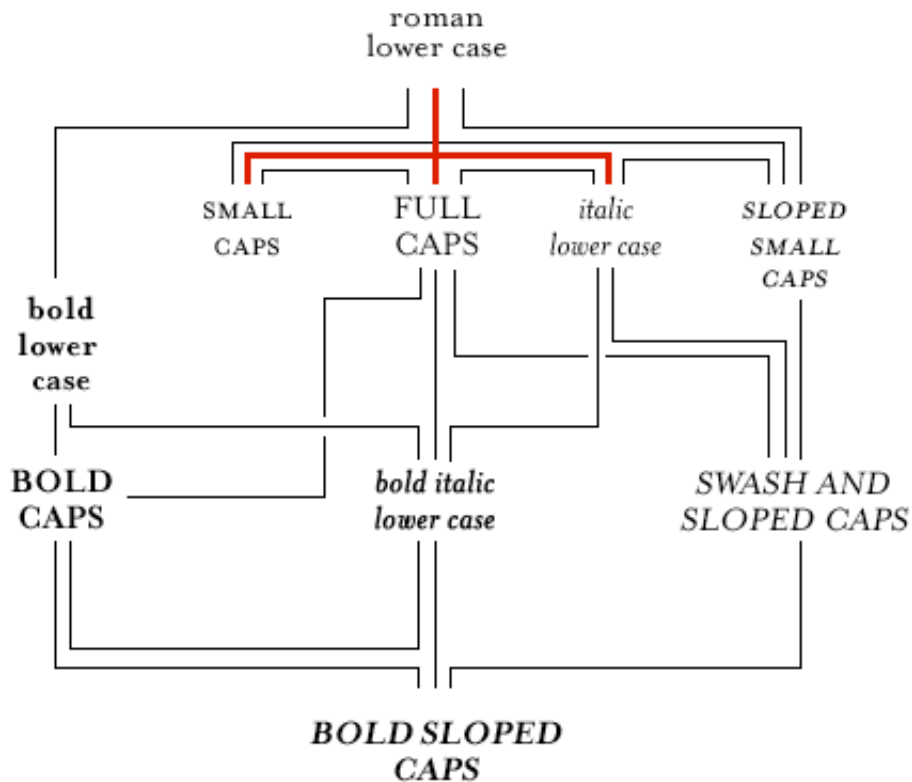
Execution of diagram inspired by Robert Bringhurst's 'Elements of Typographic Style'

Here you can see some of the weights set out and joined by lines. The red lines represent the core typeface family. Some typographers would argue that without these core weights, typefaces are reduced to being used for titles only. I'll leave that one open for debate!

The other lines show how designers can move along the lines when setting type. for example, if a designer has set type in roman and they need to add emphasis to a certain point in the copy. They would follow the lines to any on the second line — bold lower case, small caps, full caps, italic lower case or sloped small caps. If they were to jump to, say, bold italic lower case, or a more extreme example, bold sloped caps, the effect would be horrible.

If the designer is setting type in bold lower case they could go on to add bold caps, or bold italic lower case without much bother. You get the idea?

So, following this simple roadmap can ensure that your typography adheres to some simple hier-achical rules and as a result your typography will take on a harmonious feel. don't just take my word for it though, set some type, use the rules and you'll see.

A final word

I've enjoyed writing this series. What initially started as a quick five tips turned into something a little more involved and has sparked quite a lot of debate. I'm pleased it's bringing traditional design stuff into the web standards realm, there really is so much more we can learn and put to good practice in this particular corner of the industry.

Typography is one of those things that has unfortunately suffered from the advent of technology (and i'm not just talking about computers here). Designers on the whole have divorced themselves from the letterforms and the setting of them. As a result they've forgotten, or not been made aware of, the simple typesetting rules which were core to the old system of printers apprentice.

Typography to me is about design. It's about words and the conveying of meaning. It's about set-ting words that people read. A certain amount of it is creative, a certain amount is expression and aesthetics, but mostly it's about people reading stuff. Do them a favour and don't make it difficult.

This is the fifth, and last, installment of this "Simple Steps…" series.

1. Measure the measure
2. Hanging punctuation
3. Ligatures
4. Typographic Hierarchy — size
5. **Typographic Hierarchy — weight**

This entry was posted on Wednesday, May 18th, 2005 at 9:09 am and is filed under Articles, Simple Steps, Typography.

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22 Responses to "Five simple steps to better typography — Part 5"

1.