



LIGATURES

Lesson 8

In this lesson we start diving deeper into typography. We start exploring the world of micro typography. We'll look at some aspects that impact the legibility the most. Studying typography on the micro level will help you produce top-notch typographic styles. It will help you understand what difference small details can make. It separates typographic masters from the newbies.

Ligatures. Now that's a fancy word. You may have never heard of it before. Or you might have heard a designer mention it and shrugged it off as it's probably something that doesn't concern you (for the web developers in the course). Well, you may have never heard of it or paid attention to it but I guarantee you that you've seen it before. And once you know what ligatures are, you'll never be able to unsee them. You'll probably start noticing them everywhere. Let's take a look at the definition of a ligature.

In writing and typography, a ligature occurs where two or more graphemes or letters are joined as a single glyph.

—Wikipedia

The most common ligature, that everyone has seen is the ampersand. Yes, the “&” symbol. It comes in various shapes but in its core, it's a combination of letters “e” and “t”—“et” in Latin meaning “and”. How cool is that?

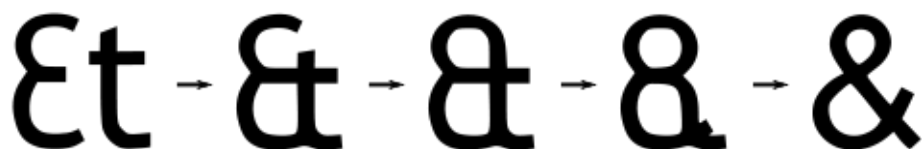


Figure 49: The evolution of the ampersand ligature (Source: [Wikipedia](#)).

An interesting fact for the German speaking readers, the “sharp s” or “ß” is also a ligature (a combination of f and s) but just like the ampersand it’s become a character of its own.

Origin of ligatures

Before Gutenberg made his movable type printing machine, all books were handwritten. Every book was a unique copy, usually transcribed by monks. Can you imagine transcribing a book like the Bible? It took a long time. So the scribes that were transcribing these came up with clever ways to speed the process up. Even if just by little. They started combining some letters into single shapes.

When the printing machine was first invented, it closely imitated the medium that came before it—handwritten books. With that, it imitated the ligatures as well. But in print, besides saving time, there was another reason for combining letters into single glyphs—aesthetics. Take a look at the following sets of characters.

fi fl ff ffl ffi Th

TISA PRO

fi fl ff ffl ffi Th

GEORGIA

Figure 50: There’s nothing obviously wrong with these sets of letters.

fi fl ff ffl ffi Th

GEORGIA

Figure 51: All the unappealing features of these letter sets in Georgia.

Take a close look. Notice that some letters collide with others (especially those set in Georgia). The combination of “f” and “i” is particularly noticeable. Particularly unappealing as well. This is where typography really grabs you by the legs, starts pulling and never lets you go. Once you start noticing these little details, there’s no way back. So what is the solution for this unappealing set of letters? A ligature. Or ligatures, because there’s quite a few of them still in use today.

fi fl ff ffl ffi Th

NO LIGATURES

fi fl ff ffl ffi Th

WITH LIGATURES

Figure 52: Same sets of letters, with and without ligatures. Can you spot all the differences?

What’s the point of ligatures?

So ligatures were designed to save time, improve the aesthetic aspect of a text or typeface and to improve the legibility. With transcribing books and hand-setting type for printing being done and dusted, we’re only left with the aesthetic aspect and legibility. Remember how we said that horizontal rhythm affects legibility? Ligatures can play a noticeable part in improving legibility. Take a look at the figure 53. We have two sentences. They’re the same with a purpose. The first sentence doesn’t have the ligatures enabled while the second one does. Notice the lines that indicate the starts and the ends of the sentences. Notice the difference in the width. The ligatures cause that difference. That’s why they have an impact on vertical rhythm, and that’s why they have an impact on legibility.

John finds the official offer on the office floor.

NO LIGATURES

John finds the official offer on the office floor.

WITH LIGATURES

Figure 53: Ligatures help keep the horizontal rhythm consistent.

Types of ligatures

There's many types of ligatures but when it comes to web typography, the two major groups are common ligatures and discretionary ligatures.

Common ligatures

These are the ligatures that substitute letter combinations like “ff”, “fi”, “fl”, “ffi”, “ffl”, “th”. These are enabled by default by most web browsers. If you want to disable them for some particular reason, you can do so with using this:

```
.class {  
  font-variant-ligatures: common-ligatures;  
  -moz-font-feature-settings: "liga", "clig";  
  -webkit-font-feature-settings: "liga", "clig";  
  font-feature-settings: "liga", "clig";  
}
```

Discretionary ligatures

These are the non-standard ligatures and usually don't really contribute to legibility at all. They're much more stylistic than their common counterparts. Examples are letter combinations of “ch”, “ck”, “ct” and “st” (figure 54). It's usually best to avoid using them but for those rare cases that you do, you can do so like this:

```
.class {  
  font-variant-ligatures: discretionary-ligatures;  
  -moz-font-feature-settings: "dlig";  
  -webkit-font-feature-settings: "dlig";  
  font-feature-settings: "dlig";  
}
```

ch ck ct st şt → ċh ċk ċt ſt ſt
tf ti tı tt ttf → tf ti tı tt ttf
ttĩ ttı ij it → ttĩ ttı ü it

Figure 54: Discretionary ligatures (Source: [Lucas Fonts](#)).

Contextual ligatures

Contextual ligatures usually come with the script typefaces. In most cases they combine the letters so it looks like they were written in one stroke. If you do use a script typeface it's recommended that you enable these ligatures if available. The text set in this typeface will look more genuine (see comparison in figure 55). Controlling contextual ligatures is as easy as (if the typeface you're using supports them):

```
.class {  
  font-variant-ligatures: contextual;  
  -moz-font-feature-settings: "calt";  
  -webkit-font-feature-settings: "calt";  
  font-feature-settings: "calt";  
}
```

The bloom has gone off the rose

*The **bloom** has **gone** off the **rose***

Figure 55: Contextual figures (Source: [Adobe](#))

Other notes on using ligatures on the web

If you're looking for the quickest and most basic way to enable or disable ligatures look no further than text-rendering property. It will enable the common ligatures and kerning (Chrome and Firefox do this by default).

```
text-rendering: optimizeLegibility; //enables common ligatures and
```

Note that if you set letter-spacing to your text it will not feature any ligatures. The browsers will strip them away.

Explore further

1. [Typographic ligature](#)
Article
 2. [Tomorrow's web type today: The fine flourish of a ligature](#)
Article
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WHAT DID YOU LEARN TODAY?

Today I learned about ligatures, what they are, where they come from and how to use them on the web. [#BetterWebType](#)