

Why are default LaTeX margins so big?

Question

I've read that — unless I know a lot about typesetting — I shouldn't change the margins of a LaTeX document. The default margin size of the article class is really big and it feels like a lot of space is waste. Thanks to the geometry package, it is simple to change the margins, but I'm not sure if I should.

Can someone tell me why the default margin size is so big? Also, why shouldn't I change the margin size?

Jeremy
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Answer

It's not that the margins are too wide. It's that the paper is too big!

As is surely by now well-known, the real question is the size of the text block. That is a really important factor in legibility. As others have noted, the optimum line length is broadly somewhere between 60 characters and 75 characters.

Given reasonable sizes of font which are comfortable for reading at the distance we want to read at (roughly 9 to 12 point), there are only so many line lengths that make sense. If you take a book off your shelf, especially a book that you would actually read for a prolonged period of time, and compare it to a LaTeX document in one of the standard classes, you'll probably notice that the line length is pretty similar.

The real problem is with paper size. As it happens, we have ended up with paper sizes that were never designed or adapted for printing with 10–12 point proportionally spaced type. They were designed for handwriting (which is usually much bigger) or for typewriters. Typewriters produced 10 or 12 characters per inch: so on (say) 8.5 inch wide paper, with 1 inch margins, you had 6.5 inches of type, giving ... around 65 to 78 characters: in other words something pretty close to ideal. But if you type in a standard proportionally spaced font (worse, in Times — which is rather condensed because it was designed to be used in narrow columns) at 12 point, you will get about 90 to 100 characters in the line.

So what is to be done? One rational answer would be to use smaller paper: that is what (most) books do; but presumably the standard paper sizes have become very deeply ingrained, and I suppose there are things (like illustrations and graphs) for which they are useful.

A second possible answer — which is what most word processors did — was to stick to the standard “document design” (margins of an inch or so) and just use proportionally spaced fonts as if they were typewriter text. This produces very long lines, which are not comfortable to read. But that discomfort can be somewhat alleviated by increasing the space between lines (1.5 or double space), which helps prevent “doubling”, and by avoiding type sizes below about 11 or 12 points (depending very much on the design of the font).

A third possible answer — which is what the designers of the standard document classes did — is to stick with a reasonable line length. No choice then but to “increase the margins”: but that’s really just a side-effect of the unreasonably large paper they were obliged to work with: the end result is very much what you get if you copy a page from a well designed book onto large paper, without enlarging it.

A fourth possible answer, one I rather like, is to adopt a design like the [tuft class](#), which has an unconventionally asymmetric layout which enables you to have a reasonably narrow text-block but make good use of a wide margin for notes and illustrations. Of all the ways of approaching the fundamental design question (how to combine a reasonably narrow text block with uncomfortably large paper) this seems to me to be the most carefully thought out.

A fifth possible answer is to use a two column format. In terms of the efficient use of space that probably makes the best sense of all. If you look at (most) properly designed books which have a page size as large as letter-paper or A4, or at magazines, you will find that a multiple column format is used.

A sixth possible answer would be to use very large type — but that somehow feels wrong (unless you are going to be reading at a great distance). It’s a time-honoured practice for things like lectern bibles, but for “standard” documents it looks odd.

These are all potentially valid design choices. I happen to think that the most conventional one (stick with 1 inch margins, and add line spacing to prevent doubling) is probably the worst of them, and that it only seems “right” because we are accustomed to it. And it doesn’t generally save paper, because unless you use single spacing you lose vertically the extra space that you gain horizontally.

Still, none of these choices is hard-wired into LaTeX. You can rearrange things how you like. But don’t think in terms of “wide margins”: think in terms of a text block which needs to be legible, and the imposition of that text block on the page.

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<http://tex.stackexchange.com/questions/71172/why-are-default-latex-margins-so-big>