Warnings

\looseness on the loose

Frank Mittelbach

Question:

This paragraph was set twice with a small value for \emergencystretch. The first time it was set without any other special adjustments, the second time we also used -1 as the value for the \looseness parameter. Can you explain why the two paragraphs are broken differently into lines even though the use of \looseness couldn't shorten the paragraph?

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Answer: When \looseness has a non-zero value, TeX always runs through all line breaking passes: breaking without hyphenation, breaking with hyphenation, and (if \emergencystretch is non-zero as it is, for example, inside multicols) with the emergency stretch. But adding \emergencystretch to every line means that the line breaks chosen in the first paragraph may fall in different fitting classes so that at different places \adjdemerits are charged, thus making the original solution less attractive.

In fact the situation could even be worse: if a long paragraph can be broken into lines by just using \pretolerance, then a setting of \looseness to +1 might in fact result in a paragraph with one line less — all that would be required is that breaking using \tolerance to get a default line count two lines less than with \pretolerance (a real life example is left to the reader).

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http://www.latex-project.org