The paragraph was set twice in a two column multicol environment. The first time it was set without any special adjustments, the second time we used -1 as the value for the \looseness parameter. Can you explain why the two paragraphs are differently broken into lines even though clearly the use of the parameter \looseness couldn’t shorten the paragraph at all?

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Answer: When \looseness gets a non-zero value, \TeX{} will always run through all paragraph passes (i.e., breaking without hyphenation, with hyphenation and (if emergency-stretch is non-zero as it is inside multicol) through the emergency-pass). But adding emergency-stretch to every line means that the line breaks chosen in the first paragraph may fall in different fitting classes so that at different places \texttt{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 is required is that by breaking it using \tolerance we would get a default line count that would be 2 lines less than in the case with \pretolerance (a real life example is left to the reader).