

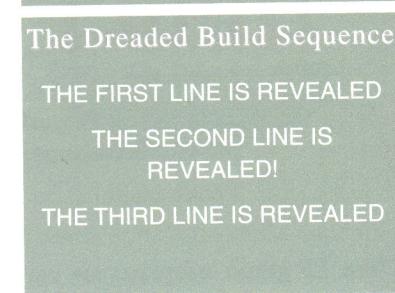
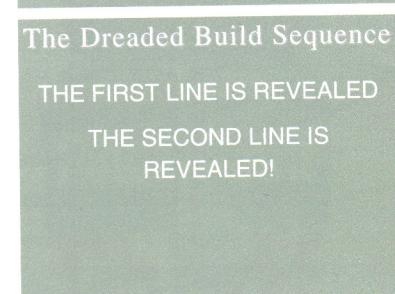
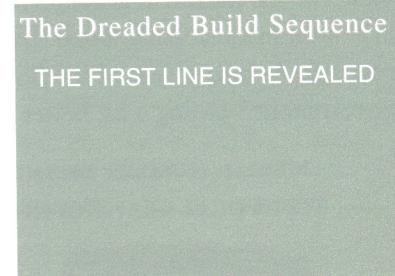
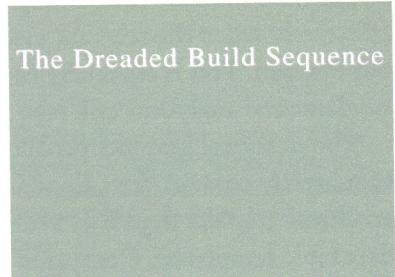
### *Sequentiality of the Slide Format*

WITH information quickly appearing and disappearing, the slide transition is an event that attracts attention to the presentation's compositional methods. Slide serve up a small chunks of promptly vanishing information in a restless one-way sequence. It is not a contemplative analytical method; it is like television, or a movie with over-frequent random jump cuts. Sometimes quick chunks of thin data may be useful (flash-card memorizing), other times not (comparisons, links, explanations). *But formats, sequencing, and cognitive approach should be decided by the character of the content and what is to be explained, not by the limitations of the presentation technology.* The talk that accompanies PP slides may overcome the noise and clutter that results from slideville's arbitrary partitioning of data, but why disrupt the signal in the first place? And why should we need to recover from a technology that is supposed to help our presentations?

Obnoxious transitions and partitions occur not only slide-by-slide but also line-by-line, as in the dreaded slow reveal (at right). Beginning with a title slide, the presenter unveils and reads aloud the single line on the slide, then reveals the next line, reads that aloud, on and on, as the stupefied audience impatiently awaits the end of the talk.

It is helpful to provide audience members with at least one mode of information that allows *them* to control the order and pace of learning—unlike slides and unlike talk. Paper handouts for talks will help provide a permanent record for review—again unlike projected images and talk. Another way to break free of low-resolution temporal comparisons is to show multiple slides, several images at once within the common view. Spatial parallelism takes advantage of our notable capacity to reason about multiple images that appear simultaneously within our eyespan. We are able to select, sort, edit, reconnoiter, review—ways of seeing quickened and sharpened by direct spatial adjacency of evidence.

Now and then the narrow bandwidth and relentless sequencing of PP slides are said to be virtues, a claim justified by loose reference to George Miller's classic 1956 paper "The Magical Number Seven, Plus or Minus Two." That essay reviews psychological experiments that discovered people had a hard time remembering more than about 7 unrelated pieces of really dull data all at once. These studies on memorizing nonsense then led some interface designers, as well as PP guideline writers seeking to make a virtue of a necessity, to conclude that only 7 items belong on a list or a slide, a conclusion that can only be reached by not reading Miller's paper. In fact the paper neither states nor implies rules for the amount of information shown on a slide (except for those presentations consisting of nonsense syllables that the audience must memorize and repeat back to a psychologist). On the contrary, the deep point of Miller's work is to suggest strategies, such as placing evidence within a context, that extend the reach of memory beyond tiny clumps of data.<sup>4</sup>



[THE AUDIENCE FLEES]

<sup>4</sup> George A. Miller, "The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information," *Psychological Review*, 63 (1956), 81-97 (and widely posted on the internet). At Williams College in September 2000, I saw George Miller give a presentation that used the optimal number of bullet points on the optimal number of slides—zero in both cases. Just a straightforward talk with a long narrative structure.