

Editorial

What was the last scientific article that you read? Think about it. Not the last article that you paged through or skimmed or sampled the introduction and conclusion, but one in which you actually *read* most of the pages. Now, how long was that article? Was it a 10–12 conference article, a 20-page journal article, or a 50-page mini-monograph?

Glenn Ellison of the MIT Department of Economics presents compelling evidence (*Evolving Standards for Academic Publishing: A q-r Theory*¹) that “In almost all fields papers seem to be longer now than in 1975.” Ellison sampled journals in some thirty-two fields and found significant increases in average page length. For example, ACM *JACM* papers increased in length from 12 pages to 29 pages (though *CACM* papers actually decreased from 7.6 pages on average to 7.0 pages).

Figure 1 provides more detail for ACM *TODS*. The top line states the length in pages of the longest article in each yearly volume, the middle line indicates the average length, and the bottom line states the length of the shortest article.

All three trends are disturbing. The average article length has more than doubled, from 19.2 pages in 1976 to 41.9 pages this year. The average article this year was longer than the longest article in 1976. The shortest article this year, at 31 pages, was longer than the average article for the entire first decade of *TODS*’ existence. In five separate years an article of at least 60 pages appeared (one weighed in at a whopping 79 pages).

The total page count per volume was relatively stable over this period, which meant that an increasing average article length was coupled with a decreasing number of articles, as shown in Figure 2. The average issue of *TODS* in the eighties contained six articles, while in the last seven years the journal has averaged only three articles per quarterly issue, or a paper a month.

The result is that readers are confronted with less diverse and more ponderous papers in each issue, of concern to the Editorial Board. (A related phenomenon, also of concern, is that referees are confronted with longer manuscripts, which must lengthen reviewing time.) Hence, the question that opens this essay.

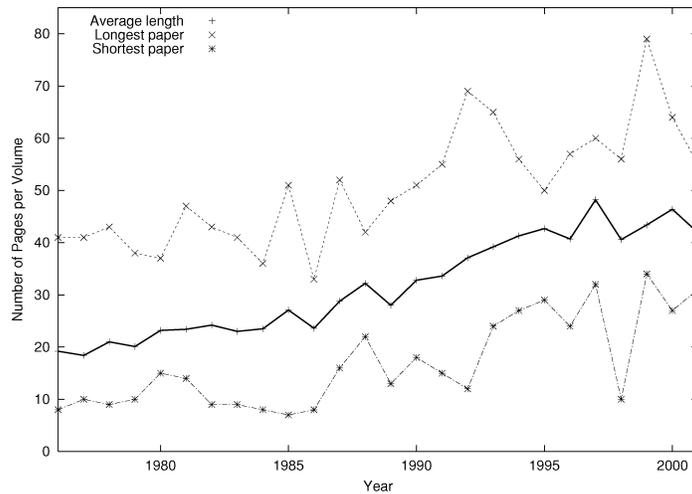
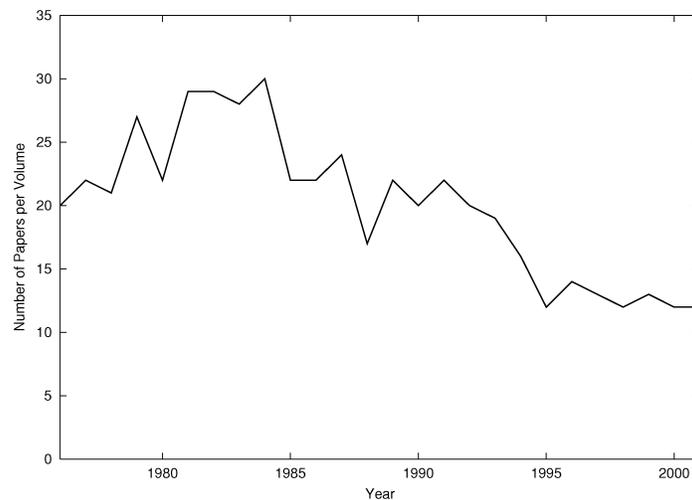
The cause of these trends is clear: in an effort to achieve the “significance of contribution” required of acceptance, authors are adding more detail, more theorems, more performance studies, and more discussion to their submissions.

¹<http://econ-www.mit.edu/faculty/gellison/files/jrnth.pdf>

Author’s address: Richard T. Snodgrass, Department of Computer Science, University of Arizona, P.O. Box 210077, Tucson, AZ 85721-0077, rts@cs.arizona.edu.

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Fig. 1. Article length per volume in ACM *TODS*.Fig. 2. Number of articles per volume in ACM *TODS*.

(I sheepishly admit that one of the data points in the top line in Figure 1 is a paper of mine.)

It is less obvious that longer papers are better papers. The top five most-cited *TODS* articles, by Chen, Smith&Smith, Codd, Shipman, and Stonebraker/Wong/Kreps/Held, average a hair over 30 pages each (again, less than the shortest article this year).

Over-simplifying, there are five basic types of papers, appropriate for different venues. There are highly innovative, initial-cut papers presenting neat ideas that haven't yet been fleshed out; in fact, it may turn out that the idea doesn't work. Workshops are an ideal venue for such papers. The next step is to pursue the idea further, prove some things or test the concepts out in an

implementation, realizing a paper appropriate for a conference. An idea that has merit can be elaborated and detailed evaluation undertaken, generating significant theorems and/or implementation and/or analytical or empirical performance studies, realizing a paper appropriate for a journal such as *TODS*. In fact, the key role of archival journals is to publish solid, enduring, reproducible research in a format less constraining than workshop or conference proceedings (and benefitting from a more thorough, multi-pass review).

The following policy has been in place for many years, somewhat stemming the growth of the longest papers.

6. *TODS* will discourage excessively long papers (longer than 50 double-spaced pages including figures, references, etc.), and unnecessary digressions even in shorter papers. This is to motivate the authors to bring out the essence of their papers more clearly, to make it easier for the reviewers and readers, and to allow *TODS* to publish more papers in any given issue.

This policy states clearly the advantages of keeping journal papers focused, while retaining their positive qualities of completeness and rigor.

The fourth kind of paper is a survey of the literature or of practice. My previous editorial announced that *TODS* is now accepting certain kinds of directed surveys.

The final kind of paper has traditionally appeared in journals such as *Information Processing Letters* or *ACM Letters on Programming Languages and Systems*. These papers are also rigorous and contribute e.g. a faster algorithm or a theoretical insight that has not appeared elsewhere, yet have a more restricted scope than a conference or conventional journal paper. They are usually quite short, 5–20 pages, depending on the background they need to present.

The Editorial Board recently augmented the above maximum bound with the following policy (see <http://www.acm.org/tods/Authors.htm>) which focuses on the minimum bound.

7. In a similar vein, *TODS* encourages shorter submissions, including even very short (say, five page) submissions. The primary criterion for acceptance is improving on the state-of-the-art in some significant way.

We are serious about encouraging shorter submissions. In fact, we are delighted to have received recently a submission of five pages and another of seven pages. We will inform referees of this new policy and will strive to reward succinct submissions with faster turnaround. We hope that authors who had decided their submission wasn't long enough for *TODS* will rethink that decision in light of this new policy.

On a related note, you can now submit your manuscript electronically, in a variety of formats. Just point your browser at the above-mentioned URL.

RICHARD T. SNODGRASS
EDITOR-IN-CHIEF