



# Lyle's Law of Records

**M**y cousin Margaret—known affectionately as Maggie—was born in 1916. Maggie was educated in a one-room country school, probably to about the eighth grade, although I'm not really sure. I know she didn't go to high school. Somewhere in her education, though, she learned to write with a clarity and concision that made her letters a joy to receive and read. Her vocabulary was limited, and her grammar could be a bit creative, but she kept us up-to-date on the life that she and Orval shared in Iowa as well as the various trips they took around the United States.

Maggie was also an inveterate diarist. I'm not sure when she started, but she had a collection of spiral-bound notebooks in which she had recorded anything that she found of interest. If someone would ask, "Now when was nephew Bill born?" she would go find her diary and come back with, "January 23, 1937." Pause. "At 7:33 in the morning." Pause. "In Marshalltown hospital, and he weighed seven pounds and nine ounces."

Maggie died in 1998, and Orval in 2001. Unfortunately, no one knows what happened to the diaries. I suspect that as she neared the end of her life, she disposed of them herself. It could well be they held a level of personal detail that she didn't care to have other people read. However, while she didn't leave her diaries, she did leave us a model that we should heed—a model that is embodied in Lyle's Law of Records, *Write it down*.

Now I have never been clear on just when one should write something down versus when they should write it up. I suppose it is related to the burning down or the burning up of a building. Down or up, the result is the same. In the burning case, the building is gone. In the writing case, there exists a compensation for the limitations of our memory.

Some people have better memories than others. A friend of mine who was noted for being somewhat "veracity challenged" was said to have such a good memory that he even remembered things that never happened. Creative memory notwithstanding, we all have imperfect memories, either forgetting information or remembering details that are not quite

an accurate description of past events. There is only one solution; write it down.

For engineers, this law must be inviolable. There are several reasons. Clearly, the most important is to help assure the quality of your designs. Nothing is of greater importance to engineers than the quality of their work, affecting, as it does, the health, safety, and welfare of the people who use the resultant products. The results of a test or measurement, the connector-pin number where a signal was sampled, a suggestion made by a colleague.... Of course you will remember them. Or not. Write them down. If you don't, you may forget them. Or perhaps even worse, you may remember them incorrectly.



*Always Write  
it Down ...  
or Up!*

Another reason for writing things down is to provide a legal trail. The work of engineers often results in patents. If a patent is contested, one very important datum is the date on which the idea was first conceived. The engineer's logbook should record that information in an uncontestable fashion.

When I reported for my first engineering job with what was then the Collins Radio Company, I was issued a logbook and instructed how to use it. One bit of advice—actually more of a command—was that if I recorded anything that could remotely be considered to be patentable, not only should

I sign the entry, I should have a colleague witness it as well. And, of course, every page was numbered, dated, in ink, no erasures, blank areas crossed out, etc. The idea is to produce a record that is as unimpeachable as possible.

Writing provides another benefit beyond augmenting memory or providing a legal record. For me, anyway, it is a significant aid to the reasoning process. With a nod to Samuel Johnson, writing, like the prospect of hanging, wonderfully focuses the mind. Since it takes more time to record a thought than it does to think it, there is time for evaluation. Since it takes effort to write it down, we may well decide that some thoughts aren't worth recording. (Be careful, however, because it's hard to know beforehand what will be important.) And when we record our thought process, we are assisted in developing a logical progression of inferences and



provided a means of testing them against observed—and recorded—facts and earlier conclusions. I have had the trying experience of reaching a conclusion through the usual thought process and then, while writing it down, finding that it just didn't hold up. I have also had the pleasant experience of solving a seemingly intractable problem by writing about it. I prefer the latter.

Today, of course, we have the computer. It provides a means of recording our thoughts and our activities that is much faster and far more comprehensive than a paper logbook. I conducted a limited, unscientific sampling of current practice in engineering companies of different sizes and learned that some adhere to the practice of using formal written logbooks while others use computer files and email for record keeping. In every case, however, the Law of Records was being obeyed.

Personal journals are also a good idea—if you can develop the discipline. I have not done well at keeping a record while I am at home, but I have kept a travel journal for many years. There probably isn't much practical value, but it is a pleasure to go back and read about what I was doing and where I was doing it on a particular day 25 years ago.

As I get older—as we all must do if we can just manage to avoid the alternative—the imperative to keep a personal journal increases.

There is a corollary to the Law of Records. As yet unproven but experimentally demonstrated, Lyle's Law of the Conservation of Memory, *Every time we forget something that happened, we remember something that didn't*, applies increasingly with increasing age and can be mitigated by good records.

Writing is hard work. Like most hard work, however, it is usually well rewarded. Whether it is an informal but precise engineering log—either paper or electronic—or a formal paper for publication or a personal journal, writing is worth the effort. The result may be archival, or it may be as transient as Maggie's diaries, but it is useful. Write it down. Or up. Whatever.

—Lyle D. Feisel, Ph.D., P.E.  
*Iowa Alpha '61*



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