motd

by Rob Kolstad

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Failing

One can hardly attend an educational institution in our country without being warned against failure. "Failure is bad," "Don't fail!" and "Don't be a failure!" are implicit, if not stated, messages.

I am not sure that failing is so awfully bad. In fact, if one looks around, one can see examples in many different venues.

- Water skiing without falling (failing)? Not trying hard enough.
- Performing sysadmin activities without failing at least in test environments? Not pushing hard enough.
- Make a mistake on a calculation (failure), catch it, and fix it? No problem.

I don't think "failure" is the problem. The real problem is "failing slowly" or "failing in some undetected manner" (ignoring, for the moment, "failing fatally," e.g., driving a car over a cliff).

Consider writing code in a scripting language. In these days of pretty darn fast computers, one can write some erroneous code, try to run it (but fail), fix the bug, and succeed—all in a manner of seconds. That sort of failure doesn't hurt at all! The amount of time it takes to make sure you typed semicolon instead of colon dwarfs the time an interpreter can check it for you. In fact, one can even develop incrementally, testing five lines at a time. The series of tiny failures pales next to trying to debug a 1,000-line script riddled with mistakes.

This idea generalizes, I think:

- Home repair: turn the little screw on the sprinkler head. Too much water (failure)? Turn it the other way!
- Riding a bicycle: turn the wheel one way and fall (failure). Turn it the other way!
- Cooking: burned the {toast, etc.}? Cook it less!

Quick failures (short of catastrophes and deaths) are dandy learning opportunities and can help us all grow as humans.

Failing slowly, on the other hand, has serious drawbacks. Think of the poor college student who majored in Albanian Poetry when she really wanted to be a computer programmer. What a miserable career she has until she realizes she took the wrong fork in the road and backtracks. Unfortunately, this can take years.

Certain projects or even relationships can fail still more slowly. The US divorce rate is a symptom of this. Couples work hard for some period of time and then realize that all those years invested in the marriage are not going to enable it to succeed. Of course, this is sometimes hard to foresee by those involved.

The initial foundations of "Extreme Programming" worked against failing slowly. Frequent (sometimes daily) checkpoints enabled implementors to know when they had taken even the slightest wrong turn. There is wisdom here, even if XP is not for everyone.

Failing fatally is still no good, of course. One must supervise infants and children. One must use power tools of all sorts very carefully. Using safety devices such as seat belts, safety goggles, and personal flotation devices is only common sense. I don't advocate failing when personal injury or death might result.

I routinely perform experiments so that I fail on a small scale instead of a large one:

- For my lawn extension, I planted 15 3x50 foot test plots of various grasses to see which would grow in the combination of sun, soil, and watering conditions of the new yard. An unexpected dividend was the revelation that grasses are very different—textures, widths, colors, and general impression vary widely. I chose one of the top two grasses,

and the new lawn has gone well. Of course, I failed for a year on getting a new lawn—and I failed with 13 kinds of grass. The alternative of failing slowly after the dozens of person-hours required to put in a new lawn was quite unappealing, though.

- I practice experimental cooking. I frequently glean a few dozen recipes from the Net in an effort to learn "essence of Chicken Cordon Bleu." I then create an amalgam that appears to hit the high points. I reckon I have a failure rate of only about 2%—and the successes are delicious. But this entire endeavor wouldn't be possible if failure weren't an option.
- The new wine cellar has a white LED that can shine on any given wine bottle's label. They're all individually addressable. Suggested as a stupid extreme idea by a lunch partner, the potential for "coolness" was undeniable, so we did experiments. First, we acquired a handful of different bright LEDs in a few colors. After a few experiments, a dozen of the best were acquired. Then we built a small PIC circuit to cycle the half-dozen winning LEDs across a single row of bottles. That brought the project to the third go/no-go point. I'm happy to report that 1/3 of the cabinets are ready to install and another 1/3 of the light circuits have been constructed. I hope that it turns out cool. If it's not, then this will become an example of failing slowly.

Failure *is* an option. Don't be afraid to make nonfatal mistakes if they are mistakes that can easily be recovered from. You might find your quality increasing side-by-side with your throughput.

Of course, success is always an option, too. Never underrate it!

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