Saving Time

My brother Douglas has worked in the theater all of his life. I remember a stint he did at the Point Theater near Kerrville, Texas some years ago. The Point is an outdoor theater, perched on the banks of the Guadalupe river and surrounded by oak and Magnolia trees. A barn-like structure holds the stage with all of its technical subsystems. The seats are fixed—as in a cinema—and an awning-like overhang protects about half of the house from direct overhead skies.

The theater is famous for its summer season, presenting musicals and plays in the hot and relaxing ambiance of a south Texas evening. Shows start at dusk. The stars can be seen clearly overhead. Wind rustles the trees and stirs enough breeze to keep away mosquitoes. The house is gently sloped—starting at street level at the back entrance, and following the natural downward contour of the river bank. When you sit in the house you can see, smell, and hear the river lapping at that bank as its lazy waters move deliberately on their long journey to a distant nowhere.

On this particular evening, I have seen the closing night of Big River. Doug is managing what in the theater is called “changeover.” The idea is to completely strike the old show—successfully closed after its two-week run—and to install the new show in time for opening night. The old show closes on Saturday. The new one opens on Monday. Sunday is tech, dress, and finishing touches. So changeover is an exhausting 24-hour stretch of work that cannot be put off.

The new show—*West Side Story*—has a very complex and permanent structure that is used as set for the various scenes. Two stories high, it consists of metal pipes and flat metal catwalks that resemble the outdoor fire escape stairs that double as balconies in 50’s New York projects. It is from this structure that audiences will hear “Tonight” and “Stick to Your Own Kind” in less than 48 hours.

The set has been anchored to the asphalt in a nearby parking lot for the last 10 days—for rehearsals leading up to the changeover. Now it has to be disassembled, carried piecewise down the slope to the barn, and then re-erected on the stage proper. The whole effort is expected to take five hours.

Unfortunately, I'm a bad influence on Doug. Seeing that everything is in hand, I encourage him to delegate the set change and join me for a late-night coffee. Ever since I left the fine arts in preference for a simpler and less-demanding career in ergonomics, we don't get to see each other that much. I thought a catch-up chat at the Waffle Spot would be nice. So we spend an hour over coffee, flirting with a southern waitress who calls us both "hon."

When we return, everything has gone pear-shaped.

The theater crew have invented a shortcut to save time. Instead of disassembling the set and moving it to the stage as planned, there are enough burly workers of carnie and circus heritage to carry it fully-assembled through the house and to heave it directly up to the stage through the fourth wall. In their five-minute "planning" conversation, it seems that they estimated a mere 30-minute carry followed by an hour of installation. At that rate, the stage would be set in less than a third of the time. As fast as you can say, "Hey Rube," the work will be over and the beer coolers cracked.

By the time Doug and I return from our coffee, we are greeted by an appalling predicament. Rather than the pile of steel, aluminum, and chain link fence that we expected, a still-fully-assembled monstrosity is lodged in the middle of the house—directly downstage center. It is teetering at an oddly impossible angle, and avoids complete collapse only because the metal piping is lodged under the seats—which are securely fixed with bolts to the concrete house floor.

No problem. Back to Plan A, right?

Sadly, Plan A has been overtaken by events on the ground.[*] Now we are faced with the challenge of getting pipe and crescent wrenches positioned between chair mounts on a sloping surface—while concurrently trying to position ladders for safe removal of the top set components. Although this is a community, not a union house, OSHA hates this kind of stuff, and Douglas—having done many Equity[†] gigs as Stage Manager, Director, and performer—is fully aware of the liability and safety issues.

So with the work now complicated by the "shortcut," disassembly takes no less than six hours. The whole changeover creeps well past dawn. Blaming myself, I have no

[*] One of my favorite military phrases. Used by General Staff when it's time to throw away the carefully-laid plans of a battle or mission gone awry, it is substituted by troops on the ground with the more vibrant SNAFU and FUBAR acronyms—expanded, of course, to their fully-expressed and most-lively spoken forms.

[†] Actors Equity—the labor union for professional live theater and stage workers.

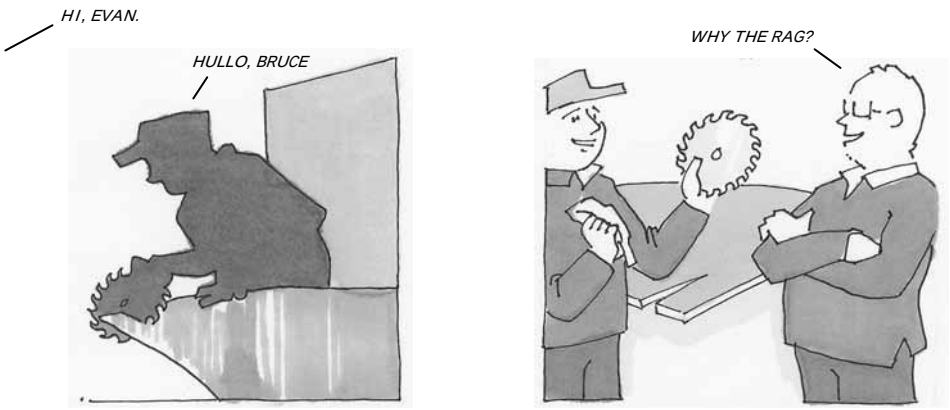
choice but to offer my help. Chagrined, Doug gladly accepts the offer, and gives me an assignment. My job is to make coffee.

No Talent for Tools

Remember that when Ayla and Droog worked their materials, they were using tool-making tools to create objects that they were able to apply to the tasks of daily survival. Caught up in the spirit of innovation, Ayla therefore symbolizes all that is great about true invention. She sees how tools are empowering, and how tool-making tools are self-empowering. The decision to use a tool, though great, is not as inspiring as the commitment to build one, because building a tool is an act that advances the human spirit. *You* can use a tool, but *others* can use tools that you build.

We saw earlier that Ayla and Droog would have had little use for a voice-activated flint knapper. This because it would be solving the wrong problem. What Ayla and Droog need is more precision for their cutting and scraping tools, not an “easier way” to have them. They want better, not easier.

The image reminds me of a colleague—we’ll call him Evan—who was sawing some wood in his garage one day when I dropped by. I don’t know what compelled him to attempt this, because Evan is not a do-it-yourselfer. He’s more of a couch potato, and usually waits for everyone else to do the work before arising and offering to help. So I was kind of surprised to find him working wood.



Bruce: “Why the rag?”

Evan: “Oh, I was using it, and … damn “modern” tool … it was cutting my fingers. So I grabbed this rag.”

Bruce: “The blade was cutting your fingers?”

Evan: (showing me his bloody hand) “Yeah … look!”

Bruce: “Well how’s it going?”

Evan: “Slow, but it’s moving forward. Someday, I’ll just be able to speak, and the wood will just saw itself.”

Bruce: “Well, you know you can do that now.”

Evan: “Oh?”

Bruce: “Yeah—have the guy at the lumber yard cut it for you.”

As we chatted, I learned that Evan bought a circular saw on a whim at *Homeowner’s Hell*, the local hardware mega-store. He had the idea that he would use it to build a tree house for his nephew. But once he got both it and the wood home, he realized that the saw was too complicated for him to learn to use. In addition to all kinds of meaningless jargon in the manual (words like “hex wrench” and “safety guard”), he didn’t have a ground lift for the old fashioned power outlet in his 50’s garage.

Because of these obstacles, Evan just located the cutting edge component of his new purchase and began using it directly on the plywood. Manually sawing back and forth, Evan was OK except that—because it was circular—the cutting edges of the blade hurt his fingers while eating into the wood. So Evan located a cotton rag and wrapped it around his hand—just as a way of holding the blade while he cut.

Believe it or not.

Evan is a “no talent for tools” kind of a guy. Even the simple ones are beyond him, and the solutions that he arrives at—grabbing a rag to protect his hand—are in fact very creative examples of tool <u>building</u>. Evan can solve user interface problems (such as edges that hurt his hand) much more effectively than he can use tools designed by others. The reason is that Evan doesn’t want to change his thinking even one iota when he pursues a goal.

This brings up the entire difficult question of who these high technology interfaces are aimed at. There is the school that says high-tech and sophisticated tools are aimed at high-tech and sophisticated users—knowledge and information specialists, who need intelligent, even superhuman aids to support their creative work. This school focuses on A-ark and C-ark users—that is, people who have a set and setting that is oriented toward productivity, problem solving, and quality.

An equally vociferous contingent tenders that the less sophisticated, the downtrodden—the illiterate and less-fortunate—are the main beneficiaries of high-tech tools. This is the school that argues for the "everyday" person, the common man. This group tends to be B-ark product designers who are developing products for B-ark users. We hear things like, "Most people want to dictate because they don't know how to type." Or, "We need an interface that doesn't require awkward and unnatural actions like mouse or keyboard." An essay in my IBTBAGM book even suggests that ASR is a vital technology for the growing population of adult illiterates—it's their only access to the information superhighway! Believe it or not.

Well Evan belongs to this last contingent. And the problem with designing tools for Evan is that we end up dumbing them down for everyone else.

And that's a pity—since Evan rarely gets much of anything done anyway.

The Optimizers, Both Good and Bad

Once in the mid-nineties I was at a client site. I and the client team were finishing up some documentation. A colleague—I'll call her Brenda—had a long list that she needed to pull out of a table and assemble into a list. The data were in a format that could not just be pasted directly into her word processor. It was about 1200 items in length.

Brenda—a real "power user" of the word processor, immediately saw that this was going to be a couple of hours of work. So she decided to optimize. Rather than hand edit every item and then reformat it for the document, she would use a set of macros to pull the data into the document and then auto-format it, stripping away the extraneous characters and displaying the list in the desired style.

Brenda knew that it would take some time to program the macros. But once they were right, it would take literally five seconds to perform the transformation. So she set about developing the macros and I went back to my cube.

As I finished up my parts of the document and went back to check on others, Brenda was in the midst of a frustrating debug effort. The macros were not behaving correctly, but she couldn't be sure what was wrong. Documentation on the macro editing features was wrong in the user manual, and Brenda was stretching her skills as a BASIC programmer. So I had a "sanity check" discussion with her.

Bruce: Is it possible that we've shifted our goal? It's interesting to try to get the macros working, but it won't take that long to just retype the whole thing.

Brenda: Yes I know, but I'm so close! I just know that after this next test, it'll work fine—I think I know the problem.

Bruce: When's the next test?

Brenda: It'll be ready in about 30 minutes.

So I decided to run a little experiment—Brenda and I had already devoted many cups of coffee to discussions about IT, productivity, methods for using tools effectively, lost time in the office, and how badly we needed to pee.

I made a deal with her. I would type the 1200 item list—I thought I could get it done in about two and a half hours. It would take me longer because Brenda is a technical writer and 10-fingered typist while I am more of a finger-poken-mitten-grabben experimental keyboard user. But I volunteered for the sake of the experiment. While I was typing, she could use the rest of our allotted time to debug the macros.

I had to leave for the airport three hours later. By the time I left, I had finished the list and passed it on to Brenda. She was still feverishly debugging as I walked out the door—success was "just around the corner" and she knew that her next test would be successful. I left my text as the fallback.

Brenda is an optimizer. She believes in tools and she believes in productivity—even to the detriment of her own productivity.

Do you see how Brenda's behavior could be viewed as Jetsonian? She's optimizing, but her optimization is misplaced. Because it is not aimed at getting the result that she wants—the sorted and organized list—but to get that result with as little boring and

repetitive effort as possible. It's actually a good trait not a bad one, right? She is following the philosophy, "Let the machine do the work." And it's a good philosophy.

What's happened in Brenda's case is that she is carrying the philosophy past the point where it optimizes. She is using a Jetsonian laziness to do more work rather than less. So it is a self-defeating behavior. But Brenda doesn't catch it, because she's caught up in optimizing her optimization philosophy—and not in optimizing the task at hand.

So you can see that Jetsonian thinking is not just laziness. Indeed, Evan is much lazier than Brenda, and Evan is not a Jetsonian at all.