

Disposability

We most definitely live in an age of disposability. The things we buy seem to come in only two modes: they are either entirely unrepairable or only repairable at great cost. The reality of this has become increasingly plain as the years go by and as our experiences with expensive devices makes it abundantly clear that when something craps out you are probably going to get screwed.



When I served in the US Navy back in the late 1950s, almost all the electronics aboard our destroyer were built using what is called “discrete components,” meaning that you could effect repairs at the lowest component level. That was back when technicians could actually replace defective capacitors, resistors and coils; however, it was also the last years of the vacuum tube era. By the time I left the ship we had brought aboard the latest piece of equipment, a powerful radio transceiver that was built entirely of transistorized modules. Although the modules

consisted of circuit boards with clearly visible discrete components, we technicians were specifically instructed to not attempt any repairs on the modules. When a module failed, we replaced the entire module and sent the bad one back to the factory for repair. Today, with the advent of integrated circuits where all the components are micro-miniaturized and encapsulated, we have gone one step further by simply discarding bad modules. There are almost no electronic devices that are repairable by replacing discrete components. The folks who were trained to perform troubleshooting at the discrete level are now wholly obsolete. Instead, the young folks at your local computer fix-it place have only five or six major components to deal with. When your hard drive goes bad, it gets replaced and the old one is thrown in the hazardous materials recycling bin (recycling consisting of melting down its precious metals, not repairing it).

In recent years, I have seen more and more examples of disposability. A couple years ago our fairly new digital camera lost its light metering function. Remember when you could buy an external light meter for about ten bucks? Now when that inexpensive function dies, your \$300 camera bites the dust. You might be able to find someone brave enough to open up the camera and replace the broken part, but the cost of the repair would no doubt equal the cost of a new camera. So even though the camera is perfectly good in all other respects, we have no choice except to throw it away.

I should make it clear that this isn't an essay about obsolescence; that's an entirely different subject. Obsolescence is about the perfectly wonderful film camera that sits in the back of one of our cabinets, never to be used again. It had every advanced feature of an automatic film camera including a very powerful optical zoom, but it will slowly deteriorate until one day we just throw it away. Can you even buy film anymore?



Automobiles remain fixable, but only at outrageous prices. A while back our 2000 Lexus RX300 developed a small oil leak. Thinking it couldn't be anything serious, I asked the dealer to make necessary repairs. As I learned later, the leak resulted from a bad seal between the transmission and the engine. To replace this relatively inexpensive seal, it required removing the "X frame" from under the engine, and then splitting off the transmission. After all was put back together, it was necessary to check the alignment of all the wheels because reinstalling the X frame could have changed that. Cost: just over \$2,000. Of course, I could have just decided to live with the oil leak, but I can't stand oil leaks.

A similar situation occurred with my mother-in-law's old 1999 Infiniti I30. Once when we were driving it the dash lights indicated a "service engine soon" problem. Because of its age, we took the car to an independent garage to have them troubleshoot the problem, hopefully at a lower cost than would be levied at an Infiniti dealer. The light came on because one of the valves in the smog control system was bad (you need a computer to determine that). To replace the \$30 valve it was necessary to remove the top of the engine. Total cost: just over \$600. I can't imagine what an Infiniti dealer would have charged.

In both of these cases, an old-technology car would have been considerably cheaper to repair. The new technology of auto design involves cramming as much functionality as possible into the smallest amount of space. This is done through the use of computer-assisted design software. The software identifies all available space within an auto so that it can be used for components. I recently had to replace the windshield washer tank on our 2001 Chevy Malibu and was amazed to see how they had molded it into the front



suspension area of the car. Once removed from its very-difficult-to-access space, it was fascinating to note that the tank had an incredibly odd shape, a shape which revealed exactly the precise amount of space that was available to install it at its present location.

Given the current trends, it seems likely that automobiles will soon be listed among all the other unrepairable products. The complexity of auto design will eventually reach a point where any repair would be so expensive that it would make more sense to just buy another car.

Even supposedly low-tech things are moving into the era of increased complexity. Remember what it used to be like to replace a washer in a faucet? Those days are long gone, unless you can be happy with a truly ancient looking faucet. Almost all the new

ones feature expensive “cartridge” guts that are difficult to replace, notwithstanding the literature to the contrary. We have Moen faucets throughout our house and recently had to repair one of the bathroom units. What a pain! The faucet was only three years old but the cartridge refused to come out. To fix it I had to totally remove the faucet from the sink, take it out the garage, put it in a vice and then pound out the cartridge from the bottom. How convenient!



Computers provide the best example of disposability, although not always because of a total failure. We swore we’d never leave Windows XP but now we have four fairly new computers that run various versions of Vista. Just like its predecessors, Vista becomes disposable when you reach the “totally f**ked” point of operating system screw up. This occurs for various reasons but mainly as the result of installing new software.

Each time you load a new piece of software it messes with everything and usually leaves some things not working like they used to. Eventually, so many things don’t work correctly that you just give up and buy a new computer and start all over again.

Again, remember the good old days of DOS? Back then, everything on your computer was fixable. There were no mysteries and you could repair just about any kind of software-induced damage. However, interface-wise, DOS was pretty boring. We wanted sexy and Microsoft delivered with Windows, but at a steep price.

So as we enter this era of increasing disposability, we need to start thinking about better ways of living with the reality that almost nothing is fixable. It definitely raises the question whether it is worth owning something past its warranty period. Of course, looked at another way, we should just assume that the life of any product can be predicted by its warranty period and that any useful life we get beyond that is just a bonus. With regard to warranties, it is interesting to note that extended warranties at reasonable cost tend to be available mostly for things that seldom crap out, things like refrigerators and ovens. If you do buy an extended warranty, it definitely pays to read the fine print as many of them are essentially worthless. A few years ago we purchased an extended warranty, through Circuit City, for a new Sony HDTV. When a weird little triangle started showing up in the far bottom corner, we naturally thought that our extended warranty would get that fixed—wrong! The warranty didn’t cover that part of the TV (read the fine print).

When you think about it, it is interesting to consider that as more and more products can be characterized as disposable, we human beings are moving in the opposite direction. There are few maladies that cannot be treated by modern medicine, including a great many that we may not be aware of. We have all seen the commercials for miracle drugs

where they never tell us what the drugs do (to avoid having to list the side effects). For those drugs we have to ask our doctor if we are in need of the miracle cure.

Someday disposability will reach its zenith and all products will be dated just like milk. If you buy a camera that is warranted for two years, at the end of the warranty period the camera will quit working. Because environmental laws will also have evolved by then, the manufacturer will be required to send you an envelope for shipping the camera back to them so that it can be safely disposed of. Of course, the camera will not be shipped to any place in the US. Instead it will be shipped to some third-world country where bare-foot children will disassemble it to remove all the hazardous material.