

## Perfect usability – The one-button machine?

One of my favourite Dilbert strips (<http://www.unitedmedia.com/comics/dilbert/>) goes something like:  
*“I’ve done it! I’ve invented the world’s most usable machine. It only has one button... and we press it before it leaves the factory”.*

The nirvana of one-buttonness is here. One-button machines are filling our environment leading the charge towards the invisible computer. Oddly my life seems to be becoming ever more irritating as a result. How can such simple devices have usability problems? Here are some of my experiences with one-button machines including those pressed before I get to them. No doubt they just show what a dork I am, but wouldn’t it be nice if the design-for-all dream extended to dorks too.

I recently stayed in a room at a learned society with electronic locks. The key had a fob with the room number on just like normal hotel keys linked to an ergonomically molded plastic “key”. The key even had a thumb pad that made it naturally point as you held it. I waved it at the smooth black box by the door. The red light turned green. A click. It turned back to red immediately. Door still locked. I held it still, pushed it and touched it, turned it and waved it. Nothing worked. 10 minutes later I gave up and sheepishly asked for help. Ahhhhh! The molded-plastic thing isn’t the key! The key is the thing I thought was the fob. I never even considered it might be the key, even though I use an identical card key every day at work. No fellowship for me, me thinks.

Speaking of doors at work – to save us fumbling for key cards when leaving you just press a switch next to the door to release the lock...which is next to the identical light switch. Guess how often I switch off the lights by mistake.

More doors. I’m tall. I have a long stride. Automatic doors that open as I approach eliminate Don Norman’s worries about handles where there should only be push plates. So why am I always striding at automatic doors only to find them open a fraction too late as I walk into them. Very irritating even when it doesn’t hurt.

I go to the toilet. Oh no. It’s those sinks that switch the water on automatically – or do if I am lucky, having waved my hands everywhere I can think of. Move to the dryers and I automatically push the “button” that is actually a label where the button normally is but says “Auto Start”. In Montreal even the toilets flush themselves automatically – except they didn’t during the disaster inducing ice storm of ‘98 when the whole city lost power for the week that I was there. No power, no working toilets.

I take the lift. Many just have a single call button, but no light to give feedback. I press it a few times never quite sure if it is coming or not. Add a light and everything is ok, though...isn’t it?...So why do so few people trust the “Please Wait” lights on pelican crossings? How often have you pressed the button even though “Please Wait” is lit – or repeatedly pressed just to be sure? And I bet you have a sneaking suspicion the button doesn’t actually do anything anyway. Oddly I don’t mistrust or get impatient with the lollipop man outside my daughter’s school in the same way. He has no buttons either. I also never go before he tells me to, unlike the little red men that I frequently ignore. Somehow a human doesn’t induce the same emotions.

I want a drink. I use one of those totally simplified vending machines. Insert money. Press button with picture of choice. Take item. Forget change.

Surely I can’t go wrong with an escalator...I thought not until late at night in Lille. I came to the top of a broken escalator in the station. I strode down it, only to find 10 paces down it starting to move, taking me back to the top feeling very silly...all the way back to the sign way below my field of vision saying no entry. Not broken, just waiting to be triggered no-button style by someone stepping on to it.

We seem to be at a stage where there is a view that if it only has one button then there can’t be usability problems. In fact one-button machines have problems that need as careful thought as with any other interactive device. Guidelines such as “give feedback”, “don’t make things look like buttons if they aren’t”, “don’t design the interaction so there are completion tasks left”, “use natural affordances” and more all apply but are often ignored.

Even when the usability problems are sorted, machines still seem to naturally make us impatient – as James Gleik discusses in “Faster”. In only 45 seconds, anger rises in people waiting for a lift. Waiting 2-4 seconds for the door to close is too long for many... which is why the door-close button can't be eliminated.

Hopefully the usability and user experience community will prevail over those pampering to our love of gadgets for gadgets sake without thought for the human issues. As they are pushed into the public environment, we can't just avoid them. If the emotional aspects of computer design aren't addressed too our love of technology is going to make our lives increasingly stressful due to trivial things like lift buttons driving our impatience. In the meantime, I want to keep fit anyway. I'll take the stairs, if I can only get through those double doors.

**Further reading:**

J. Gleick (1999) “The Door close button” Chapter 3 of *Faster* pp23-30, Abacus.

**Paul Curzon**

Interaction, Media and Communication Group  
Queen Mary, University of London.