

## PROACTIVE USABILITY

Usability is a desirable characteristic of successful products, but what exactly is meant by the term “usability”? The International Standards Organisation (ISO) defines usability clearly. It is “*The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.*” This definition captures the important idea that many factors - all inherently variable - interact to produce a measurable degree of usability. Usability is a design process and so should be woven throughout a development lifecycle. This proactive approach - sometimes known as “usability engineering” - ensures that the attribute ‘usability’ is “engineered” into the requirements and design of a new system. Unfortunately, usability is more commonly associated only with a reactive testing stage that happens late in the development lifecycle. Usability testing is critical to a system’s success, but making late changes to a product can be difficult and expensive, so late testing is seldom effective in improving a product. A usability problem that might cost \$1 to rectify at the earliest requirements stage, and \$10 at the paper prototype stage, can cost \$1000s to rectify in the late stages of development, so often design changes are not made at all. A truly user-focused design approach that introduces usability early, in an iterative design process, considerably reduces the number of problems found during subsequent usability testing.

## THE STRANGE MATH OF CHOICE

Ever struggled to choose lunch from a seemingly endless list of options? Traditional economic theory holds that the more choices people have, the more they can weigh the pros and cons and therefore

the more satisfied they will be with their selection. But a recent study in the *Journal of Personality and Social Psychology* demonstrates that this is not so. Iyengar and Lepper at Columbia Business School show that providing too many options makes people feel overwhelmed, less likely to make a purchase, and less satisfied with their choice. Setting up their study in a Draegers Supermarket in CA (which by the way offers 250 varieties of mustard and 300 varieties of jam) they laid out stalls with either 6 or 30 flavors of chocolate. 260 people passed by the stalls during the study. While the larger display received more visitors (60%



compared to 40%), more people made a purchase from the small display (30%) than from the large display (3%). Furthermore, people selecting from the extensive choice judged their chocolates less tasty and less satisfying than did those choosing from the limited choice, and they had more regrets about their choices. In short, having too much choice can hamper motivation to buy, and can reduce satisfaction.

## ERGONOMICS: A HOT NEW TREND

A new trend is sweeping through US homes. Consumers are eager to get their hands on anything that is ergonomically designed! And, let’s face it, getting your hands on them is precisely what ergonomically designed

products are for! Ergonomic design makes things easier, more comfortable, and less stressful to use. OXO started it in 1989 with their ergonomic potato peeler with the chunky, rubbery handle, and consumers will pay \$6.99 for it even though they can buy a perfectly good metal one for 79 cents. OXO have achieved this by making a major investment in their ergonomics and usability testing program. Ergonomically designed products are increasing in popularity as the baby-boomer generation ages. Dan Smercina, VP of Marketing for Rubbermaid, says of their line of ergonomically designed paint brushes that retail for 15% more, “The public are extremely willing to pay higher prices for a more comfortable product. We know if we can get the product in their hands they will buy it.”

## YOU’RE NOT SINGING ANYMORE!

If you have ever tried to continue with a phone conversation despite an annoying echo, then spare a thought for Dutch soccer fans that may soon experience the same effect in soccer stadia. To prevent abusive chanting at Dutch soccer matches, researchers in the Netherlands have developed a new sound system that neutralizes chanting by playing back a carefully timed echo through loudspeakers. The echo trips up efforts to synchronize a chant, stopping the unwelcome message without drowning out the overall roar of the crowd. Researchers surrounded volunteers with loudspeakers that simulated the sound of a chanting crowd and asked the volunteers to join in. What volunteers didn’t know was that one speaker was set up to replay the crowd’s chant with a short delay. When the delay was greater than 200 milliseconds the volunteers found it too difficult to chant coherently. Increasing the delay, up to about 1 second, was even more effective.

## NOTABLE QUOTABLES

“Making the simple complicated is commonplace; making the complicated simple, awesomely simple, that’s creativity.”  
– Charles Mingus, American jazz bassist.

## “NOT MANY PEOPLE KNOW THAT!”

◆ Toast really does land butter-side down significantly more times than butter-side up! In a recent study, 25,000 pieces of toast were dropped. They landed butter-side down 68% of times. But there is no mystery and it has nothing to do with butter. Toast that starts out butter-side up - at hand/table level - does not have sufficient time/distance to complete a full rotation before hitting the floor. Put another way... humans are not tall enough for buttered-toast to land the right way up!

◆ The detection threshold for human vision (the point at which light can just be detected) is one candle flame (about 10 quanta) at 30 miles distance on a dark clear night.

◆ Twelve men have walked on the moon.

## BOOKSHELF

**Strangers to Ourselves: Discovering the Adaptive Unconscious.**  
Timothy D. Wilson, 2002.

Wilson reports extensive research to show that we rarely know much about our own minds; and that people, literally, invent mental states to explain behaviours, choices and decisions, in ways that are expected or acceptable. As many product researchers can attest, this phenomenon underlines the risk of basing commercial and design decisions on consumer opinion (what people say) rather than on consumer behaviour (what people do).