



A toy replica of NASA's failed Mars Climate Orbiter is now a collector's item.

RESEARCH AND DEVELOPMENT

No matter, try again

Anthony King enjoys a collection of instructive failures.

An exhibition exhorts us to embrace failure. Each of the 20 objects displayed in *Fail Better* at the Science Gallery, Trinity College Dublin, has been chosen by a luminary to represent an inspiring or arresting story of the role of failure in stimulating creativity.

Inspired partly by the mantra of start-up entrepreneurs — “Fail early, fail fast, fail often” — the show also recalls the words of Trinity College Dublin graduate Samuel Beckett: “Ever tried. Ever failed. No matter. Try again. Fail better.” He saw failure as the ultimate goal of art.

Science, too, is built from mistakes that are, as Jules Verne wrote, “useful to make, because they lead little by little to the truth”. For example, astrophysicist Jocelyn Bell Burnell's pick for the exhibition is the Mars

Fail Better
Science Gallery, Trinity
College Dublin.
Until 27 April 2014.

NASA announced: “people sometimes make errors”. Notoriously, one team had used metric units, the other imperial — a simple mistake that probably led to the orbiter disintegrating in the Martian atmosphere.

Says Bell Burnell's programme note: “Even at the highest level errors happen and can go unnoticed, proving that attention to detail is always paramount.” On show is a toy replica of the orbiter, which was hastily withdrawn by NASA and is now a collector's item. The loss prompted NASA to look anew at its ‘faster, better, cheaper’ approach.

By contrast, to signify how it is

Climate Orbiter, the US\$125-million spacecraft that went missing in September 1999. A week later,

important to fail on a small scale rather than spectacularly, there is a humble fuse — a reflection by economist Tim Harford on how our economic system lacked such a ‘fuse’ to prevent the 2008 financial meltdown.

The most bizarre exhibit is a mock up of a Blonsky device. Granted a patent in 1965 but never built, the machine was designed to spin a woman during childbirth at up to 7g to assist delivery. It features a baby-blue ‘safety net’ to catch the new arrival. The choice of Ig Nobel Prize founder Marc Abrahams, the device won inventors George and Charlotte Blonsky one of the gongs in 1999.

That mistakes can be costly and destructive is rammed home by *The Ice Pick Lobotomy*, an installation by Trinity neuroscientist Shane O'Mara. One of several medical instruments on show, the macabre lobotomy kit from the Wellcome Col-

lection of medical artefacts reminds us of a terrible, telling failure of medical ethics. But it is a shame that the exhibition does not delve more into the issue of hidden failure in research. Too often, the messiness of experimentation is obscured, and the lessons of failure squandered, thanks to the bias towards publishing successful results.

What we do see is the role of serendipity in discovery, and the importance of persistence. A structure sculpted from purple acrylic thread embodies the accidental invention of the colour mauve, when a botched 1856 attempt by chemist William Perkin to make quinine from coal tar ended up founding the synthetic-dye industry. Meanwhile, a cut-away Dyson vacuum cleaner is described as the result of more than 2,000 prototypes by its selector, James Dyson.

Finally, there are three manuscript drafts of Beckett's *Worstward Ho*, the 1983 novella in which he lauded failure. Each uses different iterations of the line quoted here, as Beckett made revisions. He reputedly railed against winning the Nobel Prize in Literature, fearing that the publicity would distract him from his writing. He knew, it seems, that the path to success through a thicket of frustration is often the more instructive journey. ■

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CORRECTION

The Books & Arts Q&A ‘Tinnitus tunesmith’ (*Nature* 505, 159; 2014) omitted the name of neuroscientist Tricia MacKenzie, who likened Daniel Fishkin's instrument to a giant model of the inner ear.