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*Designers from the Cold War era on have been staring in the face of global catastrophe. Rather than building a better future, they've been preparing for a worse one, says **DAVID CROWLEY***

DESIGN AT THE END OF THE WORLD

In May the Museum of Modern Art in New York issued a notice to the press about an exhibit in its Design and the Elastic Mind show (icon 059), an exploration into today's dizzying changes in technology, science and society by contemporary designers. With just a few weeks to go before the end of the exhibition, one of the works had been killed – albeit “humanely” – by curator Paola Antonelli.

The piece – a small leather “coat” formed from cell lines grown on a polymer matrix – was the brainchild of the Tissue Culture and Art Project (TC&A) and produced in the SymbioticA experimental lab at the University of Western Australia. This was to be a victimless garment, a leather coat that did not necessitate the death of an animal. But, set behind glass in the museum, the engineered tissue was growing too fast, losing shape and clogging the incubator. So the curator had the supply of growth-feeding nutrients turned off.

Surprisingly, Oron Catts, author of the piece and director of SymbioticA, was pleased with the turn of events. Interviewed in the New York Times, he said that it added to the piece's message about the ethical dimensions of harvesting “natural” materials from living systems. To kill this exhibit was proof that it was once alive. He also welcomed the horror-film scenario of “life growing out of control” that was conjured up by the mercy killing. In its untimely death, “the piece was able to regain some of its irony that was lost” when, in Catts' words, it was exhibited in an “optimistic design show”.


Catts was perhaps a little unfair when passing this judgement. Of course many of the works in this show of prototypes and innovations could be described as well-meaning contributions to the common good. They included Nicholas Negroponte's low-cost laptop, portable solar-powered lights and water-cleaning systems for the developing world. But the works that commanded the most attention walked a line between a fascination with the potential of technology to transform our world and, at the same time, to destroy it. The Bel-Air organic-air-filtering system – designed by Mathieu Lehanneur and David Edwards to take advantage of the capability of some plants to absorb the invisible poisons emitted by common plastics into the air we breathe – can hardly be described as “optimistic”.

Other designs on display – like Susana Soares' “new organs of perception”, which enable their “hosts” to collect and read the genetic material from other people – point to fantastic and unsettling developments in fields like genetics. Whiskers set into eyebrows and nose plugs that detect chemical signals will, she suggests, one day augment our senses. In our search for a mate, the capacity for “natural” selection will be much improved by biocybernetics. Of course, such devices are not feasible. Or are they? Sometimes the giddy pace of scientific advance is so fast that one can surely be forgiven for losing track.

The premises on which many of the exhibits in Design and the Elastic Mind are based raise many questions for designers.

What is the usefulness of irony as a technique? Can design that offers critical comment on technology or society be practised within the commercial world? And, above all, what kind of future is being imagined for design in the brave new world to come?

Ultimately, these are questions about the role of design. For almost a century, thinking designers have seen themselves as pilots of the future. Their task has been to seize new materials and manufacturing techniques and, by using their creativity, give them useful and sometimes beautiful forms. The cantilever of a Bauhaus chair or the lightweight geodesic structures invented by American architect and visionary Buckminster Fuller were adventurous steps into the future. And designers put themselves on the side of the angels by imagining their buildings and products as bringing benefits to society. The difference today is that the new technologies and materials with which designers work increasingly carry dark, even apocalyptic, associations.

Each day, it seems, a new doomsday threat looms into view: global warming triggering freak weather events around the planet; the rise of superbugs at the time that antibiotics start to fail; the patenting and commercial exploitation of DNA codes; the leech of toxic chemicals into our bodies and the environment; and wars over the rights to oil, metallic ores and even water top this daunting list. Capitalism is enemy number one in these possible futures. It is, as Fredric Jameson memorably wrote, now 

“easier to imagine the end of the planet than the end of capitalism”. His point is not that our nightmare futures are inevitable, but that we lack the political means and intellectual will to mount the radical changes to society and the economy that are needed.

Yet we are not technophobes. After all, we rely on science to inform us about the state of our bodies and our world. Moreover, as so many of the designs in MoMA’s show make clear, **we continue to be**

intoxicated by images of progress, even when they seem to contain the signs of our destruction. I cannot help but think that we have been here before. During the height of the Cold War in the 1960s, the modern world was infatuated with the conjoined twins of utopia and disaster. With

startling developments in electronics, computing and new synthetic materials – many stimulated by Cold War competition in the arms and space races – mankind could imagine that the utopian world of a life without toil was within its grasp. Tomorrow would be a technotopia.

One of the chief design preoccupations of the age – on display at international expos, Disneyland and trade fairs like the Ideal Home Show – was the “house of the future”. Typically, plastic furniture would rise from the floor, and kitchen “cockpits” would direct robot servants: both at the push of a button. Yet, with the Soviet Union and the USA targeting their atomic weapons at each other, the prospect of nuclear war never seemed far away. This was a terrifying alternative future that could also be achieved at the push of a button.

The duality of utopia and disaster was even to be found in single schemes. In 1965, Buckminster Fuller proposed changing the skyline of New York by installing a dome over Manhattan. This massive structure would span the city from the Hudson to the East river. One mile high at its centre, this hemisphere was to be three times taller than the Empire State Building. “The dome’s skins, consisting of wire-reinforced, one-way-vision, shatterproof glass, mist-plated with aluminium, will have the exterior appearance of a mirrored dome,” wrote Fuller. The warm air inside the dome would provide lift, so the structure would not require a foundation: it could be tethered to the ground.

Fuller’s logic was environmental. The dome, he claimed, would conserve wasted energy spent heating the city in the winter and air-conditioning in the summer. The warm air that would gently lift the structure off the ground would also deliver a hospitable habitat and a new sensibility.

Manhattan would become a happy arcadia of outdoor restaurants and street theatre.

Writing in 1965, Fuller also hinted at a darker dividend: “The dome would provide a prime shielding against atomic radiation fall-out, reducing the radiation effects of neighbouring regions’ atomic explosions to below lethal or critical impairment magnitude.” Fuller even imagined that domes of pre-stressed and post-stressed steel and concrete could be made so powerful that they could be covered with earth and become man-made, air-conditioned mountains. In other words, his domes could become nuclear bomb shelters on a gargantuan scale.

The life of Fuller’s Manhattan project did not end there. In 1971 it was adopted by the


Olivetti Corporation in a set of posters by high-profile artists sharing the slogan “Save our Planet!” The environmental movement in North America had mushroomed over the previous decade, campaigning for clean air and water and to save threatened species. By 1971, Fuller’s image seemed to deliver a message about the threat of the volatile, polluted atmosphere of the industrialised city.

By the early 1970s, Cold War anxieties about life in the shadow of the bomb, the dire premonitions of the nascent environmental movement and the economic failure triggered by the oil crisis were all conditions that conspired to make technotopia seem a hollow prospect. **Theodore Roszak,**

one of the loudest critics of consumer society, described America as a “technological wilderness” that had pursued the holy grail of progress at great social, psychological and, of course, environmental cost: “Nothing [is] too big,

too bizarre, too mind-boggling to be dared. Matter, we have learned, is a vibrant jelly of energy; the universe a burst balloon of galactic fragments; thought itself a mere feedback in the cerebral electronics; life a chemical code soon to be deciphered; all seeming law nothing but the large-scale likelihoods of basic chaos. No absolutes. Nothing sacred. Any day now a homunculus in a test tube – cyborgs made to order – interstellar tourism – the doomsday bomb. Why not? What is possible is mandatory ...”

Sounds familiar? Writing 35 years ago, Roszak seems to be describing our current predicament in the cataclysmic tones of our most pessimistic prophets.

If our Cold War past looks like our future, are there some lessons to be learned from the action of architects and designers back then? Diagnosing the end of utopia – the dream of perfection that had motivated architects and designers from the 1920s – Manfredi and Nicoletti identified three contemporary 

attitudes in 1971. The first was to call for more innovation and better technology. If utopia was slipping from our grasp, we simply needed to try harder. The second course was the inverse of the first, a withdrawal to a lost Eden. This attitude aimed, he wrote, “at a sort of primitive state, a return to origins, a naturality now forbidden by the rhythm of life”. In 1971 Nicoletti did not have to look far to find people living out their dreams of noble primitivism: across North America and Western Europe hippies were moving into yurts and teepees like refugees from modernity.

A third approach, according to Nicoletti, was to engage irony. Powerful images – like those produced by Italian radical architecture collective Superstudio at the time – might act as catalysts for thought or action. In a series of stunning photomontage images exhibited internationally, Superstudio promoted the Continuous Monument, a massive linear structure that appeared to span the entire globe. Universal architecture of this kind would obliterate cities, villages and even distance. **It appeared to be an**

egalitarian and utopian world architecture, yet in its ordering effects the Continuous Monument was, of course, troublingly authoritarian. But that was the point: utopias require dictators. Do you want to live in one, asked Superstudio?

Nicoletti’s trio of approaches have their analogues today. The call for innovation, for instance, is expressed loudly by architects and designers who set sustainability as the principal criterion. For the new “ecocity” of Dongtan on China’s coast, masterplanner Ove Arup has set itself the task of designing a complete city that is based on watertight principles of resource efficiency.

Accommodating half a million people by the year 2040, the city will supply its own food and so dramatically cut the resources needed to transport it, and renewable energy sources will provide the greater part of the city’s power. Dongtan will also be fossil fuel-free: drivers on its streets will have to use hydrogen-fuelled or renewable energy-fuelled vehicles from a car pool.

China, of course, has the political means to compel good eco-citizenship. Speaking at the Royal College of Art in the spring, Arup design director Alejandro Gutierrez acknowledged the loss of freedom that Dongtan’s success will entail. But, as he stressed, managing energy consumption in the face of global warming overwrites the needs of democracy. It is not just utopias, it seems, which require dictators.

But what of irony? Well, of course, this is the characteristic shared by many of the Design and the Elastic Mind exhibits, not least the victimless leather that was the subject of a mercy killing in May. Other memorable works included Simon Heijdens’ Lightweeds, creeping virtual plants made from light that cling to the walls inside homes or offices, triggered by stimuli measured outside like sunshine and rainfall. Though captivating in their form, these artificial flora seem to point to some kind of apocalyptic scenario in which either man can no longer venture outside or wilderness itself has been extinguished. Designs like this perhaps meet the call for provocation made a couple of years ago by critic WJT Mitchell: “If we are living in the time of the

plague of fantasies, perhaps the best cure that artists [and critical designers] can offer is to unleash the images, in order to see where they lead us, how they go before us ... a certain tactical irresponsibility with images ... might be just the right sort of homeopathic medicine for what plagues us.”

But irony – the favourite tool of the provocateur – is a limited tool. For a start, it means saying one thing but meaning another. This is a sure recipe for misunderstanding. When Superstudio was accused of designing Fascist architecture by its critics, it was not much use to reply “you’ve missed the point”. Ironic design also works best when it occupies the margins to puncture mainstream values. But increasingly it tends to draw the ↗

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spotlight as another variety of chic. Just think of Timorous Beasties' luxury wallpaper, which represents social deprivation in the style of toile fabrics, or Philippe Starck's gold-plated lamp stands fashioned from AK47s. Starck wrapped his designs in rhetoric about the relative values attached to possessions and lives, but most commentators took the view that his Gun Collection was little more than a stunt.

Being both a commodity and a criticism of commodities is a difficult trick to pull off.

If there are strong historical echoes between the recent past and what looks like our near future, it is important to stress some of the differences too.

One major difference between then and now is the pessimism of our era. Young avant-garde architects and designers in the 1960s were confident that the future would be better and that their work would speed its arrival. Just think of the pop images of the future city as promoted by Archigram.

Today, the prevailing mood in society – if not universally among designers – is that

the future will be worse. Designers in industry increasingly understand their role in terms of stopping the future, at least in the doomsday forms that haunt our nightmares.

In this sense, they now constitute an *arrière-garde*. By no means anti-commercial or anti-capitalist, there is a strong (and laudable) desire among thinking designers to ameliorate the worst effects of their work on the world. Using resources intelligently, specifying renewable or, in some cases, biodegradable materials or improving the life expectancy of products is a way of dampening the effects of the consumerism that, of course, successful design stimulates. (Although, as many of the champions of the "clean-tech revolution" tell us, the market for sustainable technologies is growing exponentially and a "great place to make profits".)

This pessimistic mood is evident in the fascination with nature among designers, even when they adapt its forms to create beautiful objects. **If the technotopias of the 1960s trumpeted man's triumph over nature, we are increasingly being forced today to come to terms with the effects of our indiscriminate pursuit of modernity.** One cannot help feel that the current fascination with biomimicry is a kind of therapeutic response to man-made evils. Celebrated designs derived from the structures, growth patterns and behaviour of living forms – including Ross Lovegrove's much reproduced DNA Stair and the Mercedes-Benz "Bionic car", with an

aerodynamic form derived from the Boxfish – should, of course, be judged on their individual merits. But viewed as a kind of collective phenomenon, they represent a kind of fetishisation of nature at a time when nature seems less natural than ever before.

So many of our present-day anxieties are connected to a sense of the uncontrollability of nature. Yet, of course, what is triggering change in our bodies and in the environment are our very own actions.

Projects exploring the shifting borders of the artificial and natural draw attention to this paradox. The Meat of Tomorrow was a 2006 project conceived by James King at the Royal College of Art that explored the forms and tastes that tissue-engineered meat might have one day. Strangely orderly and brightly coloured cuts are facsimiles of MRI sections rather than the products of the butcher's knife. King's disembodied meat and TC&A's victimless leather project raise significant philosophical issues about man's relations with other beings as well as ontological questions about the nature of life.

The MoMA exhibition where King and TC&A displayed their projects was what philosopher and historian of science Bruno Latour might call an "object-orientated

democracy", a forum where science and its objects are put under public scrutiny. After all, both projects are well-informed about the development of tissue engineering and, no doubt, the interests of commerce in it. Rather than simply "illustrate" new science, such projects put its objects under a critical spotlight. TC&A also seem to advocate design without commerce. They describe their role as "one in which we are providing tangible examples of possible futures, and research the potential affects of these new forms on our cultural perceptions of life. It is not our role to provide people with goods for their daily use". Such works are surely design but just not as it is conventionally understood. †

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