In Transformism, Melanie Jackson and Revital Cohen reflect on our compulsion to alter and shape the materials, objects and living entities around us. They wonder at our ingenuity, and contemplate our relationships with biology and matter as they are radically transformed by human agency, whether the impulse is artistic or scientific.

Today, in our attempts to rework our living and material world to fit our beliefs of how it should be, we have powerful new tools. Molecular biology, nanoscience and engineering are converging, provoking scientists to dream up all kinds of transformed matter: vaccine-producing bananas, fluorescent cats, bacteria that excrete diesel, trees that clean up pollutants, nanorobots that can enter human cells. Science proclaims a new revolutionary age, in which we can make almost anything, if we only understand and imagine it. Yet the urge to create new forms and objects, whether driven by need, desire or simply fantastical dreams of what might be possible, is ages old. To understand where we’re headed, we should have some perspective on where we’ve come from.

Melanie Jackson’s investigations into mutability and novel forms are rooted in her awareness of the visual, sensual, historical, political and scientific aspects of materials and plants, and her interest in the intertwined role of myths and fantasy with aesthetics and technology. She is intrigued by scale, conscious that many new types of matter, such as liquid crystals, microscopic biological entities and smart materials, are rendered
invisible because of scale or concealed within a hermetically sealed interface, yet they impact dramatically on our macroscopic visual and tactile environment and our dreams of magical abundance.

Revital Cohen’s work explores themes relating to nature, technology, and human behaviour. In particular, living creatures that are produced and used as artefacts fascinate her. Her interest in these designed animals – whether pets, farm animals, or living drug factories – is driven by what motivates and influences the breeders and scientists, and what this commodification means for our relationship with these fabricated living beings.

Transformism is the latest manifestation of the Arts Catalyst’s extensive investigations into how arts practice, culture and contemporary science interpenetrate and influence one another. It also reflects the John Hansard Gallery’s long-standing commitment to cross-disciplinary approaches within contemporary art. This is the third collaboration between the two organisations, building on our previous exhibitions together: Astro Black Morphologies (2005) and Dark Places (2009).

We would like to thank all those who have supported Melanie and Revital with their commissions.

We would also like to thank Isobel Harbison, our thought-provoking essayist. We are very grateful to Arts Council England for its continuing support of both organisations and the Wellcome Trust for funding Melanie Jackson’s commission.

Above all, our warm thanks go to both artists, whose vision, dedication and hard work have been inspiring.

The philosopher Bernard Stiegler has asserted that the divorce between the rhythms of cultural and technical evolution is symptomatic of the fact that today technics evolves more quickly than culture\(^1\), but perhaps there is more interplay than we realise. We are pleased to present this provocative exhibition that meditates on the vibrations and circulations of our changing material world and explores our complex relationships with the things we create, in the process softening the boundaries between culture and technology.

Notes
Transformism is the pre-Darwinian doctrine that animal life has evolved from previously existent forms of living matter. And if we understand ‘transformism’ as an ongoing process, then perhaps we can imagine a subsequent metamorphosis, where living organisms coalesce with and return to pre-vital matter. Evidence of the first transformations informed Charles Darwin’s (1809–1882) theories of biological evolution, now widely accepted and influencing scientific developments in genetic modification and biotechnologies. Conceptualising the next transformative phase, whereby human life returns to the inorganic, technic or mechanic, becomes easier as electronic prostheses, google specs and ‘smart’ technology become integral parts of our daily lives. This speculative transformation has inspired much science fiction and provided an extraordinary conceptual paradigm for philosophies of technology, object-orientated ontology and gender politics.

Martin Heidegger (1889–1996) was one such philosopher who speculated on these transitions in his essay, The Question Concerning Technology (1954), where he wrote about how technology threatened to complicate and pervert human relationships with
nature. Technology must be understood as having its own ontology, its own being and force, he contended, rather than simply to service human life and remedy every malady. Heidegger brings to our attention the similarities of two Ancient Greek terms, ‘poesis’ (ποιησις) meaning ‘to make’ and ‘techne’ (τεχνη) meaning ‘the activities and skills of the craftsman [and] the mind and the fine arts’. Initially, both terms described the process of ‘bringing forth’ or extracting nature’s essence. While in poesis this is understood both as a conceptual exercise (the bringing forth or materialisation of an idea into form) and a biological act (bringing forth life within a reproductive cycle), in techne this is quite a specific manual or physical gesture of the craftsman. Heidegger contrasts these early similarities with their twentieth century divergence, where he proposes technology’s claims upon nature become ever more forceful but its broader impact on our being remains unacknowledged. It is dangerous precisely because the effects of its progress go unquestioned and uncontested. His writing has influenced a number of more contemporary theses about how human life and technology actively co-evolve and how the focus of one is sharply moderated through the lens of the other. Innovatively here, in this exhibition, two artists ‘bring forth’ the co-dependence of nature and biotechnology by filtering it through the important comparative frame of ‘poesis’, or art.

Revital Cohen’s projects often test the ethical and conceptual parameters of biotechnologies, while at the same time reflecting on the oft-unnoticed oddities of commodifying living form. She has explored the phenomenon of creating ‘designer species’ in a number of ways. In one previous work, Ready-to-Use Models (2011), Cohen innovated a large play-cage to boost the serotonin levels of rats bred to be clinically depressed, attempting to reverse the depressive tendencies. An earlier project, Life Support (2008), came from her interest in, to quote the artist, ‘industrial “product” animals’, in this case racing breeds and livestock. Here, a retired greyhound was wired to a person whose breathing pattern was regulated by this extraordinary ‘Respiratory Dog’. In another part of the project, a sheep’s genome was modified with the DNA of a human patient so that, during regular nocturnal sessions, its healthier kidney might filter their blood in ‘Dialysis Sheep’. The artist has said of the work, it ‘is proposing using industrial animals (the greyhound and the lamb) as machines. Life support machines in particular since animals are often successfully used as prosthetics or therapies, as well as because it questions the ethics of utility animals, the problematic nature of digital or mechanical “organs” and because it plays with parasitic and symbiotic relationships between species.’

In Cohen’s new project, Kingyo Kingdom (Kingyo meaning goldfish), she addresses the cultural history and personal motivations of Japanese goldfish breeders, both amateur and professional. Their chosen goldfish is the ‘Ranchu’, a popular, flat-headed orange fish deriving from carp and bred in Japan since the

“Cohen’s work probes the ethical and aesthetic parameters of nature’s synthesis with technology by pushing or nudging it slightly further.”
mid-nineteenth century. What motivates these people to breed these particular fish, she asks, and how does this design process become a cultural tradition? What are their design criteria? And, more broadly, what does it mean to make an aesthetic project of a living form?

Cohen’s installation takes several parts, including a documentary video recorded at a Japanese goldfish competition and prize-giving ceremony, as well as an animated projection of goldfish onto a bowl of water. The short documentary follows her journey through the different architectures for breeding, from a retired businessman’s specially designed domestic suite to the vast market places where extensive grids of water tanks are ordered according to fish colour and genus, then sold as object-commodities, packed into bags and boxes and shipped abroad. From here, Cohen skips to the goldfish competition, her lens tracing the long benches bearing white enamel bowls on which fish are traditionally displayed for judges. Between sites, she questions breeders on their individual motivations and hears of one man’s aspirations that his Ranchus’ heads will resemble those of the mythic ‘Shishi’ (or guardian lion), or another’s vision that his fishtails’ will resemble the skirt hem of a kimono. Complexities and contrivances abound.

In accompanying work, an animation of a Ranchu swimming is projected from above down onto a white enamel bowl – the same as those used for competition display. Watching Cohen’s mesmerising, swirling fantasia resembles the typical experience of observing the fish during these competitions, an aerial viewpoint passed down from generation to generation, since competitions began in an era that pre-dated glassware. This particular inherited perspective, now ceremonial rather than pragmatic, privileges their lateral silhouettes and their contours are bio-engineered accordingly. Their plump trunks and flat faces are exaggerated to emphasise their line, yet the emphasis impedes their movement as they swim, encumbered by absent dorsal fins (bred into non-existence) and flat brows emphasised by breeders’ scalpel. They are clearly show-fish, rather than efficient hydrodynamic vertebrates. Cohen’s work probes the ethical and aesthetic parameters of nature’s synthesis with technology by nudging it slightly further. What are the differences between living organism and manufactured commodity? Can we still assume any exclusivity between categories, when so much of what we eat, tend or grow now is remedied by biotechnology, biochemistry or bioengineering? And when we continue to design and modify living elements, how might this re-circuit or reflect upon our own standard, quality and conception of natural life?

In a very different installation, artist Melanie Jackson presents work less concerned with the circuitry and legacy of scientific design than the moment or passing during which one form evolves or is developed into another. In her installation The Urpflanze (Part 2), Jackson returns to Johann Wolfgang von Goethe’s...
(1749–1832) concept of the archetypal or primal plant which he first described in correspondence to his friend Charlotte Von Stein, and shortly before he published *The Metamorphosis of Plants* (1790). According to Goethe, the urpflanze was an organism that contained within it the genetic evidence of all previous plant forms as well as the potential to generate all future ones; it is a body as anticipatory as documentary of evolution’s steady passage. For Jackson, the Urpflanze represents an interesting subject both in and beyond natural science, a model for thinking through transfigurations across social, political and artistic spectrums.

Jackson’s work here comprises a comic book, a video projection, as well as sculpture and an installation of videos screened on monitors. The comic book animates a roving conversation between the artist and British writer Esther Leslie, the subject of which was expansive, starting from Goethe’s originary theory then tracing back to the Greek myth of Proteus as a man with future-telling capability but illusive fluid form, then plunging into the deep aquatic from where Ernest Haeckel’s nineteenth century microscopic drawings of single-cell radiolarians were plumbed, and on to Blossfeldt’s early and odd anthropomorphic photographs of plant life. From there the conversation roamed through the catalysis of ancient crystals to London’s iconic Crystal Palace (1854–1936) and its historical significance for commodity display, from ‘folk-lure’ and rural idylls of vegetal abundance to the omnipotence of genetically modified farm produce, and from the first uses of clay to the development of 3D printers and the magnificent malleability of CGI.

The focus of Jackson’s work is not on these objects or subjects alone, in their entirety or stasis, but on the fluid, liquid or plastic aspects of their forms and the inevitability of their changes. The phenomena presented are often scientific and technological but arranged in sequence, collectively reflecting upon the strange question of what it is to make art, the crystallisation process when an idea takes form, and the material and social conditions within which it is produced.

In her video in particular, Jackson pays attention to the texture of these transformations, the complex appearance of fluids as they freeze, crack and melt. Liquid crystals take some prominence, microscopic footage of petroleum colours rippling across the surface, crunching and dissolving at intervals. In one sequence, the crystals harden into the patina and colour of a palm leaf suggesting them as contemporary “The Urpflanze represents an interesting subject both in and beyond natural science, a mode or model for thinking through transfigurations across social, political and artistic spectrums.”
counterparts to the originary Urpflanze. Essentially, liquid crystals are collections of partially ordered molecules that combine the qualities of conventional liquid and solid crystals, the appearance and order of which changes according to their surrounding substrates of either heat and water. Both Jackson and Leslie have studied them at length and in laboratories, during which time this footage was recorded. These crystals are made of both organic and inorganic molecules, the union of nature and science advanced by modern technology. Liquid crystals are everywhere now in display devices from computer monitors and laptop screens, TVs, clocks, visors, and navigation systems. Theirs is the membrane steering one body’s vantage towards another, increasingly seen through the monitor or screen. In Leslie’s words,

The liquid crystal has seeped everywhere and it has hardened into forms that have made themselves indispensable for modern life. This form can form itself into any form, can carry any message. It can be anything – though it is often also the same thing... Cell membranes are liquid-crystalline in nature. DNA is liquid crystal. We are liquid crystals.

Jackson’s is an expansive, ambitious and intuitive work not easily reducible to cursory description. Her attention to the illusory surface textures of protean forms is not solely attentive to liquid crystals but extends metaphorically to other social and scientific developments (a fictional Jack-and-the-Beanstalk becomes a modern genetic scientist, or crystals self-organise into a palace whose display function changes consumer society forever). Perhaps most interestingly, her work carries within it a reflection on the new nature and task of the contemporary artist just as Cohen’s work reconsiders the place of the product designer in relation to the modern biotechnologist.

Jackson’s real inquiry seems to be about the modified face of representative sculpture in the digital age, from Greek mythology’s morphology to natural biology, and from the produce of the clay factory floor to the process of 3D printing. Significantly, her sculptural inquiry is brought forward in video in conjunction with three-dimensional form embodying both kinds of contemporary physical encounter, now as often on screen as in the flesh.

Here, Leslie’s proposition of human coalescence with the molecular structure of the screen’s liquid crystal is put into practice; high definition plasma screens represent our features with such crystal clarity it would seem entirely real, its flat frame almost imperceptible. Cohen’s work also plays on technology’s directives, suggesting that historically how we see or judge might depend on what aspect we’re shown. Regarding her work, the viewer’s attention is divided between
the wall-mounted screen and bowl from above. We assume a very particular view of the Ranchu dictated by outdated technology. In both works, technology’s ontology might be tangibly felt.

And while neither works seem to be actively condemning the dangers of biotechnology, neither are blithely extolling its virtues. Both works, in very different ways, provide alternative perspectives on the length and breadth of its implementation as well as its vast capacity for future change. Cohen and Jackson are not alone in their endeavours. Dramatic changes in science have always yielded new material for art (both philosophical and technical) and now is no different. A significant number of contemporary artists – traditionally society’s visual innovators – are now working across a range of media from sculpture and installation to video and digital imaging to visualise and contemplate the impact of new technologies on daily life. And while technology’s innovations and remedies are still crucial, it is perhaps through art that we can cast our gaze sideward and best reflect on how its modifications are actually felt. Here in this exhibition, regarding Cohen’s work, we stare down on ‘designer’ bodies and perhaps ask ourselves not only how, but why. In Jackson’s, we witness the ebbs and flows of modification through the same crystal bodies that in turn, onscreen, modify us. Here, poiesis and techne reunite. Perspectives might well change.

Isobel Harbison is a London-based critic and curator, writing for magazines including frieze, Kaleidoscope, Modern Painters and Tate Etc, as well as regularly contributing to artists’ catalogues and monographs. She is curating a forthcoming exhibition with Ed Atkins at Temple Bar Gallery Dublin. Harbison is an AHRC doctoral candidate in the Art Department, Goldsmiths, London.
Melanie Jackson's work in Transformism forms the second part of her ongoing investigation into mutability and transformation that takes its lead from Goethe's concept of an imaginary primal plant, the Urpflanze, that contained coiled up within it the potential to unfurl all possible future forms. Contemporary science likewise imagines the potential to grow or print any form we can imagine, by recasting physical, chemical and biological function as a substrate that can be programmed into being.

Jackson's work begins in the botanical garden and looks to the laboratory, from clay pits to the factory floor, from analogue to digital clay, from its own animated pixels to the interior of the screen in a series of moving image works and ceramic sculptures. She has collaborated with Esther Leslie on a text that has informed the work and a new publication, The Ur-phenomenon, distributed as part of the exhibition.
Melanie Jackson inhabits different tropes of art making to interrogate possibilities of representation against the engaged practices of the world. She is interested in ways in which thought and affect is conducted through the material, and much of her work has explored this against the context of work, production and the flow of international capital. She is currently investigating the relationships between nature and technology through a series of experiments with fauna and flora, and the technologies available to her. Melanie is a lecturer at the Slade School of Fine Art. Her solo exhibitions include The Urpflanze (Part 1), The Drawing Room, London (2010), Road Angel, Arnolfini, Bristol (2007), Made In China, Matt’s Gallery, London (2005). She won the Jerwood Drawing Prize in 2007. www.melaniejackson.net
Melanie Jackson
The Urpflanze (Part 2) 2013 (Stills)
In Kingyo Kingdom, Revital Cohen explores the genus of fish that have been designed for aesthetic purposes, questioning the definitions used to indicate living creatures. Does one denominate a manipulated organism as an object, product, animal or pet? What consequences does this entail for our feelings and behaviours?

Cohen’s interest in the cultural perceptions and aesthetics of animal-as-product took her to Japan where exotic goldfish have been developed over centuries of meticulous cultivation; breeding out dorsal fins and sculpting kimono-like Ranchu fish tails. Kingyo Kingdom explores the unique culture of breeders, collectors and connoisseurs with footage from the Japanese national goldfish competition, questioning the design and commodification of this species.

Revital Cohen is an artist and designer who develops critical objects and provocative scenarios exploring the juxtaposition of the natural with the artificial. Her work spans across various mediums and includes collaborations with scientists, bioethicists, animal breeders and physicians. Since establishing her studio in 2008, she has been exhibiting and lecturing internationally within varied contexts and locations – from scientific and academic conferences to art galleries and design fairs. She is the current winner of the Science Museum’s Emerging Artist Commission. www.cohenvanbalen.com
Revital Cohen
Kingyo Kingdom (Video Stills), 2013
⌂ Goldfish Market
▼ Amateur Ranchu Competition, Nagoya
Revital Cohen
Kingyo Kingdom (Video Stills), 2013

▲ Mr Ito’s House, Yokohama
▲ (top) Mr Ito’s roof top Ranchu pools
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You can watch these recorded events online:
www.artscatalyst.org