Frankenstein Reanimated:
Creation & Technology in the 21ˢᵗ Century

Edited by Marc Garrett & Yiannis Colakides

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Dedicated to David Graeber
1961–2020

Cover image: Carla Gannis, *Garden of Emoji Delights* [detail], 2014, digital print.

Images on pages 292 and 295: Details from poster and still of *Frankenstein* film (1931). Public domain.

Image on page 296: Theodor von Holst, from *Frankenstein or the Modern Prometheus* (Revised Edition, 1831). Public domain.

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Preface: The Perfect Storm

Yiannis Colakides

This book presents artworks, interviews, and texts by a diverse range of artists who participated in, or their work has a relation to the exhibitions: "Monsters of the Machine" at LABoral Centro de Arte y Creación Industrial, in Gijón, Spain, on 18 November 2016 to 21 May 2017 and "Children of Prometheus", held at Furtherfield on 1 July to 20 August 2017, London, UK, and NeMe Arts Centre in Limassol, Cyprus on 11 October to 20 December 2019. Collectively they reflect a small, but valuable part of the spectrum of artists' responses to present day technologies. We hope that the publication will be of use to readers interested in innovative critical practices that either expose the problems inherent in our technologies or offer viable alternatives for a future. The artists included may sometimes outrage the establishment, but they also attempt to leave society in a better state than they found it.

To briefly reflect on the *temporal context* that this book responds to, let me sketch some circumstances and conditions that this modest, if nettled preface emerges from. The writing of it began on the day the Conservative Party won the British General Election in May 2019, in a landslide majority, guaranteeing Brexit[1] and potentially signalling the beginning of the end of the European Union; the week Apple announced a new $53,000 'personal' computer;[2] the month Maurizio Cattelan's artwork *Comedian*,

1. Elliot Hannon. "The Conservatives Just Won a Landslide in the UK Election. Should Democrats Be Worried?" *Slate*. December 13, 2019. www.slate.com/news-and-politics/2019/12/boris-johnson-tory-conservatives-landslide-u-k-election-brexit-corbyn-democrats-worried

2. Gene Marks. "Apple Introduces A $53,000 Mac Pro... And Other Small Business Tech News." *Forbes*. December 15, 2019. www.forbes.com/sites/quickerbettertech/2019/12/15/apple-introduces-a-53000-mac-pro-and-other-small-business-tech-news

comprised of a banana duct-taped to a wall,[3] was exhibited and sold for $120,000; and the year when fires, many of them unreported in the western media, scorched large parts of sub-Saharan Africa, Russia, South East Asia, Central America, Australia, and the Amazon rainforest.[4]

Since NeMe's founding in 2004, we have always developed our projects with a sense of urgency. We favour projects that focus on societal issues and ignore trends in the so-called 'museum mainstreams' and more commercial art circuits. Our approach and interests might appear a little strange, or perhaps too new, for the art scene of an insular country like Cyprus, our locality. However, we have always believed that art is not just about artists' ideas within a particular place, but how art can relate to, and be part of, ever more globalised and mediated societies.

We operate in a time of a widening knowledge-gap in the use and understanding of technologies, stretching between hackers, who can "calculate their interests not as owners, but as producers" of technology; the "vectorialist class," whose working asset is control of information flows;[6] and the majority, who are all too often *taken for a ride* by their technologies, either by ignoring, or insisting on remaining oblivious to the controversies plaguing it. We see this as a sociological problem, where artists can play a pivotal role in exposing problems, and speculate on solutions through

their research and artworks. As such, much of the art production that interests us, is unhinged from the usually accepted hegemonic canon. Accordingly, we promote the functional purpose of art as a cognitive discipline which uses communication in order to reflect, to comment on, critique, and build upon our society. NeMe has a history of presenting contemporary curators, theorists, and artists who have something to say, not only *about* us, but also *to* us. Often simultaneously articulating what they are *for*, and what they are *against*. The paradigm we strive for enhances the role of art and artists, from mere producers, to critically engaged active citizens, who bypass or surpass the prescribed, imposed narratives of their discipline.

Following a successful collaboration with Furtherfield for *State Machines*,[7] NeMe invited Furtherfield's co-director Marc Garrett to curate a project for the NeMe Arts Centre in Limassol. His proposal, "Children of Prometheus", proved to be a multidimensional project, which drew its inspiration not only from the Greek myth of Prometheus, but also from Mary Shelley's *Frankenstein*, reimagined in the context of contemporary discourse intersecting feminism and the social implications of technology and automation. As Marc Garrett, analyses in his introductory text, the agency and traction of the tragic issues introduced by both stories remain germane, in our present age of AI, surveillance, and relentless technological 'progress.' And so we are excited that the project has evolved further, to become this publication, allowing us to dig deeper into the conversations that started and questions asked during its development.

A central question at the heart of the book is: what is the price we pay as technologies of control are increasingly becoming legally embedded in our exchanges, hijacking and hybridising our online

3. Sarah Cascone. "How the Unhinged Reaction to Maurizio Cattelan's Banana Revealed the Thin Line Between the Art World and Total Anarchy." *Artnet News*. December 9, 2019. https://news.artnet.com/market/art-basel-maurizio-cattelan-banana-memes-1726233

4. Michael Carlowicz, ed. "Fire." *Earth Observatory*. https://earthobservatory.nasa.gov/global-maps/MOD14A1_M_FIRE

5. McKenzie Wark. "A Hacker Manifesto [Version 4]." *NeMe*. January 1, 2006. www.neme.org/texts/hacker-manifesto

6. McKenzie Wark. "The Vectorialist Class." *e-flux Journal*. August 29, 2015. http://supercommunity.e-flux.com/texts/the-vectorialist-class. Wark defines the Vectorialist class as "one that no longer relied on either land or industry as its source of wealth. Its working asset was information itself. The separation of industry from land produced the abstract terrain of second nature. The separation of information from industry produced a yet more abstract terrain of third nature."

7. *State Machines* (2017–19) was a Creative Europe funded programme which investigated the new relationships between states, citizens, and the stateless made possible by emerging technologies. Focussing on how such technologies impact identity and citizenship, digital labour and finance, the project united five experienced partners Aksioma (SI), Drugo More (HR), Furtherfield (UK), Institute of Network Cultures (NL), and NeMe (CY) together with a range of artists, curators, theorists, and audiences. Documentation of the project can be found on www.statemachines.eu.

presence for monetary or political profit? We live in a time when money is gradually being dematerialised, cash left behind in favour of credit/debit cards, apps, biometric, and facial recognition technologies, and our communications are increasingly spied upon, rendering privacy a luxury, only affordable to those who have, or can buy enough technological knowledge. Within such a milieu, Margaret Thatcher's comment that "there is no such thing as society"[8] is unfortunately becoming true, as governments become ineffective or, more often than not, biased in favour of capital, relinquishing the rights from those who do not fit in their economic policies or their vision of neoliberal, mono-cultural, privatised, commodified, dystopias. As a consequence technologies, initially developed to connect us have become weaponised and are used to divide and commodify us. If these patterns of exploitation and control continue, it is evident that humanity will no longer have a future. This will not only be because of the catastrophic effects predicted by climate scientists, but also because it is increasingly apparent that we are living in Orwellian times, where technology becomes a catalyst of a decent into hell, rather than a tool of salvation.[9] As Douglas Rushkoff has written: "what is happening just outside our window is devalued. As we come to depend on the net for our sense of connection to each other and the world, we end up fetishising the tools through which all this happens."[10]

Time and time again, our efforts have struggled to make positive changes to our world, whilst those who have assumed control, whether through the ballot or usurpation, thrive on social inequality instigated by a combination of economic, cultural, social and symbolic capital, habitus, and taste.[11] Furthermore, these inequalities are becoming wider, often with the ostensible support of the public. National elections in and beyond the EU are unfortunately demonstrating the support of extreme right-wing,

xenophobic, authoritarian ideologies, such as those of Trump, Modi, Orbán, Bolsonaro, Duterte, Erdoğan, etc. are becoming more inculcated into the mainstream, whilst positive imaginings for a more egalitarian, open society are crushed as the technologies we use daily are militarised for socio-political ends. George Orwell predicted, four years after the end of World War II, not only the technologies we have today, but also the problems which will arise from them when he wrote: "If you want a picture of the future, imagine a boot stamping on a human face—forever."[12]

As our ubiquitous technologies are systemically embedded into our lives, and as the internet is increasingly weaponised by behemoth corporations,[13] academia,[14] and governments,[15] it appears that counter voices have been essentially left to community activists, independent media sources, open source projects, Non Governmental Organisations, and artists. It seems counterintuitive considering we live in the era of the internet, but the platforms where people can have their voices heard are narrowing, not least because of algorithmic biases which entrench the dystopian systems of control in our daily lives and behaviours.

The "Children of Prometheus" exhibition, seminar, and this reader, examines not only what is wrong with our technologies, but also stands defiantly against the current global tech corporations and the political mainstream which supports them. Marc Garrett's curation succeeds in introducing digital narratives which demonstrate what can be achieved when art and technologies are created ethically to serve society rather than business interests.

8. Margaret Thatcher talking to *Women's Own* magazine, October 3, 1987.

9. "How China Tracks Everyone." YouTube video, 12:55. Posted by "VICEonHBO," December 23, 2019. https://youtu.be/CL03e1Pak-Y

10. Douglas Rushkoff. *Program or be Programmed*. OR Books, 2010. p.42.

11. Pierre Bourdieu. *The Field of Cultural Production*. Cambridge: Polity Press, 1999.

12. George Orwell. *1984*. Secker & Warburg, 1949.

13. Kevin Chan. "Apple CEO backs privacy laws, warns data being 'weaponized'." *Associated Press*. October 24, 2018.

14. Rodrigo Ochigame. "The Invention of 'ethical AI': How Big Tech Manipulates Academia to Avoid Regulation." *The Intercept*. December 20, 2019. https://theintercept.com/2019/12/20/mit-ethical-ai-artificial-intelligence

15. Morgan Meaker. "Authoritarian Nations Are Turning the Internet Into a Weapon." *OneZero*. December 10, 2019. https://onezero.medium.com/authoritarian-nations-are-turning-the-internet-into-a-weapon-10119d4e9992

Introduction:
Frankenstein in the 21ˢᵗ Century

Marc Garrett

"At first, I started back, unable to believe that it was indeed I who was reflected in the mirror: and when I became fully convinced that I was in reality the monster that I am, I was filled with the bitterest sensations of despondency and mortification."[1]

Mary Shelley wrote her classic Gothic horror *Frankenstein; or, The Modern Prometheus*, in 1816 and published it anonymously in London in 1818. This publication marks its 200th anniversary, examining Shelley's renewed relevance in the twenty-first century through the unique prism of contemporary art practice. It draws upon three exhibitions between 2016 and 2019 at LABoral Centro de Arte y Creación Industrial, Gijón, Spain; Furtherfield Gallery, London, UK; and NeMe Arts Centre, Limassol, Cyprus. As arts spaces committed to engaging with relationships between society, politics, and technology, Shelley's work offered fertile ground for artworks and conversations to grow out from.

Shelley's *Frankenstein* offers a distinctive lens through which to look at practices within the arts today and how they shape and are shaped by society's relationship with science and technology. The artworks and responses to the novel compiled in this book show us how many imaginative ideas and social contexts are shared between the arts and sciences. For example, artists and scientists often work with the same tools, frameworks, and archetypes of enquiry, observation, and experimentation. Within these

1. Mary Wollstonecraft Shelley. "Frankenstein; or, The Modern Prometheus" in *Frankenstein; or, The Modern Prometheus: Annotated for scientists, engineers, and creators of all kinds,* eds. Guston, D. H., Finn, E., and Robert, J. S. London, MIT Press, 2017. p.93.

crossovers, the boundaries of imaginative fantasy and objective reality fuse or disintegrate.

The interviews and artworks in this book converse and resonate particularly with Shelley's warning that scientific and technological inventions can have unintended and dramatic consequences for the world. Furthermore, the book brings *Frankenstein's* themes of scientific creation, dangerous knowledge, and collective justice into dialogue with related present-day issues and contemporary artist practices concerned with AI, misinformation, and social media. Right now, the classic techno-utopian dream of computers liberating society and providing tools to underpin global democratisation seems distant, a nightmare, or even some-what sterile. The mass surveillance of internet users by the NSA, the military, and other state agencies, linked to Edward Snowden's revelations, and the continuing spread of 'surveillance capitalism,' have become all too familiar, intrusive formulations of technology affecting individuals' lives globally.

Dr Frankenstein's figure is a remarkably prescient person-ification of the above themes and a great touchstone for our times. He simultaneously plays the role of Promethean scientist, creative genius, and narcissist, tangled up in individualistic desires and exploiting others in an irresponsible and abusive drive to control nature. However, who is the real monster in the story? Dr Frankenstein or the poor wretched mutant he brought to life? Similarly, we may ask, are we Dr Frankenstein, or the suffering mutant, or both? More broadly, *Frankenstein's* relevance to contemporary life demonstrates how science, once contained within specialist discourse and spaces such as the laboratory, has now become a part of everyday life: the Anthropocene, climate change, surveillance, posthumanism, transhumanism, hacking, biohacking, post-colonialism, neoliberalism, biopolitics, accelerationism, and technoscientific transformation: all terms for a world where Frankenstein's monster has become a tangible reality.

The interconnected impacts of climate change and new technologies, from increasingly volatile climatic phenomena to the rise of automation, have profoundly displaced and decentered how we understand humans and humanity's agency and cor-porality. For example, we might ask: do we inhabit our bodies any-more, or do we share our bodily materials for others to measure,

reshape, construct, trace, data-scrape and manage remotely? Or, as Donna Haraway puts it: "We no longer inhabit a body in any meaningful sense of the term but rather occupy a multiplicity of bodies—imaginary, sexualised, disciplined, gendered, labouring technologically augmented bodies."[2] The meaning of what the body is has been steadily going through evolutionary changes in response to different socio-technical demands and situations. Consider how mobile phones are now a fluid extension of our arms as if an extra limb, or an extra lobe of our brains, fusing our conscious into the networked society.

The word *transitioning* is relatively common in everyday language. It can be described as moving away from one's assigned sex by discovering that biological sex does not reflect one's true gender. But we may also use it in a broader sense to acknowledge how communities are transitioning. In our present society, tensions are growing between hyper-capitalist systems at odds with the ethics and emerging conditions around wealth, and health. As a response to the recent outbreak of the Covid-19 coronavirus, capitalism has lost credibility; neoliberal governments collectively failed to prevent its spreading, leaving the communities vulnerable, and inadequately investing into the already deteriorating care infrastructure. Since the UK Conservative and Liberal Democrats coalition government action in 2010 to roll back state funding in the name of austerity, we have witnessed regressive cuts in spending by local governments, cuts to adult social care, and failure of health care spending to rise in accord with historical patterns, and cuts in public health funding. Covid-19 has further revealed and amplified these inequalities in health, as the clear socioeconomic and ethnic inequalities led to an increased risk of mortality from the disease. Just as Frankenstein's monster is constructed, so too is our society. Still, as the artists in this book demonstrate, the world and our monsters can be deconstructed and remade differently, and less monstrously.

This book reveals how the past continues to live with us today, despite the radical political and technological shifts we have experienced in our lifetimes. Our world is deeply entangled with

2. Cited in Arthur Kroker. *Body Drift: Butler, Hayles, Haraway.* University of Minnesota Press, 2012. p.93.

the ideas and consequences explored in Shelley's classic work, and its themes will inevitably continue to haunt us. *Frankenstein Reanimated* reminds us how past lives, fears, and troubles inform our present, resonating through the contributions by the artists, activists, technologists and academics, who collectively reanimate Shelley's questions in *Frankenstein* now, in the twenty-first century.

The next section discusses some of the technological resonances, contexts, social issues, and historical origins of the *Frankenstein* story for this project. It peels away at the background influences, pieces of knowledge, concepts, and stories, which have made this book possible. In the concluding section, I introduce some of the contributions to this book and discuss the varied approaches and ideas examined by the artists in the three exhibitions and the writers' essays and interviews.

Frankenstein Reanimated

"Nature builds no machines, no locomotives, railways, electric telegraphs, self-acting mules etc. [...] They are organs of the human brain, created by human hand; the power of knowledge, objectified."[3]

Technology tends to dominate media art exhibitions. To connect beyond one field of art practice, the series of shows that included "Monsters of the Machine" at LABoral, and "Children of Prometheus" at Furtherfield and NeMe, needed to be less singular in their approach. The technology had to be part of an assemblage, part of a larger cultural context and continuum, less reliant on itself and demonstrate dedication towards an intuitive and generous complexity. The use of technology did not represent, as is too often the case, simply how fortunate the artists were for having the best technology at hand. Technological cultures are at the forefront of spectacular consumerisms. If we reconnect with

Yanawaka Artists, video installation. *Monsters of the Machine* exhibition, at LaBoral, Spain. (Photo by Marcos Morilla. Courtesy of LABoral.)

the urgent questions of the day, we need a focus on technology beyond addiction to the new.

Mark Fisher wrote, that capitalism "is what is left when beliefs have collapsed at the level of ritual or symbolic elaboration, and all that is left is the consumer-spectator, trudging through the ruins and the relics."[4] Likewise, Jodi Dean has pointed out that technologies "are invested with hopes and dreams, with aspirations to something better," but she also argues that "technology fetishism reduces complexities of politics—of organisation, struggle, duration, decisiveness, [...] representation, and thus, leads to a reliance for technological solutionism, which may not be an appropriate response to the condition(s) in question."[5]

Numerous techno-visions are proclaiming how technology will positively change our lives and futures for the better. In *You Are Not A Gadget: A Manifesto*, Jaron Lanier describes Ray Kurzweil's excitement for the concept of the *Singularity*, which Lanier regards as apocalyptic, saying that the "coming Singularity is a popular belief in the society of technologists. Singularity

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3. Karl Marx. *Grundrisse: Foundations of the Critique of Political Economy*. Penguin Classics; New Ed edition (29 April 1993). Martin Nicolaus (Translator). p.706.

4. Mark Fisher. *Capitalist Realism: Is There No Alternative?* Zero Books, 2009. p.4.

5. Jodi Dean. *Democracy and Other Neoliberal Fantasies: Communicative Capitalism and Left Politics*. Duke University Press, 2009. p.38.

books are common in a computer science department as Rapture images are in an evangelical bookstore."[6]

As capitalism continues to grind on alongside and to steer the development of much technology, accelerating and co-evolving at an exponential rate, Kurzweil argues that "progress would eventually become virtually instantaneous—a singularity."[7] Kurzweil's ideas for the Singularity, imagining a point in the future when technological evolution becomes ungovernable and leads to a new artificial super-intelligence, have fitted hyper capital frameworks all too well. In 2008, Kurzweil and Peter Diamandis co-founded Singularity University, a company that offers executive education programmes. Kurzweil's and Diamandis' proposition is that the future will naturally solve humanity's problems via technological solutions rather than solutions inspired by nature or egalitarian human society. In *To Save Everything, Click Here*, Evgeny Morozov writes that Diamandis 'promises us a world of abundance that will essentially require no sacrifice from anyone—and since no one's interests will be hurt, politics itself will be unnecessary.'[8]

The exhibitions "Monsters of the Machine" and "Children of Prometheus" critique the ideas of Kurzweil and Diamandis through the deployment of Mary Shelley's Dr Frankenstein as a cautionary spectre, to simultaneously challenge and draw attention to the overconfident, patriarchal domination of corporations and technological industries that exists today. The project critiques our relationship with technology by using grounded interpretations of Shelley's *Frankenstein* and related themes, inviting the visitor—as we now invite the reader also—to reconsider to reconsider her warning that scientific imagining and resultant technologies have unintended and dramatic consequences. Finally, the exhibitions invite visitors to ask the same about the arts and the human imagination, and consider

how technology operates today as a monster in, and haunts, our imaginary and artistic mechanics.

Key Ideas Behind the Exhibitions

"It matters what stories we tell to tell other stories with; it matters what concepts we think to think other concepts with."[9]

"Monsters have always defined the limits of community in Western imaginations. The Centaurs and Amazons of ancient Greece established the limits of the centred polis of the Greek male human by their disruption of marriage and boundary pollutions of the warrior with animality and woman. Unseparated twins and hermaphrodites were the confused human material in early modern France who grounded discourse on the natural and supernatural, medical and legal, portents and diseases— all crucial to establishing modern identity. The evolutionary and behavioural sciences of monkeys and apes have marked the multiple boundaries of late twentieth century industrial identities. Cyborg monsters in feminist science fiction define quite different political possibilities and limits from those proposed by the mundane fiction of Man and Woman."[10]

Donna Haraway's work, which has done so much to add complexity to our understanding of relationships between nature and culture, human and machine, and articulate the relevance of *Frankenstein* for today, is a key catalyst for the work presented in this book. Haraway and Shelley's writings operate like doorways and keys to explore numerous other techno-visions and narratives, informing us how technology changes our lives, the future, and the planet. The boundaries between imaginative fantasy and objective reality appear to be breaking down. For instance, reports

6. Jaron Lanier. *You Are Not A Gadget: A Manifesto*. Penguin. 2011. p.25.

7. Greg Satell. "3 Reasons To Believe The Singularity Is Near." *Forbes*, June 3, 2016. https://www.forbes.com/sites/gregsatell/2016/06/03/3-reasons-to-believe-the-singularity-is-near/#75d191df7b39

8. Evgeny Morozov. *To Save Everything, Click Here: Technology, Solutionism, and the Urge to Fix Problems that Don't Exist*. Penguin (2014). p.131.

9. Donna J. Haraway. "Sowing Worlds: A Seed Bag for Terraforming with Earth Others," in *Staying With Trouble: Making Kin in the Chthulucene*. Duke University Press, 2016. p.117.

10. Donna J. Haraway. *Simians. Cyborgs, and Women: The Reinvention of Nature*. Free Association Books, 1991. p.180.

of jellyfish invasions between 2005 and 2013 around nuclear reactors in Japan, Israel, Sweden, and Scotland, read like science fiction.[11] So, it seems that the natural world is writing its science fiction into a new reality, with vivid images and outlandish outcomes. Some say jellyfish will be the only species left for fishing in European waters if trends in overfishing are allowed to continue. An article in the Telegraph in 2008 reported: "scientists have said that unless the system is completely overhauled, fish stocks will continue to deplete to the point of extinction by 2048, leaving consumers little option but to eat jellyfish or the small bony species left behind at the bottom of the ocean."[12]

Like the jellyfish, another parallel, more-than-human world is evolving, defining its existence. As humans continue to fight out their struggles, other species continue to adapt, following their evolutionary groupings and complexities. These species can do great harm while simultaneously sustaining whole ecosystems, sometimes associated with humans and sometimes not.[12] However, we are the only species that has built tools to bring about mass destruction. Since the Chernobyl disaster in 1986, trust in the idea of a state safely handling dangerous technology has diminished. More recently, we can cite Japan's experience of technological disaster with the Fukushima nuclear disaster. In his 2014 movie *Godzilla*, director Gareth Edwards explored themes of risk and radiation by starting it off with a ten-minute documentary sequence featuring nuclear bomb tests in Bikini Atoll and voluminous apocalyptic mushroom clouds with a full-blown nuclear power meltdown.[14]

As one Medium post describes:

Exhibition view at LABoral, Spain.
(Photo by Marcos Morilla. Courtesy of LABoral.)

"There were two non-negotiables from director Gareth Edwards when Legendary Pictures took the helm of the 2014 Godzilla adaptation: 'The storyline would involve radiation, and Godzilla would attack Japan.' That makes sense given the bread-and-butter of the franchise's past, but there is more relevancy here than initially meets the eye. When the film franchise was first launched, Japan was just nine years removed from the 1945 bombings of Hiroshima and Nagasaki—clear sources of inspiration for the film's radioactive and destructive allegory. Film experts have looked back at these origins intensely since the film debuted, and almost all converge on the same parallel."[15]

The apocalyptic stories in science fiction and horror that have gripped our imaginations for years are now mirrored in the news of today. The concerns mentioned above about jellyfish being the only creature that would survive following the extinction of all other marine species by 2048 is not science fiction. Still, neither is it science fact. It is a prediction based on data analysed by scientists working on "the 1,000-year history of 12 coastal regions worldwide, including San Francisco and Chesapeake bays in the US, and the Adriatic. Baltic, and North seas in Europe."[16]

11. "Jelly fission? Jellyfish invasion leads to Swedish nuclear reactor shutdown." *Russia Today*, October 2, 2013. https://on.rt.com/ixou5d

12. Louise Gray. "Jellyfish on the menu as edible fish stocks become extinct." *Telegraph,* December 15, 2008.

13. Donna J. Haraway. *Sowing Worlds: A Seed Bag for Terraforming with Earth Others. Staying With Trouble: Making Kin in the Chthulucene.* Duke University Press, 2016. p.125.

14. Anthony Kaufman. "Godzilla." *Science and Film.* May 22, 2014. http://scienceandfilm.org/articles/2472/godzilla

15. Naturalish. "Godzilla is a God, Not a Lizard. That's Important." *Medium.* 2019. https://medium.com/@Naturalish/godzilla-is-a-god-not-a-lizard-thats-important-3146fde5edbd31.

There are no Godzillas or Frankenstein's monsters out there, but more modest tales of jellyfish represent humanity's same pitfalls, careless mistakes, and cynical uses of technology. Indeed, terrifying environmental stories seem to be getting more real, closer to both our new everyday realities and our fictions of old.

Returning to our monster and its influence on the exhibitions, many readers have viewed Shelley's *Frankenstein* as having triggered the emergence of deep-seated fears within the cultural psyche, expressing a lack of control over how technology is mutating ourselves and society. The roots of Shelley's work lie in Ovid's poem, *Metamorphosis*, written in 8AD, and the Promethean myth, as told in *Prometheus Bound* by Aeschylus composed sometime between 479BC and 424BC. Publius Ovidius Naso, known as Ovid in the English-speaking world, was a Roman poet who based many of his tales and poetry on Greek mythology. At the same time, Aeschylus is considered to be the father of Greek tragedy. Out of the nearly ninety plays Aeschylus wrote, only a few still exist or are known to have been his work, namely: *The Persians*, *Seven Against Thebes*, a trilogy consisting of *Agamemnon*, *The Suppliants and Oresteia*, *Choephoroi* and *The Eumenides*. A seventh is *Prometheus Bound*, being the only full play to survive out of a trilogy called the *Prometheia*. The other two, *Prometheus Unbound* and *Prometheus the Fire-Bringer*, survive only as fragments. Mary Shelley combined elements drawn from *Metamorphosis* and *Prometheus Bound* to build her contemporary vision for *Frankenstein*. Doctor Frankenstein's mission in Shelley's novel was to create a new life. Appropriating symbolism from Christianity, Shelley identified the monster as Adam and Frankenstein as God, the creator of its life. The monster, just like the biblical Adam, enters the world innocent, born of a vision of beauty and perfection, but once alive, is perceived by the creator as something completely different.

Mary Shelley's husband, Percy Bysshe Shelley, was also influenced by Aeschylus' *Prometheus Bound*. However, even though the tragedy has often been attributed to the ancient Greek

16. Daniel DeNoon. "Salt-Water Fish Extinction Seen By 2048." *CBS News* November 3, 2006. https://www.cbsnews.com/news/salt-water-fish-extinction-seen-by-2048

playwright Aeschylus, it is now considered almost certainly the work of another (unknown) author, perhaps written as late as 415BC.[17] Bysshe Shelley published the lyrical drama *Prometheus Unbound* in 1820, whose Greek mythological figure Prometheus defies the gods and gives fire to humanity. He is subjected to eternal punishment and suffering at the hands of Zeus.

Percy Bysshe Shelley's *Prometheus* is a revolutionary text "loosely based upon the Jesus of the Bible and orthodox Christian tradition, as well as Milton's character of the Son in *Paradise Lost*."[18] *Prometheus* is also Percy Bysshe Shelley's answer to the mistakes of the 1789 French Revolution and its cycle of replacing one tyrant with another. Shelley wanted a revolution that would rid society of these power-hungry, dominant monsters and replace them with an anarchist paradise. Franco Moretti proposes a Marxist reading that views the Prometheus myth and Frankenstein's monster as a product belonging wholly to his creator and the story as one born of the "fear of bourgeois civilisation."[19]

Before Mary Shelley had even conceived of writing *Frankenstein*, the utilitarian and anarchist ideas of her parents Mary Wollstonecraft (who died at Mary's birth) and William Godwin, were under frequent attack from the conservative intellectual establishment. Between 1786 and 1802, Godwin received much of the abuse, labelled as a monster by his contemporaries, especially Edmund Burke, depicting Godwin as a terrifying individual bent on the destruction of society, to the extent of naming him the Devil. Burke was well known for his outbursts against those who challenged the status quo, and, as far as he was concerned, Wollstonecraft's and Godwin's intentions in reforming society were based on *godless* principles.[20] Embedded within the roots of *Frankenstein* lie the roots of anarchism, and

17. "Prometheus Bound—Aeschylus—Ancient Greece." *Classical Literature*. https://www.ancient-literature.com/greece_aeschylus_prometheus

18. Susan Hawk Brisman. "'Unsaying His High Language': The Problem of Voice in 'Prometheus Unbound'." *Studies in Romanticism*, Vol. 16, No. 1, Romanticism and Language (Winter, 1977). p.64.

19. Franco Moretti. *Signs Taken for Wonders* (London: Verso Editions and NLB, 1983). p.83.

Exhibition view at Furtherfield, UK.
(Photo by Pau Ros. Courtesy of Furtherfield.)

our project is one of reanimating this through a process of egalitarian curating, where, to quote Godwin: "No man must encroach upon my province nor I upon his. He may advise me, moderately and without perniciousness, but he must not expect to dictate to me. He may censure me freely and without reserve, but he should remember that I am to act by my deliberation and not his."[21] These words are also evocative for building and developing decentralised and collaborative technological spaces and creatures in the future. All the issues and themes examined and discussed in these exhibitions reflect what exists in our world. They are an attempt to update the essence of Mary Shelley's concerns for our century. If we leave responsibility for the use and development of technology in the hands of neoliberal governments and the same old companies, we are in deep trouble with their tarnished track records. The exhibitions showcase how artists can unlock propri-etorial systems that involve technology and other mediums and systems, using practices across the fields of art, technology and social change. They ask and propose speculative answers for what new strategies, values, and infrastructures we need to initiate and

develop whilst to uphold our values and creating more just and equitable systems fit for the twenty-first century.

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The final part of this text presents some of the contributions by artists and academics to the book. In her essay "Radicalism, Reform, and the Relevance of Frankenstein," Frances A. Chiu writes about the relevance and the parallels of Shelley's work today. Chiu also investigates conflicts between the English radicals and the Tory government from the 1790s through to 1816, and how the hostility between Thomas Paine and the Pitt government work as an influence and backdrop for *Frankenstein*, and the influences of her dying mother, Mary Wollstonecraft and her distant father, William Godwin. Chiu gives us a glimpse of the lives of Mary and Percy Shelley and asks why it was considered an outrageous work at the time.

Shelley's *The Last Man* is a poignant reminder that viruses have caused mass devastation throughout history, and will always be with us. Gregory Sholette and Olga Kopenkina, in their interview with Yiannis Colakides discuss how Covid-19 has been viewed as a failure of capitalism. They look at health and social care and how this virus appears to have revealed the true nature of our exclusionary politics and policies. Paul Vanouse guides us through the radical interdisciplinarity amateurism of his art practice. Reflecting on his projects using molecular biology techniques to challenge misleading DNA hype. His methodology mixes his research, science, and multimedia, resulting in complex installations to challenge our understanding of biotechnology's consequences on our societies.

In his essay "On the Basis of Face: The Politics and Practices of Biometric Art," Devon Schiller explores face studies and recogni-tion technology and biometric art and how these are accelerated and are entwined. Schiller's research demonstrates how artists present various approaches, from subverting and celebrating the technology to imaginative critiques. Eryk Salvaggio's essay "Nothing to See Here" looks at the poetics around image classification tools describing the coronavirus, especially stock photography on the Internet. He discusses how the algorithms

20. Paul Marks. "The Principled Libertarianism of Edmund Burke. (1729–97)." *Libertarian Alliance*. http://www.libertarian.co.uk/?q=node/1179

21. William Goodwin. *Enquiry Concerning Political Justice*. 1793. Available at: https://theanarchistlibrary.org/library/godwin-political-justice

and images represent Covid-19 and where the public is subjected to automated references and narratives. He argues these network systems are incapable of generating the kind of vocabulary needed for this messy reality. Ruben Verwaal, in his article, asks what objects from a bygone age can tell us about epidemics today. To answer this question, he reviews the exhibition "Contagious!" This fascinating show reflects the history of pandemics, including patients' painful experiences, coping and containment strategies, and examples of groundbreaking medical research and envisioning the experiences of those who lived in times of plague, cholera, or the 1918 influenza pandemic. He considers how we can learn from these histories and their stories and our situation today.

In "Ongoing Investigations," Marinos Koutsomichalis is interviewed by Yiannis Colakides about his work in the "Children of Prometheus" exhibition at NeMe, where his work, *Hyperstition Bot (Or, An Evolutionary Machine Appropriating Human Culture)* (2017–19), was exhibited. Koutsomichalis discusses his practice and exploration with systems/hybrids and cybernetic emergence, exploring geographical/socio-political/contextual disparities. His work in the show both draws upon and contributes to this landscape in many thought-provoking ways. Via the Internet, the bot transfigures, re-synthesises, remediates, and re-appropriates human culture concerning congenital cybernetic orderings, ultimately creating a 'hyperstitional' computational reality: fictions that make themselves true. In another fictional setting, we have Ami Clarke's project and expansive artwork, *The Underlying*. Laura Netz discussion with her unearths some of the work's science fiction based context, where, set in a parallel present, it draws out the failures of its current systems to deal with an impending climate crisis as the future comes up increasingly short. The exhibition was sited at the arebyte Gallery, part of the business district in the City of London. It is a virtual reality piece questioning how virtual the effects of the markets are on the environment, as data from the sentiment analysis influences the sandstorm polluting the landscape at the financial heart of the British nation-state, born of tax evasion and offshore banking. Staying with the theme of climate disaster and constant extraction, Gretta Louw writes about Guido Segni's *A quiet desert failure* exhibited in LABoral and NeMe as part of the touring *Frankenstein*

series. The project is an "ongoing algorithmic performance" in which a custom bot is programmed by the artist so it "traverses the datascape of Google Maps to fill a Tumblr blog and its data centres with a remapped representation of the whole Sahara Desert, one post at a time, every 30 minutes." It touches on the most critical issues facing our increasingly networked society and the cultural impact of digitalisation. As we upload and download each day and exponentially use digital networks, the physical world continues to go through the process of climate change.

Michael Szpakowski's interview with Alan Sondheim takes us away from the world of climate catastrophes to the point of 3D printing models of dead or wounded avatars. His ideas explore death, sex, space, time, terror and how these affect our psyche and the body. He has shown his work at all three of the Frankenstein exhibitions. Sondheim is interested in the alien, whether defined within edge spaces and projections, grounded in philosophy—ranging from phenomenology to current philosophy of mathematics to his writing. He says the work in all shows connect deeply with charred bodies, with anguish, with genocide and scorched earth. Sondheim's pained artworks show us similar tensions and anxieties that Shelley's Frankenstein monster felt, which are all too human. The all too human comparison fits with Patrick Lichty's interview with Salvatore Iaconesi; we learn about the Italian tactical media artist's dilemma when diagnosed with glioma (glial cell brain cancer) approximately 2×3 cm on his right hemisphere's surface. Upon asking to see all the data relating to his condition, he found that all of the documents, MRI scans, and so on were not readily accessible. If one wanted to view the data, you needed specific or corporate software. He decided to translate the data and share it on the Internet to help find a cure, resulting in the artwork *La Cura: An Open Source Cure*. Like Sondheim's and Louw's, this work was exhibited in all three venues, and Iaconesi, in addition, presented his story at TED Talks.

Carla Gannis also showed her art at all three venues. Gannis' *The Garden of Emoji Delights* reconstructs Hieronymus Bosch's famous triptych for the digital era, experimenting with the new ways the digital redefines identity and forms of representation, both virtual and physical. Gannis reconstructs the powerful iconography at the core of Bosch's landscape by replacing

religious vocabulary with secular and contemporary digital symbols. Gannis also discusses the influence and inspiration of her Appalachian grandparents singing dark mountain ballads about human frailty and her future-minded father working in computing, alongside a politicised Southern Belle of a mother wearing elaborate costumes, performing her prismatic female identity. This artwork does not directly highlight the issues explored in Shelley's *Frankenstein*. Yet, Gannis shows us a kind of everyday horror and a multitude of sexual perversions and sexual freedoms in her borrowing from Bosch, bringing us a secular apocalyptic vista. It is worth noting here that, Gannis does not, as Bosch did, assign a moral absolute, but a visual web of complex sexualities as playful, dark pleasures for all to enjoy no matter how dark they may be. Gannis has unpacked and updated a classical, dystopian vision of the world.

Spanish artist Joana Moll with her artwork, *The Virtual Watchers*, developed in collaboration with French anthropologist Cédric Parizot, declares an online community that demonstrates how palpable dystopia can be with online group trolling. A clandestine right-wing group of American nationalists set up a project page on Facebook in 2010, consisting of 203,633 volunteers surveilling the US-Mexico border for immigrants. The platform displayed live screenings of CCTV cameras, with citizens participating in reducing border crime and blocking the entrance of illegal immigration to the US. Virtual surveillance is also one of the themes examined in Régine Debatty's interview with Karolina Sobecka. Her game *Medusa FPS* evokes parallels between the coronavirus pandemic and Black Lives Matter (BLM) protests. The project highlights how technologies are targeted disproportionately against black and brown people tagged as threats to society. Sobecka's *Medusa FPS* exposes these semi-autonomous and autonomous weapons in her first-person shooter game with AI-assisted guns. They also examine the project's revealing of 'smart' technology consisting of sophisticated machinery as weaponry that comes with a wi-fi transmitter, stream live video and audio, recorded and uploaded to YouTube or Facebook.

In Mary Flanagan's *[Help Me Know the Truth]*, a software-driven participatory artwork, visitors first snap a digital self-portrait at a gallery, and faces are manipulated using cognitive neuroscience

Exhibition view at NeMe, Cyprus.
(Photo: Helene Black. Courtesy of NeMe.)

tools to construct the perfect stereotype through time and user input. Flanagan's other work *[Grace: Feminist AI]* uses Deep Convolutional General Adversarial Network (DCGAN) software, which after it is trained, can produce images by calculating the spatial correlations within the fed images, scraped web resources of women's artworks (as opposed to photographs of women artists, or images made by male artists of them), and compared the result with *Frankenstein* image data sets, forming a mutation monster image.

Gretta Louw reveals how her work *They Learn Like Small Children*, was informed by how Generative Adversarial Networks (GAN) and deep neural net architectures compete with each other as if in a game. Her work resonates with how artificial intelligence (AI) specialists say that the technologies are in their infancy and that, like children, they learn by trial and error. Louw deconstructs a common myth about AI by taking it literally and visualising it in a way that encourages the viewer to think about its validity. The artist combines new technologies with older media, particularly textiles and embroidery, to connect the dots between craft and advancing technologies.

Lynn Hershman Leeson's art incites and articulates how the tools and objects used within digital culture continuously produce new extensions and variations of ourselves. Her journey has involved a dizzying amount of photography, video, film,

performance, installation, and interactive and net-based media art. In her interview by G. Roger Denson, Lynn Hershman Leeson tackles big questions surrounding identity in a time of overpowering consumerism; privacy in an era of mass surveillance; the interfacing of humans and machines; the relationship between real and virtual worlds; and new bio-ethics surrounding practices such as growing parts of the human body from DNA samples. Hershman Leeson considers Shelley's celebrated publication and its challenges and critiques the misuses of science and technology by hegemonically patriarchal actors. She does not keep a distance from the processes of science and technology; she leaps into the depths of our fears and unreservedly engulfs herself and her imagination in their material influences and modifications.

The works of Leeson, Louw, Gannis, Flanagan, and Moll, collectively demonstrate contemporary art feminism insightfully engaged with the legacy of *Frankenstein* and contemporary subjects. Especially true while the day's issues are explored as part of their art context and its making. They are allies alongside Mary Shelley against the ills of chauvinism and its domination of our systems and structures through history. Yet, whether directly or indirectly, all the works in this publication connect with Shelley because they are asking similar questions now. There is another side to seeing the world through the eyes of Mary Shelley. The joy of it all. The joy of the artistry, the technique, the vision, the intelligent and profound use of technology and turning it into art. Each of these artists and free thinkers demonstrates a radicalness of care through their creative productions.

The material presented in this book unearths an ever-changing world, running away from the assumed roles of conduct and official rules that our civilisation expects.

Our belief systems, structures, infrastructures, and political economy are being tested to the limits. We are now living in a sci-fi world where anything can happen. We all stand at a precipice; what choice do we have but to jump into this sea of dysfunctional dystopias and directly observe ourselves as complicit in its making. We are monsters of this unstoppable machine and it's up to us how we change the future.

Radicalism, Reform, and the Relevance of Frankenstein

Frances A. Chiu

With the steady stream of film adaptations and current controversies over AI and genetic modification, it is all too easy to forget that *Frankenstein* was written by Mary Shelley more than two centuries ago. Yet, as well acquainted as many are with its central plot and characters, if not the general history of scholarship on this classic text, we are still not altogether familiar with its origins and circumstances. What were the sources of inspiration for the tale of an ambitious man who creates a being, only to abandon it recklessly to a shallow, judgmental world? Why was it considered a scandalous work? And how does it continue to be relevant to us in 2021, in the midst of a raging pandemic (one that invokes Shelley's third novel, *The Last Man*) and the Black Lives Matter movements around the world? It is only when we tease out the roots of this novel—both on a personal level involving the lives of the Godwins and Shelleys, and a historical one involving the history of English radicalism as viewed by the two families—that we can begin to understand not only why Mary Shelley crafted her novel as she did, but also why it still resonates forcefully today. I will begin by exploring the lives of Mary and Percy Shelley, delving more closely into hints from earlier biographers that Percy Shelley served as a model for Victor Frankenstein and his nameless Creature.[1] But I will also go farther, showing how the conflict between the two fictional antagonists might have been at least as equally informed by that between the English radicals and the Tory government from the 1790s through to 1816, particu-

1. See Richard Holmes. *Shelley: The Pursuit*. London, Harper Collins, 1974, 1995; and Miranda Seymour, *Mary Shelley*. London, John Murray (Publishers) Ltd., 2000.