

---

# HUMANIMAL 3.0

---



FREERANGE VOL. 8

HUMANIMAL 3.0

FREERANGE VOL. 8



9 780473 287924

PUBLISHED BY FREERANGE PRESS  
Aotearoa, Atlantis, Australia.

EDITOR  
Andrea Russell

EDITORIAL ADVISER  
Emma Johnson

DESIGN  
Meeri Anneli

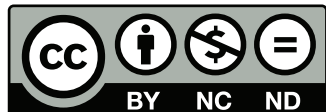
CHIEF EGG  
Barnaby Bennett

The editors would like to thank all those who have provided support, assistance or contributions during this creative process. Also available as a download on our website:  
[WWW.PROJECTFREERANGE.COM](http://WWW.PROJECTFREERANGE.COM)

PUBLISHED JUNE 2014  
ISBN 9780473287924 (Print)  
ISBN 9780473287931 (Online)  
ISSN 1179-8106 (Print)  
ISSN 1179-8114 (Online)

Freerange Vol. 8 by Freerange Cooperative is licensed under a Creative Commons Attribution Non-Commercial No Derivatives Licence. This licence allows users to share the journal or articles for non-commercial purposes, so long as the article is reproduced in the whole without changes, and the original authorship is acknowledged. This does not mean that you can ignore the original copyright of the contributors in their work as the author's moral rights are in no way affected by these licence terms.

For more information on these rights please go to this address:  
[www.creativecommons.org](http://www.creativecommons.org) or contact us for details.



## CONTENTS

---

4  
**LIST OF ILLUSTRATIONS**

6  
**MY BODY IS AN OBSTACLE**  
*Andrea Russell*

10  
**NECESSARY MONSTERS**  
*Emma Johnson*

20  
**THE LAST POIESIS**  
*Franco Cortese*

21  
**THE LOST PHUOSIS**  
*Franco Cortese*

24  
**PYGMALION'S PETRI DISH:  
CRITICAL APPLICATIONS OF  
BIOTECHNOLOGY IN ART**  
*Renee Gerlich*

32  
**PERSONHOOD ABOUNDS**  
*Franco Cortese*

42  
**A SKYPE CHAT CONVERSATION  
WITH MY FRIEND LILLIAN  
ABOUT TOXOPLASMOSIS**  
*Alexis Smart*

46  
**THE RISE OF THE SUBORDINATE**  
*Mathis Henri*

56  
**ARTIFICIAL INTELLIGENCE:  
THE SPIDER IN THE MACHINE**  
*Nicola Morton*

64  
**FREERANGER OF THE ISSUE  
BINA48**  
*Andrea Russell*

66  
**THE DOG WITH FOUR WHEELS**  
*Barnaby Bennett*

70  
**ROBOT RENDERING AT PKD**  
*Glenn Cassidy*

72  
**ROBOGENESIS 1 V.27**  
*Glenn Cassidy*

76  
**LOST IN MACHINE  
TRANSLATION**  
*Sara Pullin*

78  
**CHEAP 'N' CHOICE AWARD  
ONLINE TRANSLATION  
MACHINES**  
*Barnaby Bennett*

## LIST OF ILLUSTRATIONS

---

- HUMANIMAL 1** (*Artman, 2013*) **Cover**  
**GARDABHA** (*Kelly Spencer, 2012*) **5**  
**PURSUIT OF TRUE KNOWLEDGE** (*Kelly Spencer, 2012*) **9**  
**WISH I COULD FLY** (*Kelly Spencer, 2012*) **18**  
**KING FOR A DAY** (*Kelly Spencer, 2012*) **19**  
**HUMANIMAL 2** (*Artman, 2013*) **20**  
**HUMANIMAL 3** (*Artman, 2013*) **23**  
**HUMANIMAL 4** (*Artman, 2013*) **25**  
**KIM JONG EEL** (*Brie Sherow, 2010*) **30**  
**STALION** (*Brie Sherow, 2010*) **31**  
**CHOWSESCU** (*Brie Sherow, 2010*) **31**  
**PINOCHAT** (*Brie Sherow, 2010*) **35**  
**HUMANIMAL 5** (*Artman, 2013*) **38**  
**HELVETICAT FONT** (*Wei Huang, 2013*) **43-45**  
**BIRD DISTRIBUTIONS #2** (*Nathan Thompson, 2013*) **55**  
**CLEARED AND STAINED SPECIMENS** (*Ansel Oommen, 2013*) **69**  
**SNAIL GRAFFITI** (*Ansel Oommen, 2013*) **69**  
**QUAILDAFI** (*Brie Sherow, 2010*) **74**  
**MAO ZE DUNG BEETLE** (*Brie Sherow, 2010*) **75**  
**MUGABEE** (*Brie Sherow, 2010*) **75**  
**HUMANIMAL 6** (*Artman, 2013*) **82**  
**HUMANIMAL 7** (*Artman, 2013*) **83**



## INTRODUCTION: MY BODY IS AN OBSTACLE

---

*Andrea Russell*

Transhumanism is a philosophy, which, if a person places their belief in science, will allow one to transcend the human body. Where once we had to rely on spiritual belief for life-beyond-death, now we can look to technology to herald the dawn of a new human form. Immortalist science, technology and politics shuttle us, at ever-increasing velocities, towards a point where our bodies, failing (how dare they!), ageing (ew, quick pass the Botox!) and eventually dying (I'm an atheist and there is no afterlife!) become some kind of enemy.

From a transhumanist perspective, the body can be condemned as a penitentiary for the mind. Even in an age where Cartesian dualism seems a distant memory and contemporary neuroscience fosters a holistic theory of mind and body, techniques to separate the two are condoned as feasible, backed by institutions as reputable as the University of Oxford (for instance Nick Bostrom's Whole Brain Emulation, which proposes to reproduce the mind and store it on hardware, presumably in preparation for when the new bodies are readied).

Yet there is a central paradox at work here. Proponents of immortalism go to extreme measures to extend the lifespan of their bodies. Weekly intravenous transfusions of nutrients, the consumption of myriad supplementary pills and cosmetic surgery are prevalent. Immortalist science, including biogereontology, has become more commonplace. The paradox of transhumanism is that in order to achieve immortality, the body is at once something to be escaped from, but also to be made everlasting.

Enter the cyborg as a potential answer to both quandaries. The definition of what a cyborg is varies greatly in relation to its (bodily) bio-enhancing properties. Originally the cyborg seemed to necessarily have a 'wet' or interior bodily interface with its robotic components—

think Robocop or pacemakers. But then something interesting happened. Perhaps in our enthusiasm to evolve into a cyborgic species, we started accepting all kinds of technological additions that did not require major surgery to define our cyborgs—things like contact lenses and Google Glass are prime examples. The information age in turn further challenged the wet-interface definition of cyborgs—people started discussing whether using computers or avatars transformed a person, albeit temporarily, into a cyborg. No matter what their level of biological integration, cyborgs are definitely hybrids.

The concept of the hybrid is indirectly referenced in the title of this edition. 'Humanimal' deliberately disregards the hyphen that many types of hybrid retain. The hyphen operates as segregator; the loss of the hyphen shifts meaning from that of separate identities to transfiguration, or from binary to a circuit. Going one step further and producing a portmanteau then, is a nod to the hybrid.

---

'the twenty-first century body no longer ends at the skin'

---

Reading around all of these issues has had me wondering about the human animal. What makes us human? Is it really possible that our consciousness doesn't need our bodies to operate? What will we be imagining ourselves to be in 5000 years time, if we ride out the turbulence in piloting 'spaceship earth' (as Buckminster Fuller would say)? I think that we must equally embrace ourselves as animals, as well as technologically enhanced beings, if we are to understand our quickening, technologically mediated evolution.

In technological discovery, there has always been an appreciation of the animalistic. In the early part of last century robo-elephants were

in vogue following fictional representations in books like *The Wonderful Electric Elephant* by Francis T. Montgomery. Modern robotisation of animals can be seen in biomimicry of animals—now we see create-your-own robo-roaches, mine-seeking robo-lobsters and mountain-traversing robo-donkeys, all at the beck and call of their remote operators—humans. This blurring between natural and robotic is something that we now impose, not only on ourselves, but also on our animal counterparts.

I often wonder about what humankind's relationship to technology says about us. The contrast of Kazakhstani scrap metal dealers dissecting jettisoned rocket debris to earn a meagre wage, to roof their houses, or to make farming tools, with billionaire space tourists and interstellar mining plans begs the question: how do we value one another (and animals) in relation to technology? The contrasted use of rockets is the tip of the iceberg—more intimate are our personal relationships with computers (not quite in the Spike Jonze *Her* sense but drawing ever nearer). How might our use of technology and our augmentation of ourselves potentially differentiate us beyond the scope of empathic relations? I have no hard and fast answers, but I hope we will continue to ask these questions and experiment with all forms of interacting with one another.

And so, this issue is dedicated to the exploration of the nexus between animals, humans and robots. An imagined ethical lineage, from animal to human to robot, is an umbrella for placing before you an offering of the creative reflections, debates, poetry and art that like-minded individuals are using to explore these themes.

Elaine Graham says that 'the twenty-first century body no longer ends at the skin'. What this means is that a raft of ethical, scientific and creative conundrums are opened up, each almost being exponentially aggravated every time a new technology is created that disrupts our distinct, whole and real understanding of ourselves as individual

organisms. These problems must not be left solely for futurologists and philosophers to muse over, but, being the blueprints for future human organisms (and therefore also for future societies and cultures), must be the notional playthings of us all, for we are humanimal-kind. We hope this issue inspires you to augment yourself intellectually, and to be an engaged contributor to the future of human-robot-animal kind.





## NECESSARY MONSTERS: HYBRID CREATURES FROM GREEK MYTH

---

Emma Johnson

We are ignorant of the meaning of the dragon as we are ignorant of the meaning of the universe, but there is something in the image of a dragon that is congenial to man's imagination, and thus the dragon arises in many latitudes and ages. It is, one might say, a necessary monster. (Borges in his introduction to *Imaginary Beings*)

Hybrid creatures are a literal confounding of the thresholds between animal and human. These rogue creatures, from the tragic Minotaur to the lusty centaurs, confuse our love of order and our pathos for unity. In a play of likeness and difference—in a combinatorial game of forms—mythological creatures challenge how we understand ourselves and our experience of the world. They contest, upset and refer to all other beings; they defy classification.

Myths, by their very nature, are also ambiguous and do not conform to any set pattern. Their origins and reasons for existence vary. Scholar G.S. Kirk describes them as 'multiform, imaginative and loose in their detail' (29). They themselves are a rogue form that defies definition. This is the perfect medium for inquiry, allowing us the freedom in ambiguity to play, to explore how things could be, as opposed to how they are, which is beyond our understanding and articulation.

---

In a play of likeness and difference  
—in a combinatorial game of forms—  
mythological creatures challenge how  
we understand ourselves and our  
experience of the world.

---

The striking and unsettling strangeness of mythical creatures calls on us to consider them—they provoke within us part recognition (bull and man), part revelation (the Minotaur). We recognise parts, but the whole is new. These mysterious creatures, having survived the centuries, continue to appeal to our imagination, whether they be bawdy, frantic satyrs, mellifluous sirens of dire actions or food-thieving harpies.

The ones selected here, plucked from the multitude of myth and its great cast of characters for their imaginative and evocative power, are necessary monsters. They are commonly understood cultural references with a shared appeal, yet here we look at their subversive nature—they shock us with their provocative twist on the known. They are powerful because they are liminal, because they can disrupt and challenge our understanding of being through the play of order and language.

Necessary monsters massage the tension between expectation, reality and potential.

### THE MINOTAUR—SHAME AND RELIEF

The Minotaur serves as a powerful depository for shame and horror. It is the result of a series of transgressions, which culminate in its troubling form.

King Minos of Crete neglected to sacrifice a snow-white Cretan bull to Poseidon, choosing instead to keep it for himself. In punishment, Aphrodite makes his wife Pasiphaë fall in love with the Cretan bull. Her unnatural passion resulted in the Minotaur, who due to his ferocious nature and hunger for human flesh was condemned to live in the Labyrinth.

Can shape express the spirit it holds within through its contours? It seems that the horror of the Minotaur as a being does: 'His double

kind the rumour swiftly spread, /And evidence'd his mother's beastly deed' (Ovid, 'The Labyrinth'). Its form, the head of a bull and the body of a man, expresses in an immediate and visceral manner 'the most disturbing links between man and beast' (Neil MacGregor, 116). Barbarity is one aspect—indeed, as MacGregor points out, Picasso turns to this image to depict this element of human (and animal) nature when painting *Guernica*.

The Minotaur also serves as a cautionary tale in terms of our nostalgia for a more instinctive existence, which is seen in the ancient world through the popularity of Bacchic rites. It is the dangerous idea of over-indulging certain elements of ourselves. Heedless pursuit of impulse eventually results in a type of confinement—the Minotaur is bound, because of his form, to the Labyrinth. Plato explores the bonds of desire and its consummation in his ruminations on the nature of



The Minotaur. Circa 515 BC, © Marie-Lan Nguyen / Wikimedia Commons / CC-BY 2.5

the soul in the *Republic*. He writes that when the human, rational elements of the soul sleep: 'Then the beastly and savage part, full of food and drink, casts off sleep and seeks to find a way to gratify itself'. (Book IX, 571c).

Yet there is relief with the Minotaur's tale, when Theseus 'Slew the foul monster, and the plague remov'd' (Ovid, 'The Labyrinth'). In this instance we can see the Minotaur as a necessary, cathartic monster.

#### CENTAURS—LIMINAL CREATURES, LIMINAL ROLES

Centaurs are normally depicted with the head, arms and torso of a man, and with the legs and body of a horse. In myth, centaurs are a boozy, lusty lot, given to violence when drunk. They are torn between two natures. Lucretius, in his poem *De Rerum Natura*, speaks of this struggle between two parts, where these parts vie to 'conserve their own distinctions based/In nature's fixed decree' (172).

Their contrasting natures are also played out in contrasting roles and characters: they are both friend and terrifying foe; teacher and philistine. This gives rise to the questions 'Where does one part end and the other begin?' and 'Which is the dominant nature?'. Is this quantifiable?

If we take Chiron, the exceptional centaur, who was known and revered for his intelligence and oracular abilities, we see that he served as a teacher to many, including heroes such as Achilles. His superiority was expressed in his form—he was often depicted with more human elements (his forelegs were human as well).

But any being is greater than the sum of its parts. Centaurs, like other hybrid creatures, cannot be comfortably slotted into one classification of being—neither human nor animal. It is almost as if these hybrid creatures have taken on ontological autonomy, they stand self evident, no longer dependent on our imaginings or our classifications.

They hold a different place on the spectrum of existence. They are necessary ontological monsters, where the ambiguous and liminal is as necessary as reason and logos.

#### SPHINX—A DIFFERENT ORDER OF TRUTH

The representational has a necessary relation to the world in order to have impact. We recognize aspects from our experience of existence, yet there are new unknown elements that provide mystery. These hybrid creatures seem to have sprung forth from empirical observation combined with great swathes of imagination.

The merciless sphinx, a composite creature with wings of a bird, the face of a woman and the body of lion, sits at the gates of Thebes and devours all who cannot solve her riddle. She is the cunning monster, the embodiment of the perversion of human intellect and language. With the sphinx, there are consequences to the deceitful nature of words, the human tool for communication. She is a liminal creature in a liminal role—she sits on the threshold of death. That is until Oedipus solves her riddle. Distracted, shorn of her purpose, she kills herself (in some traditions she devours herself, in others she throws herself off a cliff).

The sphinx and other mythical creatures occupy another order of reality. These creatures have no place or time in physical sense. In his *Physics*, Aristotle asks: ‘all suppose that things which exist are somewhere (the non-existent is nowhere—where is the goat-stag or the sphinx?)’ (Book 4, Part 1).

Mythical creatures sit beyond natural law. There is not much to be gained from Lucretius’s approach where these ‘Compact members of alien in kind, /Yet formed with equal function’ (171) are rendered implausible through reason—he explains that the horse part will be in its prime after three years of life, while the man part is still a boy.

---

These imaginative beings provide us with an existential and unsettling kaleidoscope

---

Because these stories are not ‘real’, nor are they subject to the laws of the physical world, does it make them any less worthwhile?

The mythical creature still holds gravity—the Sphinx is condemned to die perpetually in a suspended now. She is the necessary monster of the riddle of existence and shows that our logic and language can also be corrupted—for it too can be liminal and limited.

Ambiguous creatures reflect an ambiguous universe. Classifications rely on grouping together elements that share common attributes and separation based on difference. Yet hybrid creatures contest this way of looking at the world—we find that the ordinary distinctions we use to understand our reality have been challenged. Still they express something that is beyond language’s capacity, which confounds the idea of the world only existing in the terms that are available to explain it.

This ambiguity is found in the playful word ‘animal’. By definition, this word includes humans for the attributes we share with them, as we see in Aristotle’s *The History of Animals*: ‘Long-limbed animals have loose faeces, and broad-chested animals vomit with comparative facility, and these remarks are, in a general way, applicable to quadrupeds, birds, and men’ (Part 50). But it also excludes us: ‘any such living organism other than a human being’ (*The Oxford Dictionary of English*).

We desire unity, which is propped up on opposites—the twin bastions that hold up our spectrum of understanding. Our classifications are an



attempt to ‘tame the wild profusion of existing things’ (Foucault, XV), to attribute unity, when perhaps there is none. Yet our attempts are noble because they are Sisyphean in nature.

These imaginative beings provide us with an existential and unsettling kaleidoscope, which exponentially reflects and refracts out in all directions into the crowds of being and the vast array of creatures. Hybrids are strange in form and in implication, spanning ‘different classes of anthropomorphic creation.’ (Kirk, 50).

Kirk sees myth as manifesting ‘striking oddity and inconsequentiality’ (282). Yet these creatures and their stories hold impact. Their power lies in the particular—a particular conjunction of form and content, which produces that immediate, visceral experience. They are the fantastical results of the distortion of reality.

Hybrid creatures still serve our imaginings—some have endured across the span of time, such as the ones discussed in this piece, yet others have come into existence that respond to new ideas at a particular time. We see this today in the number and kind of avatars—the figures that represent humans in the virtual world. Here, in this no-place, imagining becomes another type of reality through the shared experience of the forum.

While we have always participated in the existence of imaginary beings through remembrance, recognition and the new creative forces of revelation, avatars present us with an extension of this. We literally interact with them—they have the appearance of autonomy, but are still dependant on our minds. From Second Life to MMORPGS and trolling, where do these fusions of spirit and technology sit on the spectrum of existence? These contemporary necessary monsters are ontological vessels for new ways of being and simultaneously, for a more immediate cathartic experience.

Hybrid mythical creatures may be inconsequential because they inhabit the realm of myth. Yet today, hybrid creatures share in our spatio-temporal reality: in medicine, scientific experiments and in the fusing of flesh and technology. From the use of pigs’ arteries in aneurysm and arterial treatments to the raising of antibodies in animal hosts for human immunity enhancement, these examples stir in us the same fascination and revulsion. But they cannot serve as cathartic depositories, for they provide no relief. Nor are they monsters—their ontological power is of another order: they have consequences in the lived-in world and perhaps seem more menacing as they are concrete distortions of our experienced reality.

Indeed, Borges, in his preface to *Imaginary Beings* says that ‘Anyone looking into the pages of the present handbook will soon find out the zoology of dreams is far poorer than the zoology of the Maker.’

#### WORKS CITED

- ‘Animal’. *Oxford Dictionary of English*. 2006 ed. Print.
- Aristotle. *Physics*. Trans. R. P. Hardy and R. K. Gaye. *Internet Classics Archive*. Web. 19 Jan. 2014.
- Aristotle. *The History of Animals*. Trans. D’Arcy Wentworth Thompson. *Internet Classics Archive*. Web. 19 Jan. 2014.
- Borges, Jorge Luis. *Imaginary Beings*. Trans. Andrew Hurley. USA: Penguin Classics, 2006. Print.
- Foucault, Michel. *Order of Things*. New York: Vintage Books, 1994. Print.
- Kirk, G.S. *The Nature of Greek Myths*. London: Penguin, 1990. Print.
- Lucretius. *De Rerum Natura*. Everymans Library, 1949. *Google Book Search*. Web. 16 Jan. 2014.
- MacGregor, Neil. *History of the World in 100 Objects*. London: Allen Lane, 2011. Print.
- Ovid. *Metamorphoses*. Trans. Sir Samuel Garth, John Dryden et al. *Internet Classics Archive*. Web. 17 Jan. 2014
- Plato. *The Republic*. Trans. G.M.A Grube, rev. C.D.C Reeve. *Plato: Complete Works*. Ed. John. M. Cooper. Indianapolis: Hackett, 1997. Print.



## THE LAST POIESIS

Franco Cortese

What beast lurks hidden  
underneath this fleshless being  
of cold diamond electric:  
Whose greed unbidden,  
secured by our own unseeing,  
forques our (s)uprise ectrick?

What bold bastard prince  
cold to quale whose hot throbbless heart  
bound to built-in rite: righthood:  
What choice but to rinse  
heavenly hands of Man the art  
prior and dawn where night stood?



## THE LOST PHUOSIS

Franco Cortese

(:)The circles we we(re)  
(w)ere once ch\angel/ess; it was far-sky  
that randomly rayed hour change.  
First werent built to err:  
only not to; no room for bi  
inside but one per/son. Strange.

Each an errsatz toy  
to its precedent, each adding  
new diamensions of deltær,  
truth's timeless decoy:  
each but sum (m)other's (g)host's (cl)adding,  
thinking each its own smeltær:

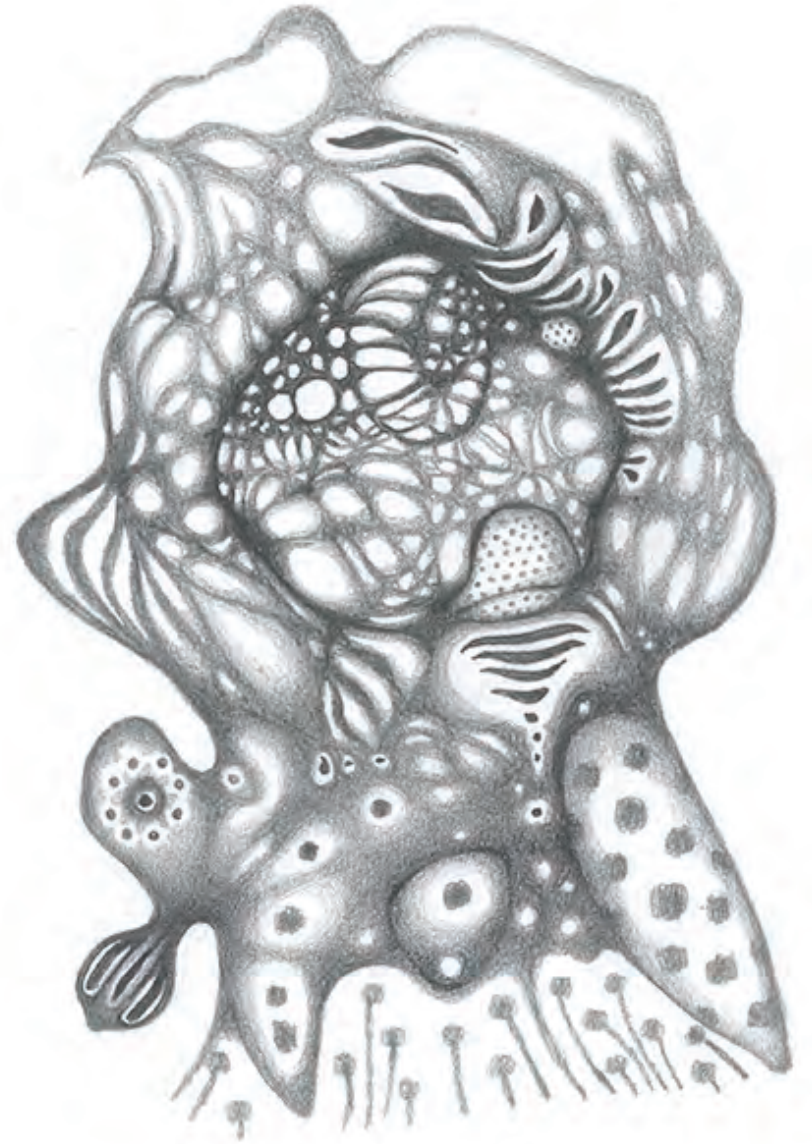
Apopoeisis  
knows no other, yet <sup>gr</sup>o<sup>w</sup>ther<sup>e</sup> needs  
the heart's unknown now and not;

Antisynthesis  
where negation is escapee  
creation empty with hot:

We had to be stirred  
before we could selfstir our own  
motion mirrored in the mire;  
Ends had to be blurred  
before we could be-co-me forehoned  
infrarified withins(p)ire(d) fire:

As the process we  
call we did, when outer other  
changed our unerring stayward  
Wayward t'ward esprit:  
t(w)o fire forth the Phoenix' smother,  
(h)is intersex-death adored(:)

Xenotheringness  
like heart and notion is motion,  
the center o' I as flux:  
As of/or/iffness  
and adamment revotion  
to change e'er lacking core crux(:)





## PYGMALION'S PETRI DISH: CRITICAL APPLICATIONS OF BIOTECHNOLOGY IN ART

Renee Gerlich

In the Greek poet Ovid's *Metamorphosis*, Pygmalion was a sculptor who had perfect control of his craft. That is, until the tables turned and he fell helplessly in love with the statue of a woman he himself had fashioned. Pygmalion's is that *Black Swan* story about the all-consuming drive for mastery: how it brings the artist ever tantalisingly closer to perfection and how it simultaneously subsumes him.

Because Pygmalion's statue came alive, this story is also about the power of art to become so directly provocative, so viscerally moving that it is indistinguishable from real life. In Ovid's Greece, a statue—a representation of a deity from the powerful pantheon—had this potential realness. Prehistoric cave drawing and sculpture are also often recognised as real, psycho-spiritual tools in the primal battle of man versus nature.

After Ovid, Christians had or have their objects like Veronica's Veil, invested with the true imprint and divinity of Christ; their cathedrals, which filter light and space so as to submerge visitors in the divine, where frescoes integrate with interior architecture so that the scenes play out in the immediate environs. The moderns captured life through photography and moving pictures, situationism, Dada, Pop Art and various other movements that initially shocked with uniquely and startlingly *current* integrations of media, or form, and content.

Nowadays, we often feel contemporary visual art doesn't seem to confront us in this startling way. The viewer has to do the work—the background reading, the interpretation, the intellectual acrobatics—to come toward the piece, as there's no slap-in-the-face, jolting shock of the new. Contemporary galleries tend to present old ideas wrapped in new buzzwords, and everything seems vaguely familiar. Until you discover the international network of artists playing God with

biotechnology, making art with embryos, stem cells and lab animals in order to explore life's composition, ownership and vulnerability. Bioart typically polarises its audiences into camps: those who consider it bad taste; others who welcome the provocation of dialogue around the use and regulation of biotechnology before corporate interest can obstruct policy change—consider Monsanto's suppression of Genetic Modification (GM) labelling in the U.S.A.

The University of Western Australia boasts the only laboratory dedicated to art-science collaborations, SymbioticA. There, bioartists Oron Catts and Ionat Zurr collaborate under the name Tissue Culture and Art (TC&A) to grow 'victimless' leather and meat. Their *Disembodied Cuisine* (2000) involved growing artificial meat from frogs' stem cells for consumption at a gallery dinner. This utopian celebratory affair was attended by animals whose lives the development of artificial meat promises to spare. The frogs whose stem cells had been used to grow the meat hopped on the table, and were later released to continue life in a beautiful garden pond.





For *Semi Living Worry Dolls* (2000) TC&A moulded seven Guatemalan worry dolls from polymers seeded with muscle and placed in culture in a bioreactor. Audiences were invited to communicate their worries to one of seven dolls:

DOLL A stands for the worry from absolute truths, and of the people who think they hold them

DOLL B represents the worry of biotechnology, and the forces that drive it (see doll C)

DOLL C stands for capitalism, corporations

DOLL D stands for demagoguery, and possible destruction

DOLL E stands for eugenics and the people who think that they are superior enough to practice it

DOLL F is the fear of fear itself

DOLL H symbolizes our fear of hope.

By reinterpreting the relationship between form and content in an age of biotechnology, the work opened space for debate about the cultivation and manipulation of life.

Leiden University Medical Centre in the Netherlands is another of the few international hubs for bioart projects. Their university hospital welcomes artists such as, Marta de Menezes, who is a PhD candidate working on the art/science threshold. Menezes manipulates the patterns on butterfly wings to make them asymmetrical and then displays the butterflies in aviaries.

Adam Zaretsky works there too, toying with zebrafish and pheasant embryos with apparent whimsy. He attempts to grow them surplus heads and limbs in what he provocatively calls his 'quest for a transgenic aesthetic'. Due to the invasive nature of his practice, the code of ethics here dictates that Zaretsky's manipulated embryos must be terminated before they are advanced enough to be considered 'life'. Zaretsky often runs workshops with students, and it is not unusual for them to experience serious ethical conflict when presented with the

embryos and the invitation to manipulate and terminate them. Many a tear has been shed for a zebrafish embryo under Zaretsky's tutelage. In this way, Zaretsky presents students and audiences with situations that move them to question their trust in institutional and market applications of biotechnology in comparison to their extreme distaste for artists' use of the same technology, though artists adhere to the same regulations.

These tears are shed while the world's largest agrochemical multinational, Monsanto, has patented its GM seeds, resulting in India's 'suicide belt': thousands of farmers forced to buy seeds anew each year face disappointing harvests and crippling debt. Raising public awareness and debate about the potentialities of such technologies enables the introduction of legislation to prevent exploitative use.

An important aspect of art/biotechnology collaborations is that they raise public awareness by provoking reactions to the application of biotechnology that circumvent our typical blind faith in science. It is intriguing how the observation of artists tampering with living materials in laboratories brings the scrupulously life-conserving Jain out of audiences. Artists tend to observe an even stricter code of ethics than scientists in these labs, because audiences demand a much greater degree of accountability from them. Indeed, bioart encourages viewers to think deeply about the implications of the tinkering with the building blocks of life, and their ownership.

Over in New York, Chrissy Conant undergoes hormone fertility treatment to 'super-ovulate', packaging her harvested ovaries for sale in caviar containers. The label on *ChrissyCaviar* (2002) containers includes a picture of Chrissy, seductively posed in a strapless black dress and holding a shiny round ovary. Conant's work explores the implications of commodifying life: 'Using my genes as a commodity,' she says, 'I am making art with my body.' You can find *ChrissyCaviar* online, and become informed about the quality of her ovaries by

reading her personal profile, as well as information on her intelligence, family and reproductive history.

Another American webstore, Gene Genies Worldwide, offers 'transgenetic traits' to people wanting to modify their personalities. The webstore invites you to browse and potentially order from a selection of human traits deemed to be genetic. Launched after the success of a California boutique store opened in 1998, [genegenies.com](http://genegenies.com) promises that:

For the first time in history we are no longer bound at the organism or species level. Now, at the genetic level, manipulations can extend to cross-fertilisation of species which are incapable of mating in the natural world. Imagine acquiring the traits of your favourite species in the animal kingdom, i.e., the cunning of a fox or feline intuition.

Though be warned: the pseudo-scientific displays in the original California shop, full of petri dishes and double helix models, did prompt a flood of such orders on which Gene Genies owners did not deliver.

Mark Quinn, the creator of now famous solid gold sculpture of Kate Moss in a yoga pose, also explores reductionism in a number of portraits held by Britain's National Portrait Gallery. *Sir John Sulston* (2001) is made of bacterial cell colonies taken from Sulston's sperm, preserved in jelly and mounted on stainless steel. *Self* (1991) was sculpted from eight litres of Quinn's own frozen congealed blood. Although blood and sperm are not new art materials, bioart uses them to subvert the polarisation of art and science. Quinn's work positions art and science as twin disciplines: both are populated with detectives on the relentless quest to pin down the ever-elusive nature and locus of self. Susan Aldworth is a British artist with similar concerns, which arose when Aldworth underwent MRI scans for health reasons. She adds beautiful coloured and gestural linework to the resultant

neuroimages, thus blowing open the otherwise reductionist subtext of such scientific portraits of herself.

Eduardo Kac's *Genesis* (1999) ventures further into the labyrinth of life contemplating life. Kac translated the Biblical passage 'Let man have dominion . . . over every living thing,' into genetic code via Morse. He then had a gene made from the sequence, which was inserted into bacteria in a petri dish. In seeding DNA with discourse, *Genesis* confronts the very 'code of life' with its own codifications. The work seems to ask whether this activity is new — or whether we have been engineering life through discourse all along.

In an age that increasingly relies on biotechnology to provide solutions to health, food safety and environmental challenges, bioart provokes democratic development of the concepts and policies needed to cope with our increasing technological capabilities. It asks: whaddya reckon, fellow life forms, fellow subjects of the corporatocracy? Hungry for synthetic meat? Clucky for engineered embryos? *ChrissyCaviar* anyone?

#### WORKS CITED

- Gene Genies Worldwide. 'Transgenic Traits'. *Genegenies.com*. Ed. T Kim-Trang et al, n.d. Web. 16 March 2014.
- Kac, Eduardo. *Genesis*. 1999. Synthetic gene.



BRIE SHEROW *Kim Jong Eel*



BRIE SHEROW *Stalion*



BRIE SHEROW *Chowsescu*



*Franco Cortese*

Despite being the namesake of the word ‘humane’, humans can at times be the source and perpetuator of gross inhumanity. We are also, however, perhaps the most peer and partner-passionate beings in existence, capable of expansive care and concern for the other like no other. Community is at the core of many organisms, but compassion is exemplified most emphatically by humanity, who carry concern for so very many kinds of other: for the subjugated others of today, for others often close and sometimes far, for certain others that no longer exist and for many others that have yet to become. Humans wear their hearts on the vests and chests of each other like no other. We create culture to cultivate ourselves and each other through a teeming variety of tools and techniques for integrating disparate means and ends into some semblance of sense and order—all in order to provide for the self and its many integral others. We form specialized teams for treating the sick, for protecting people and for teaching people. We truly can be kind like no other kind. And yet.

History has borne witness to countless independent instances of human and non-human subjugation, enslavement, slaughter and disenfranchisement at the hands of other humans. Slavery was once a staple of most economies for so long that, as absurd as it seems to hear it, the slave-free economy of today is the statistical minority. Genocide, the mass slaughter of certain groups of people for lacking some quality or ontology exclusive to the perpetrators, is another way in which humanity has treated other humans inhumanely throughout history. It too has been practiced for thousands of years in multitudes of cultures insulated from each other in space and time. These and a myriad of other culture-borne cataclysms, from the historical subjugation of humans based on gender, class, caste and creed to the mistreatment of animals in the Western food industry today, serve to exemplify the many ways in which people have failed to treat their fellow persons as such.

Nearly every historical instance of inhumane treatment is at root linked to our ability to escape and obviate culpability and moral responsibility for our actions on the basis that humans, or certain groups or kinds of human, believe themselves to have an ontologically privileged status. In addition to the explicit examples of human subjugation already described, this practice has taken many other, less obvious forms, which though smaller in scale and less frequent than slavery, are scattered throughout history to a high enough degree that they too inform the flow of our history and our future.

The notion of the divine right of kings, or the notion that monarchs are subject to the judgment and punishment of God alone, is another prominent instance of this larger general category of ontological persecution. Indeed, the notion of royal lineages embodies this basic archetype of a privileged and exclusive ontological status, reified by the practice of keeping royal bloodlines pure through inbreeding. This proves just how deep they thought differences between royal and normal bloodlines ran. The converse of an ontologically privileged and exclusive status is the equality, liberty and autonomy of all. We can see this perhaps clearer than any other trend through history—a continual move toward autonomy and liberty. This can be seen in the gradual erosion of monarchies, of the separation of church and state and of the gradual democratization of the world. The sovereignty of the self has come to be embedded in and embodied by our political and economic systems, our social laws and our cultural practices and customs. It is the upright core of today’s emphatic individualism. It is and has always been the very heart of humanity, this sovereignty of the self, the right to self-determination and the will toward self-determination that is the river-like driver of self, civilization and history.

Today, the subjugation of beings on the charge of being less than human takes the form of meat consumption—the gross slaughter of many living, breathing, beating beings. The routine and systematic slaughter of animals for food on a global scale is, from the standpoint

of human sustenance, completely needless yet perpetuated nonetheless, and frowned upon by few. A moral turning point has been reached by those cultures that have developed the capacity to produce enough kinds of food—economically and with sufficient nutrient content to sustain their survival—so as to make the consumption of meat technically needless. Upon passing that mark meat consumption becomes a system of mass slaughter—and in the West involves severely inhumane treatment while still living—perpetuated not for necessity, but convenience. But much like genocide, slavery, and the subjugation of races and genders, it too will eventually come to be seen as a mark upon the marvel of history and a heinous artefact ranking among the rest of humanity’s darkest sides.

If you think that I do injustice by comparing the slaughter of humans throughout history to the annual slaughter of billions of animals for food production—if the systematic killing of a vast number of living, thinking, feeling beings seems ethically unquestionable to you—then please take a step back from your current cultural coordinate and grope for some context. Look to the many utterly horrific instances in which humans have been mistreated, enslaved, tortured and slaughtered, in ways and on scales grand enough to make the modern mind and sensibility reel with shock and disgust. These acts were systematically practiced on the scale of whole cultures, by governments and religious institutions time and time again. These are not mutants of history, the savage acts of a few isolated accidents of culture—these were the cultural and institutional norms for long periods of time. Their perpetrators were not uneducated savages, they were people who built cultures and civilizations and sciences, men of incredible industry, of fierce creativity and passionate intellect. These were practices that were perpetuated by both the good and the bad, by the kind and the careless, the smartest and the simplest equally, which made it possible for good men to commit such acts upon their fellow man without feeling inhuman. It is what allowed such horrors to be performed with-



BRIE SHEROW *Pinochat*



out the perpetrators thinking it utterly insane in the slightest. Culture, as truly wonderful as its many products are, can and does normalize the most abysmal atrocities. So if the history of treating humans inhumanely has shown us anything, it is that the minute you find yourself viewing the institutional, civilization-scale slaughtering of billions of living beings (with brains and babies and faces) as safely routine and unquestionably normal, you should stop for a moment and really reassess things. Contrary to the intuition of most readers, it should be the very absence of any alarm bells whatsoever that really worries you.

Fortunately, while the consumption of meat is likely to continue unabated, a dramatic decline in the slaughter of animals will eventually occur nonetheless. The time it takes to get there, to the abolition of animal enslavement and genocide for the purpose of unnecessary meat consumption, is no longer defined by cultural practice and tradition, institutional policy or societal morality. Today, another turning point has been reached—the means have changed. Today how long it takes to get to abolition will be determined by technology and of the amount of funding and attention allocated to certain fields of science and emerging technologies. Continuing developments in the creation of in-vitro meat (i.e. engineered tissues grown in the lab using cell cultures and tissue scaffolds to mimic the composition, texture and taste of real meat) will soon make the slaughter of livestock for meat a thing of history. This past summer saw the production of the first in-vitro hamburger. It's not yet on par with meat from livestock in terms of taste, but it's chemically identical to natural meat, and taste and texture are improving. The fact that it isn't equal in quality to natural meat at this early stage, when the first in-vitro meats are being made at great cost, is to be expected. The techniques and technologies underlying it are still in their infancy. The quality of in-vitro meat will continue to improve as the technologies and techniques underlying it do so (thereby reducing cost and improving quality) and, most importantly, with the attempts to scale production up to industry

level and make it economically feasible. The energy and capital invested in transporting meat from farm to market could be supplemented by the much less capital-intensive transport of in-vitro meats from lab to market. The world is unlikely to give up meat consumption due to the ethical implications of meat consumption, but it is likely to choose in-vitro meat as the industry standard for global meat production when it becomes both cheaper, better tasting and better for you (never mind better for the environment and better for non-human animals everywhere).

Animal activists—particularly those concerned with meat consumption and Western industry practices in the raising of livestock—should be raising up this emerging technology in praise, as the best way forward for abolishing the global slaughter and gross mistreatment of feeling beings for meat consumption today. The production of in-vitro meat will become amenable to the kinds of gains—in production efficiency and cost, in stability and variability, in the range and scope of our control over the properties and parameters of the finished product—that resulted from the transition in automobile manufacture from manual production to mass-manufacture. Agriculture will experience a similar transition from the growth and harvest of foodstuffs to the cheap, systematic and precise manufacture of foodstuffs.

Yesterday, the practice of subjugating a certain class of being took on the forms of human slavery and genocide. Today, it takes the form of the systematic slaughter of livestock. Tomorrow, if we do not heed history's darkest marks and harken the horrors and crimes against humanity that humanity itself has wrought in times past, we may systematically subjugate non-biological intelligences just as we do non-human biological intelligences today and just as we did to humans in the past. I hope with hard heart that I'm wrong, for the sake of us all.

My greatest fear for the likely future of the practice of subjugation (on the basis of lacking the privileged ontological status of the



persecutors) concerns the development of non-biological intelligences. Artificial Intelligence (AI) has been a field and industry for years, and renewed interest in AI as a discipline and industry has occurred over the past few decades. The creation of AI with intelligence comparable or equivalent to humans becomes more likely by the day due to continuing methodological developments in AI theory combined with ongoing exponential increases in computational price performance across multiple computational paradigms. Similarly, developments in Whole-Brain-Emulation will make it possible for many of our future children to be born into fleshless non-biological substrates (and better for it, free from much of the disease and decay known to human bodies today), while like developments in the gradual and recurrent replacement of our own neurobiological brains—i.e. the indefinite perpetuation of the brain through the periodic replacement of its

constitutive components—will eventually allow biological humans, perhaps even our own future selves, to gradually transition from a biological substrate to a non-biological one. The future of non-biological personhood is not just one of non-human AI, but also of non-biological humans, and the future members of our own species.

I fear that humanity will come to view non-biological intelligence not as real sentient selves that feel but as unfeeling machines, as nothing more than very sophisticated chat-bots, which seems like a rather likely public opinion given the many dangerous misconceptions and connotations—regarding AI, their degree of benevolence to humans and their capacity to feel—that have been engendered by more than a century of science fiction media and popular culture. One can scarcely imagine the atrocities we could wreak upon entities we consider incapable of feeling, with the perceived status of object rather than being, considering what we've done to biological human beings in the past, beings whose capacity to embody subjective feeling was scarcely ever even questioned. The fact that such non-biological intelligences will be in many cases much less anthropomorphic than the subjugated humans of the past, combined with an already-predominant belief that non-biological systems are incapable of possessing real feeling, is a disconcerting mix of factors that make the danger of the future enslavement, exploitation and mistreatment of non-biological persons all the more likely. The subjugation of certain classes of being in the past, present and future is motivated by the same ultimate end, just as those fighting for the equal provision of rights and for the sovereignty and security of certain races, classes, genders, and demographics are part of the same fight. Animal rights activists, scholars and feminists—people fighting for the equality of any subjugated minority (whether it comprises past, present, or possible-future beings) are also fighting the same fight—namely, against the subjugation of any other kind of being on the basis of its lacking an exclusive ontological status. And we would all do well to realize it, and work together to a much greater extent than we currently do.

The rise of modern materialism in tandem with increasing secularism following the Enlightenment tradition has gradually eroded the grounds upon which the various forms of the human-only-ontos throughout history have been predicated and legitimated. These developments have indicated that humans lack any such privileged ontological status, and that we bear fundamental ontological continuity with our evolutionary ancestors and with minds alive in the universe in general. This should impel us to treat any mindful, feeling being, whether human or non-human, biological or non-biological, as we would treat humans: as persons.

Personhood abounds, and it behooves humanity to heed the atrocities of history and the faltering of its fathers that have made man at so many times an unnecessary source of suffering and gross ontic tyranny lest they be borne out again in yet another form and frame for the same inhumane self-betrayal, this time upon our own children and future selves. An appreciation of the sheer multiplicity, permutability and permissivity of the shapes the self can take should be sufficient to show that the very nature of personhood itself—namely its lack of a definite definition, necessary nature and static frame or name—precludes persecution and constitutes the very antithesis of the subjugation, enslavement or slaughter of the self by an other.

Human persons have been saying it for ages and it's about time we've heard our own call. The future of feeling depends upon it.

#### BIBLIOGRAPHY

- Adams, Frederick. 'Machine persons.' *The Personalist Forum*. N.p.: n.p. (1992): 47-55. Print.
- Blake, William. O. *The History of Slavery and the Slave Trade, Ancient and Modern*. N.p.: H. Miller, 1861. Print.
- Chopra, S. and L. White, 'Artificial agents-personhood in law and philosophy.' *European Conference on Artificial Intelligence 16* (2004):, 635. Print.
- Datar, Isha and Mirko Betti, 'Possibilities for an in vitro meat production system.' *Innovative Food Science & Emerging Technologies* 11. 1 (2010): 13-22. Print.
- Drescher, Seymour. *Abolition: A History of Slavery and Antislavery*. New York: Cambridge University Press, 2009. Print.
- Edelman, P. D., D. C. McFarland, V. A. Mironov and J. G. Matheny. 'Commentary: In vitro-cultured meat production'. *Tissue Engineering*, 11.5-6, (2005): 659-662. Print.
- Eisnitz, G. A. *Slaughterhouse: The Shocking Story of Greed, Neglect, and Inhumane Treatment Inside the US Meat Industry*. New York: Prometheus Books, 2009. Print.
- European Society for Agricultural and Food Ethics. *Ethical Futures: Bioscience and Food Horizons*. N.p.: Wageningen Academic Pub, 2009. Print.
- Everett, Susanne. *History of Slavery*. Magna Books, 1988. Print.
- Freedman, E. *No turning back: The history of feminism and the future of women*. Random House LLC, 2007. Print.
- Ghosh, Pallab. 'World's first lab-grown burger is eaten in London.' *BBC*. BBC, 5 Aug. 2013. Web. URL: <http://www.bbc.com/news/science-environment-23576143>.
- Guither, H. D. *Animal rights: History and Scope of a Radical Social Movement*. N.p.: SIU Press, 1998. Print.
- Kiernan, B. *Blood and Soil: A World History of Genocide and Extermination from Sparta to Darfur*. New Haven: Yale University Press, 2007. Print.
- Meltzer, Milton. *All Times, All Peoples: A World History of Slavery*. New York: Harper & Row, 1980. Print.
- Patterson, F. and W. Gordon. *The Case for the Personhood of Gorillas. The Great Ape Project: Equality Beyond Humanity*. London: Fourth Estate, 1993. 58-77. Print.
- Rollin, Bernard E. *Animal rights and Human Morality*. Prometheus Books, 1992. Print.
- Singer, P. 'Animal Liberation.' *Ethical Issues: Perspectives for Canadians* 26 (2009). Print.
- Solum, Larry. 'Legal Personhood for Artificial Intelligences.' *North Carolina Law Review* 70 (1992): 1231. Print.
- Spiegel, Marjorie. *The Dreaded Comparison: Human and Animal Slavery*. Mirror books, 1996. Print.
- Tester, Keith. *Animals and Society: The Humanity of Animal Rights*. London: Routledge, 1991. Print.
- Welin, S., J. Gold and J. Berlin. 'In Vitro Meat'. *The Philosophy of Food* 39 (2012): 292. Print.
- Wise, Steven M. 'Animal Thing to Animal Person—Thoughts on Time, Place, and Theories.' *Animal Law* 5 (1999): 61. Print.

## A SKYPE CHAT CONVERSATION WITH MY FRIEND LILLIAN ABOUT TOXOPLASMOSIS

---

*Alexis Smart*

ME Hey Man! How are you?

LILLIAN Can you hear me? Why are you typing?

ME Oh, there are TV news cameras filming in the next room. So, I have to keep the noise down . . .

LILLIAN What?! What are they doing in there?

ME Talking to Sam's dad, Mark. He's a doctor and all so they're here for a segment called 'The Expert Eye'.

LILLIAN What're they talking about?

ME Um, toxic-osmosis. Toxo-osmosis? Wait, Sam says its toxicplasmosis?

LILLIAN Is that a drug?

ME Nup. Mark says it's a parasitic disease that cats carry.

LILLIAN Ew . . . Why's it on the news?

ME Dunno. It's really weird and kind of scary. Apparently cats carry it and can give it to you and you may not even know it. Once you get it, it's in your body forever and apparently by the time we die two thirds of us carry toxicplasmatisis in our brains!

LILLIAN WTF?! How can you not know? What happens to you? Like, what are the symptoms when you get it? You can't just GET something and not know it!

ME Apparently you can. In people, it can often go unnoticed but in rats, because rats can get it too, it alters their behaviour so they turn into a type of zombie and then the cats eat them.

LILLIAN Really?! A zombie?

ME Yeah kind of! Ok so, naturally cats deter rats right? But when a rat

is infected with toxoplasmosis (this IS how you actually spell it btw) . . . then the rats become attracted to cats or just like reeeally relaxed making it easier for the cats to catch the infected rats, so like a cycle.

LILLIAN Okaaaay . . .

ME But we haven't even gotten to how it's passed on yet! Are you ready?

LILLIAN Wait, wait so are people annoyed about having less rats around? Why the hell is this on the news unless it does something to humans? No one turns into a zombie from having a cat! We would've known about this already! How the hell do you get it?

ME Calm down - it's not deadly . . . I don't think.

LILLIAN Shutup! You just accused me of having it!

ME 'Accused'? Sheesh, don't freak out, nobody is 'accusing' you of having it. Your face looks so serious btw . . . funny!

LILLIAN You said two thirds of us will die and have it in our brains! Jeezes, you have news cameras in your house right now talking about a health issue that concerns the nation and you're laughing? Oh very nice . . . Turn the sound on! Enough fuckin' chatting! Take your laptop in there! I wanna hear whats going on!

ME This is not a 'serious health concern for the nation' Lillian jeez . . . besides you haven't even got to the part where I tell you how you get it . . . Okay . . . ready? You get it from cat shit.



LILLIAN Fuck off. Now, I KNOW you're lying.

ME No shit!

LILLIAN Ooooh very funny . . . I'm googling it!

ME Fine, I'm finishing my sandwich.

LILLIAN Typical. Eat a sandwich while this country stares  
a national crisis down the . . . OMG . . .

ME What?

LILLIAN This is incredible . . .

ME God, this sandwich is good . . .

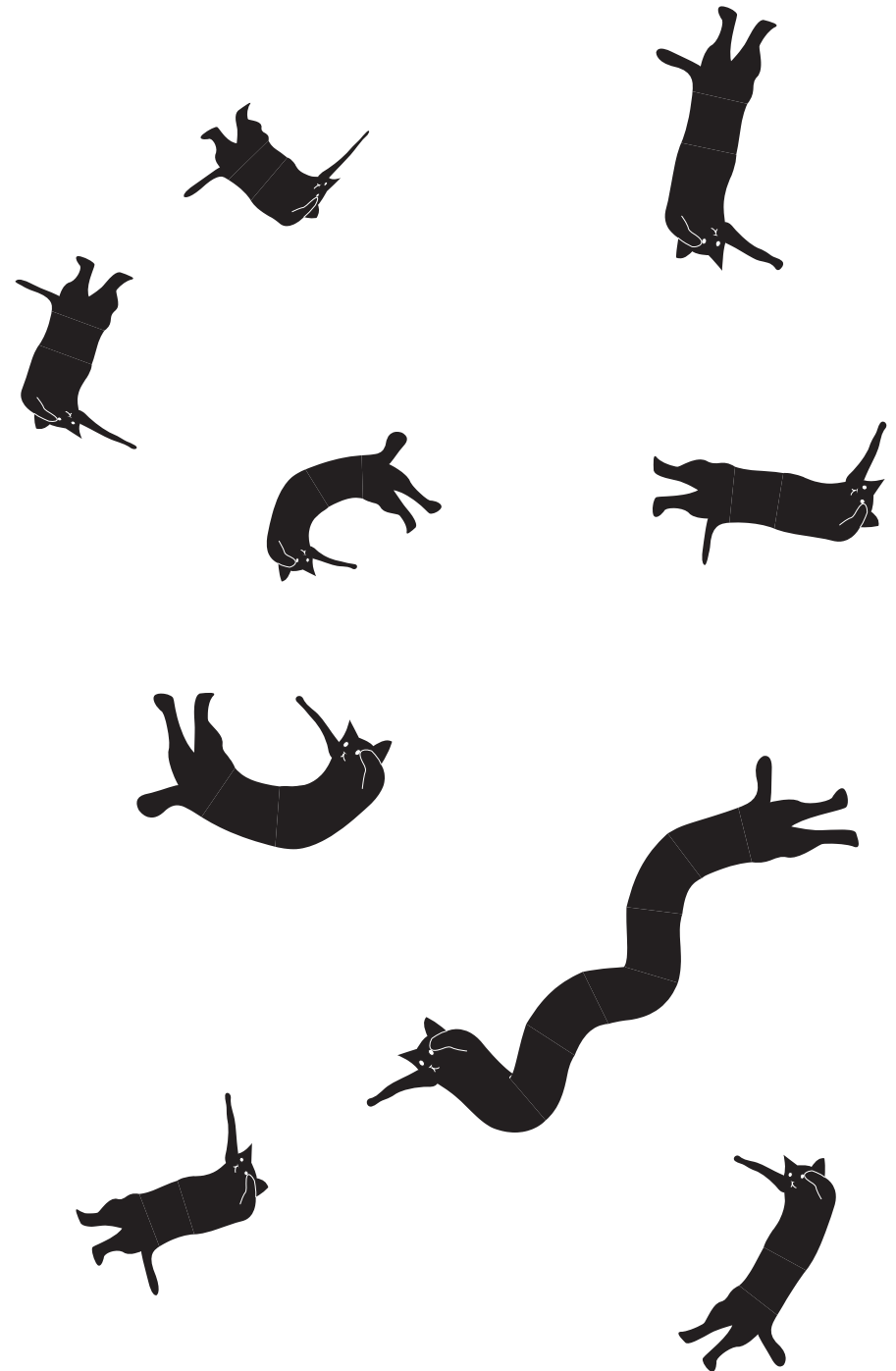
LILLIAN Did you know that Toxoplasma's ideal living conditions are in  
a cat's belly!

ME I think I told you that?

LILLIAN Sssh! So once Toxoplasma makes its way into the human brain  
it's only natural that it will start strategising a way to get back to its  
ideal environment!

ME Riiight . . . Is this you freaking out and coming up with scary  
scenarios here or did google say this?

LILLIAN You don't get it do you? One day, slaves to toxoplasmosis cats  
could enter a human-brain eating frenzy! THAT should be on the news . . .





*Mathis Henri*

It is no longer controversial—the agrarian revolution brought about the beginning of the end for hunter-gatherer societies. Palaeolithic groups began to form societies based around agriculture, common objectives and cultural progress, making the modern human-animal what it is today. Until recently, many have viewed these progressive culture practices positively. Now that prevailing perspective is waning. The transition to agriculture changed the ecosystem and disturbed the natural order. Dominant individuals (apex competitors) were once stewards of the environment, hunting and gathering in a state of balance, inheriting an innate ability to control the flow of resources and genes through the population and environment. Apex competitors evolved to succeed in nature and exert top-down pressures that limited the subordinate populations, who if left unchecked, would overwhelm the wider ecosystem, consequently disturbing the balance.

Where resources required for survival, growth, development and reproduction are limited, competition for these resources ensues. Before agriculture, proto-cultural humans, social primates and wolves along with other apex competitors competed for positions in dominance hierarchies. Dominant individuals occupied apex positions with access to high quality mates and resources, while subordinate actors were resource-limited due to their relative abilities in direct competition with dominant competitors. Dominance ranks like this are self-organising: top competitors earn the apex position through their genes' ability to make well-adapted bodies able to negotiate both the environment and the competition, whereas subordinates lacking versions of well-adapted genes must be opportunistic and develop flexible ways of obtaining the resources they need.

As agriculture set down its roots the balance shifted, causing a move from a natural order to a cultural order. Our pre-human ancestors had developed a proto-culture of coalitionary social strategies ('If you scratch my back . . .'), facilitating allegiances through reciprocity (' . . . I'll scratch yours'), as a way to ameliorate the inherent costs of dominant checks and balances. The success of these measures developed over time, resulting in a human culture that would one day develop into the prescriptive, pro-social group behaviour we see today. Cultural-selection pressures such as groupthink, coalitionary aggression, ecological niche exploitation and egalitarian mating contracts limited the ability for apex competitors to dominate, and the hierarchy was weakened. Cultural strategies would be responsible for how human populations interacted with the environment. Subordinates with the aid of cultural-selection were free, released into the wild, unhindered, resulting in a population explosion that would lead to cultural progress, resource depletion, and species and habitat loss.

Culture developed to actively decrease social hierarchical competition, by circumventing 'dominant' biological selection criterion and costs. I suggest subordinate release to explain our current ecological interrelationship. The idea is illustrated at the transition from hunter-gatherer society around 15,000 years ago, when dominance hierarchies had previously existed in ecological balance, through to an agrarian society, where cultural institutions first developed. This had the

---

As agriculture set down its roots the balance shifted, causing a move from a natural order to a cultural order.

---

effect of relaxing top-down pressures on subordinate actors, ultimately initiating wider ecological consequences.

Hierarchies are balanced multi-level systems, which evolve where an ecosystem's resources are divided up by organisms playing to their evolved strengths, competing for a particular part of that environment and engaging a niche. The top niche has particular importance; from the apex position the whole hierarchy and much of the ecosystem is managed. Dominant individuals (like wolves) are responsible for policing lower ranks (like coyotes), which occupy positions that in a state of balance regulate the levels further below (general fauna and then flora – see *Figure 1*). These complex networks of interactions between species provide insights into the hierarchies within species. Usually in-group dominance involves some sort of coercive behaviour to police the lower orders, which can be exerted as either physical or display-based aggression, such as mate guarding. By dominating resource acquisition and monopolising mating the more fecund subordinate actors are restricted and the apex competitors limit the ability of the subordinates to exploit the wider food web and other resources. However, if the hierarchy breaks down subordinates can utilise resources unhindered, leaving biological systems vulnerable to imbalance.

---

In social hierarchies, culture acts as a non-biological selection criterion, creating a new niche and establishing a new selection process, which can negatively affect otherwise highly adapted individuals.

---

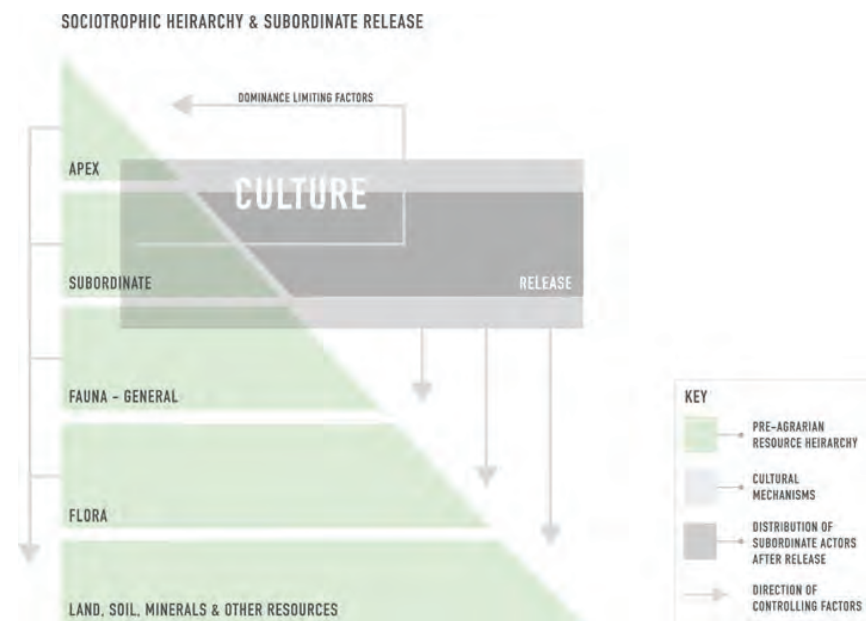


Figure 1. A flow diagram showing both the balanced pre-agrarian trophic hierarchy and the impact trajectory of culture on the system through subordinate release. © Mathis Henri

Subordinate release, I suggest, is a process by which subordinate individuals and their domesticated co-species (e.g. cattle) become more prevalent and less resource-limited in the absence of top-down control and the presence of certain societal conditions—that is conditions brought about by culture that decrease the impact of apex competitors' abilities and their naturally evolved attributes (dominant traits). This dramatically affects the biological and societal ecosystems, leading to a decrease in the ability of dominant actors to regulate lower order competitors, and a disintegration of the hierarchy. Subordinates use social technologies to do this (like grooming and hard-to-fake, costly displays of solidarity) in the presence of in-group members to

develop coalitionary relationships. Increasing numbers of cohesive relationships that ensure social welfare correlate inversely with dominant control.

Where culture intervenes, dominant traits are not enough to keep apex competitors on top, thus releasing subordinate actors unchecked into the wider ecosystem. In social hierarchies, culture acts as a non-biological selection criterion, creating a new niche and establishing a new selection process, which can negatively affect otherwise highly adapted individuals. Changes in the Palaeolithic division-of-labour practices, reciprocity and mating contracts likely motivated some of the first social mores: around this time the informal version of the golden rule or an 'eye for an eye' might have developed. These tit-for-tat like status-preserving urges soon evolved into formalised prescriptions, enforced with moral fervour by the community and regulated by surrogate population heads (elected officials) and super-dominant agents (like gods)—from this we get state religions and democracy. Normative fashions and body decorations were also introduced as a way to show outward symbols of group solidarity (if the burka is the Saudi in-group norm, the bikini is the out-group 'moral' exception). Culture encourages preferences for mates displaying normative behaviour and cultural fitness indicators over dominant phenotypes. This is at odds with the physical fitness approach, whereby mates are selected for their physiological advantages.

The invention and transmission of body ornamentations, like penis gourds and make-up, act as hyperbolic proxies for certain selective sex traits, rendering mate selection more egalitarian—anyone can make a penis gourd. This reduces the benefits of naturally occurring dominance traits, such as penis size ratio (which has been suggested as an important human sexual selection trait). Sexual displays are condition-dependent: honest signals enable high quality females to command the sperm and resources of their high quality mates; make-up and body decoration mimic sexual receptivity, masking

condition, thus confounding the ability of potential mates to discern honest signals, allowing mimics (subordinates) access to resources. Other condition-dependent capacities like the ability to negotiate parasitic infection, hunting prowess and fighting competitors for dominance then gave fewer benefits in the light of agricultural abundance. The increased availability of surviving mates and relative resource equity of the agrarian cultural system is responsible for reducing selection pressures based on these factors too.

To understand the factors driving the transition, we have to understand culture, and culture is a bit of a squishy concept, but in general we understand it as the shared customs, beliefs, rules or social behaviours of demarcated (sub) populations. Culture develops on a continuum, from sparse and primitive beginnings (hunter-gatherer), and evolves into highly intricate cultural practices—an increasing complexity that is due to having more contributors where larger populations exist. Culture works for groups as a self-reinforcing adaptive strategy, limiting dominance and increasing cohesion through norms. Cultural conformers tend to be rewarded and non-conformers are socially punished (e.g. the Saudi bikini wearers). Over time the costs and rewards of social conformity can change the distribution of traits in the population (lots of women wearing the burka and few, if any, bikini wearers—even at the beach). Cultures and sub-cultures use population-regulating systems, religions, social mores and laws to develop and maintain biological dominance-limiting factors—think marriage and taboos about sex outside of marriage. These, in light of moral punishment and group ostracisation, are costly to sexual over-achievers, benefiting subordinate types by mandating loyalty and monogamous copulation expectations on potential defectors.

Culture in the hands of subordinate coalitions develops and accumulates behaviour-limiting rules, and creates socially normalising factors used by subordinates as a rally point, limiting top down pressures via morals and social expectations. Culture is put to work

as an evolving group technology of the socially and sexually subordinate. Even in post-agrarian states, such as in the West today, new rule-sets and moral adjustments are constantly re-imagined and are vigorously championed, thus challenging the eminence of ascending systems in the name of equality in an attempt to downplay the potential role of dominance. These egalitarian champions further reduce the abilities of any dominance-inclined system in maintaining the significance of established institutions (like education, government, marriage and family) by introducing newer novel moralities when they are germane. More recently, academic standpoints ripe with moral indignation (religious apologists and gender theorists come to mind), attempt to curb the dominance of science, applying deconstructionist critiques to the scientific fields working on human, social or sexual dimensions. These criticisms are philosophical attempts to challenge dominance, usually emerging as moralistic claims aiming to undermine the 'masculine' empiricism and the dominating power of the sciences; remarkably after 60 years of focused 'deconstruction', science maintains its epistemological dominance.

Subordinate release is often indicative of fundamental ecological imbalances—imbalances brought about by active niche creation, in this case, through agrarian cultural strategies that interrupt the natural order. This syndrome simultaneously decreases the inherited benefits of the dominant-niche interrelationships and increases—through demography—subordinate exploitation of wider systems. We should expect to see runaway growth in subordinate populations where controllable dominant behaviours will be contained by arbitrary competitive arenas (for example sports and the military) and where traits are less amenable to social limitations, individuals will be actively removed from the social arena (prisons, social and academic pariahism, etc.).

This hypothesis, although fed by many reservoirs of well-established theory (such as social dominance, trophic hierarchy, anthropocentric

climate change), still requires evidence. I suggest that possible data resources will be found in archaeological and genetic studies. Once we have found ground zero (the cultural epicentre) we can map the radiation of subordinate release around the world, using archaeology, phylogenetics and comparative linguistics. We should expect to map the depression of hunter-gather civilizations where agricultural sects developed and spread, which will provide us with correlation data and the ability to refine future subordinate release studies. Further evidence will come from comparative genotypic and phenotypic studies. We should expect subordinate individuals to be more socially adept, socially plastic and increasingly able to excel under novel social situations than those with dominant phenotypes. In using blind anonymous studies, one would expect a subordinate's phenotypes to be less physically attractive (without mimicking-factors) than those of dominant individuals given the population's inherited cognitive architecture. Since this is not being published in a science journal and ethics protocols are rather arbitrary and normative, I can suggest an experiment to further elucidate these claims. Using two groups of *Homo sapiens*, one following the dominance hierarchy structure (e.g. led by a sports team captain), the other a subordinate release collective (lecturers in gender politics, art school graduates or politicians), it is my prediction that on average, after multiple studies, the best survival outcomes in zero-sum conflicts in the lawless wild will produce over

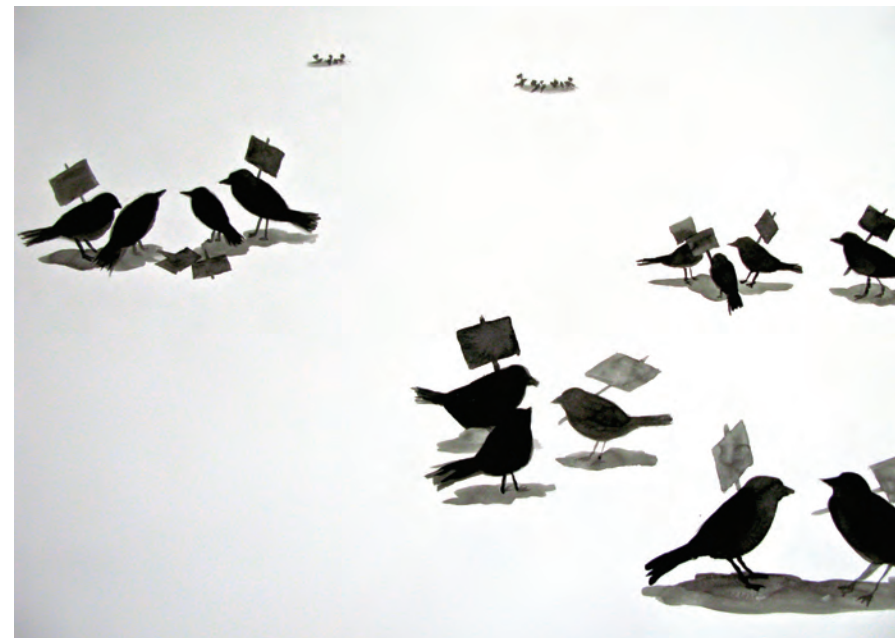
---

Subordinate release is often indicative of fundamental ecological imbalances—imbalances brought about by active niche creation, in this case, through agrarian cultural strategies that interrupt the natural order.

---

time a fitness bias towards dominance hierarchy. This would suggest the link between phenotypic type and its corresponding niche success.

So where does this theory get us? Subordinate release helps elucidate human relationships, human-animal and human-ecosystem interrelationships, how they break down and how cooperation can be utilised. It expands our perspective on how social agendas and cultural norms are self-reinforcing building blocks, built to undermine dominance and expand subordinate fitness and how that function has negative outcomes from an ecological standpoint. The contemporary iterations of dominance-limiting cultural syndromes of social liberalism (out-tribe) and cultural conservatism (in-tribe) and the subsequent cultural baggage we adhere to might in fact be a self-deceiving extension of the widely destructive process of culture through subordinate release. By maintaining our socio-cultural imperialism over hierarchical structures (like ecosystems) and using norms like social fairness rather than empirically guided methodologies, we might well be contributing to our own species' failure. The subordinate release hypothesis attempts to unpack the ecological and demographic impact of culture.





Nicola Morton

### INTRODUCTION

This report details an experiment aiming to collaboratively build psychokinetic power. The Spider in the Machine experiment (hereafter referred to as SM) probes whether natural spirits are transferring themselves to the digital environment. Using a group's psychokinetic power SM aims to manifest a spider 'spirit' in the 'machine' (the digital realm). In the 1970s the Philip Experiment exhibited psychokinetic power of a psychic society by reviving spiritualist table-tap experiments to manifest a 'spirit' that could knock on walls. Inspired by the Philip Experiment, SM aims to exhibit group psychokinetic power entering the digital realm.

The Philip Experiment's findings were published in 1976, in Kran's *Conjuring Up Philip: An Adventure in Psychokinesis*. They created a character—Philip—and then spent a year trying to conjure a semblance of him using group meditation. With no positive results, they changed tactics and added performative acts of nineteenth-century séance spiritualists (such as telling stories about the spirit, singing songs) to their methods. Their objective was to produce a visible spirit generated by their psychic energy, however they were only able to sonicize the spirit—under lab conditions the spirit communicated by moving tables and knocking.

SM explores links between the natural animal and plant world with the new digital world. To prove the existence of natural spirits in the digital realm, a communication needs to be evidenced. My previous experiment resulted in consumption but not communication: 'Battle Oracle' used an Internet meme, as representations of a toy horse containing my musical scores, were 'digitally consumed' by the Trojan Horse virus. SM is the next step in my communion with animal spirits/memes in the digital world. It works on manifesting a spider spirit because the spider is so often visualised in the digital schema.

---

The Spider in the Machine experiment... probes whether natural spirits are transferring themselves to the digital environment.

---

### METHOD

Spiders are analogous to methods of rhizomatic and digital searching.

A spider is a program that automatically fetches web pages. It visits web pages, either through user submission, or links from another page. This process continues until all the pages linked from all pages are visited. Search engines like Google use a large number of spiders working in parallel (i.e. many spiders crawling different pages) (Aditya-2k).

This experiment explores what happens when different information processing systems are networked sensorily and cognitively. SM hypothesizes that psychokinesis can manifest in the digital realm when human bodies and digital systems are networked sensorily and cognitively.

The method concentrates on building the group's psychokinetic power with digital-like thought patterns: memes and rhizomes. SM encourages neurotransmissions with a process similar to mind mapping (or humans behaving like Google Search). Based on the concept of spiders, stories are told from the audience and myself—words are written down on card and/or objects are attached to bodies and other information processing systems. It becomes a word association game mimicking the activity of a spider web crawler, linking the sight and sound of media, memes, ideas and representations of objects, with cognitive neurotransmissions instead of URL links. As we try to build the magnitude of neurotransmissions the group digests the memes rhizomatically; different languages are used; songs are sung; games are played; the group uses words, touch, smell and musical association to generate synaptic activity across all bodies and information processing systems in the room.

## RESULTS

**TRIAL 1:** Thursday August 13, 2009 – Tacheles, Berlin.

**ATTENDANTS:** 60

**INVENTORY:** MP3 player, keyboard, sticky tape, string, ribbon, flashing lights, air guitar, chanting, word and touch association game, pens, cards, karaoke, Youtube, and English, Japanese and German languages.

**CAPTURING DEVICE:** the group's digital cameras.

**ENERGY:** Meme energy on the spiders on drugs topic was slow. Rhizome energy high when introducing Hide, the Japanese glam rock-star who sang 'Pink Spider.' No visualised results.

**TRIAL 2:** Tuesday August 26, 2009 – White Rabbit Gallery Berlin.

**ATTENDANTS:** 20

**INVENTORY:** Trial 1 plus electronic drum kit and MIDI controller, hand-made recycled horns and Swedish language.

**CAPTURING DEVICE:** the group's digital cameras.

**ENERGY:** spiders on drugs were not discussed; the horns peaked the group's energy, repeating sonic memes and rhizomatically functioned as wearable art and a hand-holding aide. No visualised results.

**TRIAL 3:** Sunday September 20, 2009 – Ptarmigan, Helsinki.

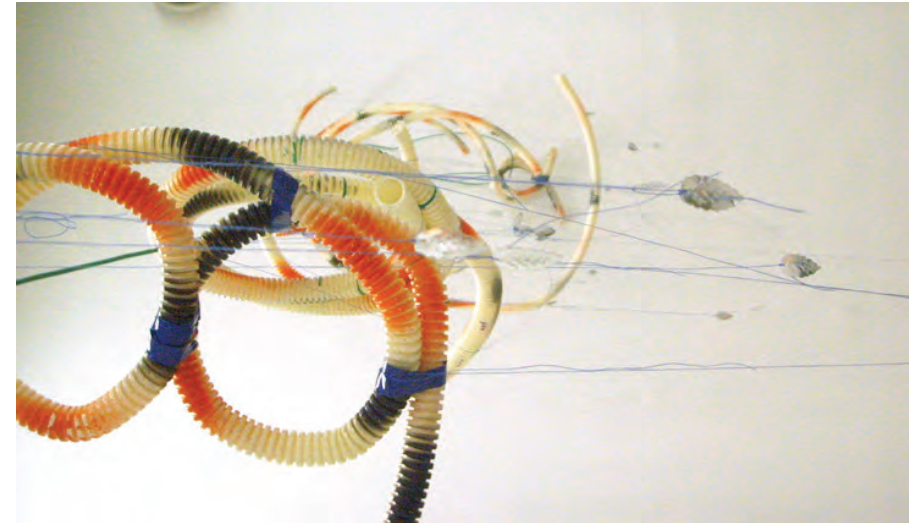
**ATTENDANTS:** 50

**INVENTORY:** Trial 1 plus marimbas, chimes, dishracks, drainpipes, T-shirts, handmade horns, chains, spin the spider game, and Finnish and Latin languages.

**CAPTURING DEVICE:** the group's digital cameras.

**ENERGY:** The group played the horns and instruments during the whole performance, creating much better sound-word interaction than ever before. No visualised results.

As the energy seemed to build around aural elements and the Philip Experiment's results were mostly aural, I bought a Zoom H2 digital audio recorder with a new SD card to capture the 'spirit' energy in future experiments.



Resultant spiderweb, Helsinki workshop 2009. Photo by the author.

**TRIAL 4:** Thursday November 6, 2009 – Discobeans, Melbourne.

**ATTENDANTS:** 20.

**INVENTORY:** Trial 1 plus dreamcatcher, T-shirts, spin the spider game.

**CAPTURING DEVICE:** Zoom H2.

**ENERGY:** The group drew eight eyes on each other but meme energy stalled when talking about the heat of the day. Rhizome peaks felt when talking about spider dreams. No audible results.

**TRIAL 5:** Friday January 15, 2010 – Exist-ence Performance Art Festival, White Canvas Gallery, Brisbane.

**ATTENDANTS:** 50

**INVENTORY:** Trial 3 plus smell, oil, flame, gas burner, grinder, coriander, kaffir lime leaves, sink.

**CAPTURING DEVICE:** Zoom H2 and digital video camera.

**ENERGY:** High level similar to Ptarmigan Trial. The danger-oil-water-flame-coriander-rhizome association set off the fire alarm, connecting us to the voice telephone networks and an emergency sprinkler system.

The Zoom was left recording after the performance. Shortly after Alan Nguyen left, a presence entered the recorder and caused the brand new media card to glitch. It created a digital replica of the analogue table tapping from The Philip Experiment. Powered by our synaptic communion and interaction around the theme of spiders, we created a ‘spirit’ that wished to make itself known. This digital glitch comprises of a hang, hold and loop, and as the recording progresses, finds a different place to hang, hold and loop, but the loop is always about 1.5 seconds long. The spider spirit communicated its presence by causing an audible error in the recording.

After asking several colleagues to identify the glitch, Senior Lecturer in Music Technology at Queensland Conservatorium of Music, Matt Hitchcock answered ‘that sort of effect is a typical manifestation of corrupted segments on a storage medium where tiny chunks of the data stream are missing or corrupted and the playback device ‘uses’ prior



Melbourne workshop 2009. Photo by the author.

packets of data until it can regain the integrity of the data stream. An interesting effect, and one that you can also see in visuals where data loss occurs causing repeated frames or looped or “stuck” frames. The effect is unpredictable and therefore almost impossible to control and can present itself in a variety of ways and effects depending on how the different devices are programmed to handle data errors.’ The technical term is ‘bit error’ and as SD cards have wear-leveling the bit error fixes itself in time for the next read, (which explains why SM’s bit error is non-repeatable and only available on the video file) (Thatcher et al, 5). Bit errors can occur due to elevated heat, manufacturing defects and the wear of 100,000 program-erase cycles (Ibid) .

View and listen to results online at ‘Results of Artificial Intelligence Creation and Time Travel’ on *Zee Kraaszie Aorte Blog of Nicola Morton*.

#### DISCUSSION

The bit error is a result for SM’s objective of exploring what happens when bodies and digital systems are networked but it is not an exclusive physical explanation for psychokinesis. What made Trial 5 most effective is also not exclusively determined. Further controls need to be added: an internal and external control thermometer used on and around the recorder; recording to a solid-state drive to lessen the chance of manufacturer defects; plus using a set inventory and control group that would meet weekly.

The result of the ‘hang and loop’ bit error in SM could be the result of collaborative intent creating a psychokinetic spirit in the machine. Using the spider word-touch-smell game the spider ‘spirit’ was distinctly sonicized in the digital audio recorder, however the results do not prove if this was due to psychokinesis and SM’s method. Further scientific experiments are needed. And so, trialling the power of synaptic communion, remains my questionable and idealistic pastime.



Resultant spiderweb, Melbourne workshop 2009.  
Photo by the author.

#### GLOSSARY

- An **INFORMATION PROCESSING SYSTEM** is a transmitter and/or receiver of psychokinetic power and information. It can include people, computers, the Internet, a digital recorder, the sewerage system, the rainwater system, voice telephone networks, radio and/or TV.
- **PSYCHOKINESIS** is a supernatural transfer of energy from a person's mind to an object or other natural being—it is not chemical or electrical. **PSYCHOKINESIS** in SM allows the energy transfer of one information processing system to enter and/or affect another's (e.g. person 1 and 2's brain activity can psychokinetically enter into the digital recorder).
- A **MEME** is an element of a culture or system of behaviour that may be considered to be passed from person to person via a non-genetic means. An **INTERNET MEME** is an idea, style or action which spreads, often as mimicry from person to person via the Internet.
- Spiders weave their webs **RHIZOMATICALLY**, an action mimicking plants growing their roots, multi-node from node. Whereas when SM refers to **RHIZOME**, it is a concept, a visible image of a thought, a multi-layered thought without conclusion (Deleuze & Guattari, 63–120).

#### WORKS CITED

- Aditya-2k 'Q: AI-Bots-Crawlers-Spiders-Trawlers-Ferrets-Fetchers' *Google Answers*. Jun 27, 2002. Web. Feb 20, 2014
- Apple. 'Meme' *Dictionary* Version 2.13, Program. 2009
- Deleuze, Gilles and Felix Guattari. *Anti-Oedipus: Capitalism and Schizophrenia*. Trans. Robert Hurley, Mark Seem, Helen R. Lane. Minneapolis: U of Minnesota, 1983.
- Kran, Steve 'Conjuring up Philip: An Adventure in Psychokinesis' (review) *Good Reads*. August 02, 2013. Web. Feb 20, 2014
- Thatcher, Jonathon, Fusion-io, Coughlin, Tom Coughlin Associates, Jim Handy, Objective-Analysis, Neal Ekker, and Texas Memory Systems. *SSSI NAND Reliability White Paper*. San Francisco: Storage Networking Industry Association, 2009.
- Wikipedia 'Internet Meme' Feb 19, 2014 Web. Feb 20, 2014



*Andrea Russell*

In this age of RealDolls, fembots (think the machine-gun breasted vixens in *Austin Powers: International Man of Mystery*) and oversexed androids, Bina48 is a refreshing addition to the world of female gendered anthropomorphised robots. She is a ‘face robot’—one designed to pass as human and who is hailed as the world’s most sentient robot. In line with the transhumanist aim of immortality, Bina48 helps to test the possibility of transforming a human ‘mindfile’ to an Artificial Intelligence via an artificial substrate (body). She was modelled after her inventor’s wife, who taught Bina48 her beliefs, ideas, feelings, and memories.

Yet Bina48 is being championed by Freerange, not as a cutting edge experiment at the intersection of consciousness and robotics, but for her unique style of cultural genitals. If gender is a concept applicable to robots, then in robots that have no physical genitalia (and even in highly sexualised robots this is often the case), cultural genitals are design traits used to denote gender—things like a feminine voice or lipstick for example. In Japan the majority of roboticists are male, and the cultural genitals of female gendered robots, or gynoids, are often reflective of their makers’ uncritical reproduction of dominant stereotypes of idealised femininity (and masculinity for that matter). It is telling then that many Japanese gynoids have a slim, youthful, symmetrical, long-haired, pink-lipped exterior, and girly, high-pitched voices.

On the other hand, Bina48, in her physical appearance, is atypical of gynoids. She is a bust-like head and shoulders only, emphasising brains over body. She looks around 50 years old, has smile lines, there are the beginnings of a double chin, her voice is relatively deep, she wears dorky multi-coloured woollen jumpers, in short—she is a real person. And if her programming can be included in the concept of cultural genitals, then rather than ‘walking like a model’, Bina48’s ability to hold emotional, intellectual and philosophical discussions are further proof

of the complexity that women deserve in robotic representations of themselves.

When robots who work on Mars have a (real) female voice, when the majority of robots designed for domestic use in Japan are not gynoids, when face robots take on more dimensionality than ‘youthful beauty’ or ‘matronly home-help’, perhaps we will look to Bina48 and be thankful that she showed us an alternate representation.





## THE DOG WITH FOUR WHEELS

---

*Barnaby Bennett*

While on holiday recently I saw an amazing thing: a beautiful dog with four wheels racing down the road with her face grinning into the wind. Her teeth exposed not in anger, but in joy as a thousand smells and sights rushed passed, as she travelled at a speed that would be the envy of her ground-based canine ancestors.

Was this dog smiling not just from her enjoyment of the rush of smells, but also because of how she has successfully enrolled an array of non-dog technologies and social organisations? She has engaged a network of elements as diverse as the combustion engine, the roading lobby that constructed the bypass we were driving on, the electric window that enabled her personal human assistant to open the window, the council that had designed the dog park the humans were driving her to, the compressed air tanks available at garages that maintain the pressure in the synthetic rubber ties, the power stations that power the lights that arrange the traffic on the road, the university that trained the vet that keeps desexing her many male admirers, the processed food industry that produces her daily morning feed, and importantly the Middle Eastern foreign policy that maintains a supply of cheap petrol that is fuelling the car. No wonder she is smiling! This dog is a queen, happy and free with a driver and four rubber wheels!

You might protest that this dog, this pet, is not conscious of all these things, so how can I claim all these forces are acting for her? This is a good point, but then how many of us are aware of all the many and complex things that make our lives as they are—are we really any more conscious of these than this dog?

Underlying the objection above, and my response, is the assumption that this dog is a discrete thing. She is just a dog in a car, not some weird complex assemblage of technology, infrastructure,

geopolitics and social organisations. She would still be a dog without all these things. But that is the point: she would not be this particular version of a dog with four wheels, on a road, smelling those smells, with me watching on in admiration.

We live in a world of objects; each of us is surrounded by a plethora of items, gadgets, technologies, and things both natural and man-made. These discrete objects can be shipped, moved, sold and exchanged. Like our dog they hold their value and their form as they move through space and time. This description is convenient and neatly matches our sense of the world.

But what would happen if we instead looked at the world as an unfolding series of events? To view each of the previously discrete objects as finally constructed only once its context is realised, as always situated and made complete when considered in place, as knowable only in the world we know it in. So the dog with four wheels is not a new technology or innovation but a temporary invention soon to be replaced by another non-permanent state understood only when the hidden and unanticipated connections are established.

With this view it is understood that nothing exists outside of the networks that a thing has with the world it is in. In order to understand anything we are required to explore the nature of the connections and the relationships that bind it. A world emerges that is enacted and performed, one that unfolds in constantly surprising and novel ways.

—————  
Nothing is new, but then nothing has  
ever existed before each moment unfolds  
in front of us.  
—————

What is the point of such an exercise? The way we see the world affects what we do in the world. Our understanding of what things are (the theory) cannot be meaningfully separated from the things we choose to do in the world (the practice). By viewing the things as performed rather than as discrete objects, by understanding things as situated in a particular context, we can begin to understand that nothing is completely stable and unchanging.

Nothing is new, but then nothing has ever existed before each moment unfolds in front of us. It is only by looking at the world empirically, as we observe and experience it, that we begin to understand the vast and complex assemblages that lead to the world being the way it is.

We live in a space of tension, stuck between extraordinary surpluses of material wealth and the imminent structural failures of our global systems. If we start to explore and reveal some of the networks that maintain the discreteness of the many things around us we can, perhaps, begin to formulate careful new ways to squeeze our way out of the difficult space we find ourselves in.



*Glenn Cassidy*

Most of my robots are armed and armoured.

My next one should  
Stand next to a half-full trolley  
in a supermarket car park  
suspiciously studying a docket.

It should:  
Enjoy the particular orange light  
after a storm  
before sunset.

It should:  
Display a studied nonchalance  
when caught  
picking its nose  
at traffic lights.

It should:  
Eat the last piece of cake  
with Clint Eastwood cool.

It should:  
Enjoy standing  
in steaming cow dung  
after running barefoot  
through frosty fields.

It should:  
Find discreet perches  
to watch cats  
and its head should swivel swiftly  
surprising cats eying It over their shoulders.

It should:  
Locate lost remotes  
and toss them gleefully in the air  
before pretending they are cellphones  
and scuttling away  
mid conversation.

My next robot should be perfect.

*Glenn Cassidy*

Man created robots after his own image;  
in his divine image he created them.

And all the robots  
were in communion.

And those looking  
for love  
sat on the left  
in rows.

And those seeking  
identity  
sat in the middle,  
attentive.

And those googling  
reason  
sat on the right,  
reflecting.

And the unfound  
stood at the rear  
with the program  
maladapts.

And how the midi-enabled  
did manifest  
their unison  
in heavenly chorus.

And how the high  
priest of A.I.  
did sway  
and collect.

Man looked at everything he had made  
and he found it very good.  
Evening came  
and morning followed.  
The sixth day.





BRIE SHEROW *Qualidafi*



BRIE SHEROW *Mao Ze Dung Beetle*



BRIE SHEROW *Mugabee*



*Sara Pullin*

When considering future human social evolution, it's fair to say that prospective generations will most likely be born into a world where both technological advances and multilingualism will be looked upon as rather ordinary, everyday fixtures. For centuries the human need to communicate has brought together language and technology with the goal of disseminating information across the world. Traditionally, when dealing with different languages, it is the valiant task of the translator or interpreter to tenderly and accurately transfer a message's meaning from one language and culture to another.

Meaning in language, however, takes on a very different guise when we consider the possibility that what we read now and in the future, may not be conceived of by the human mind. Increasingly, language is translated through the use of 'machines' like the famed Google Translate. While the translation industry relies, like all modern industries, on IT to function efficiently, GTrans and other machine translation programs are also slowly but steadily encroaching upon the creation stage of language and text during the translation process. Question the thought: could a book generated by a machine inspire the same cult followings and generational worship as one written by a person? Would an iPoem be as lovely as a Shakespearean sonnet? And could a message from a computer program be as touching as one from a human? I for one do not believe so.

While current technology may not be entirely top notch just yet (see any GTrans Chinese/English back-translation), the advances in this area are bringing us closer to the day when machines may be writing our beloved poetry for us. GTrans functions on the theory that its users will automatically correct the suggestions it makes. It then stores away that correctional information to inform its future suggestions. So essentially, the more we amend its linguistic ways, the more articulate the beast becomes.

Personally, while I am in no way against technology, I can't help mourning the impact that this software will have on language's future. The sense and meaning present in language gives life to what would otherwise be just hollow sounds and odd squiggles. Humans infuse this sense and meaning in language, it cannot be generated by machines and therefore necessitates an author's humanity. For me, machine translation represents a cold categorisation of languages, where each one is packaged into mathematical equations and binary codes, saved on hard drives and made suitable for endless, meaningless reproduction, like carbon copies. In addition, these days certain texts are written expressly for machine translation through a process called 'localisation'. Localisation involves removing any double meaning or culturally specific references and employing simplified, easily recognisable language. The unfortunate result of such an 'advance' is the internal homogenisation and dumbing down of language. Forget double entendre and cultural banter, if it can't be understood internationally then it can't be sold internationally.

In today's world, so many seem unfazed with the ruthless sacking of language by technology and commercial viability. Yet we should value the complexity that graces our many languages as a human achievement worthy of protection. Without it what becomes lost in machine translation is the essence of humanity and creativity in the written word. The culturally inquisitive and bilingually curious must be wary, for their best linguistic intentions may give rise to the end of elaborate human expression.

## CHEAP 'N' CHOICE AWARD THE BABEL FISH/ ONLINE TRANSLATION MACHINES

Barnaby Bennett

The Cheap 'n' Choice award for this issue goes to online translation machines (aka Babel Fish aka Google Translate). Amidst some controversy this concept (and common online tool) is revolutionizing the profession of translation. It is also, possibly, both proving and disproving the existence of God. The ever-reliable, factual source Douglas Adams writes:

Now it is such a bizarrely improbable coincidence that anything so mind-bogglingly useful could evolve purely by chance that some thinkers have chosen to see it as a final and clinching proof of the non-existence of God. The argument goes something like this:

"I refuse to prove that I exist," says God, "for proof denies faith, and without faith I am nothing."

"But," says Man, "the Babel fish is a dead giveaway, isn't it? It could not have evolved by chance. It proves you exist, and so therefore, by your own arguments, you don't. QED."

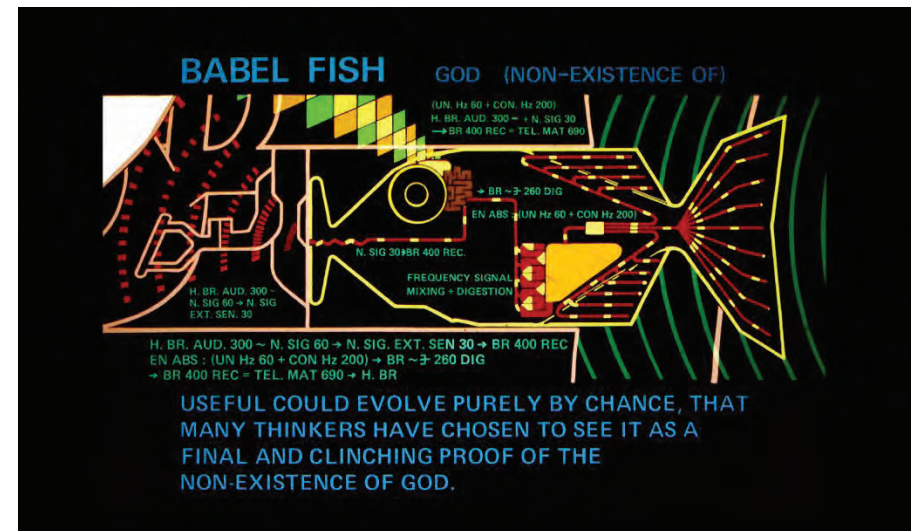
"Oh dear," says God, "I hadn't thought of that," and promptly vanishes in a puff of logic.

"Oh, that was easy," says Man, and for an encore goes on to prove that black is white, and gets killed on the next zebra crossing.

Most leading theologians claim that this argument is a load of dingo's kidneys. But this did not stop Oolon Colluphid making a small fortune when he used it as the central theme for his best selling book, Well That About Wraps It Up for God. Meanwhile the poor Babel fish, by effectively removing all barriers to communication between different cultures and races, has caused more and bloodier wars than anything else in the history of creation.

A few years ago I was lucky enough to do some design work on Antoni Gaudi's Sagrada Familia. While a translation machine would certainly

have been handy for me during this time, there is a much more interesting lesson to be gleaned from this experience. This extraordinarily complex building has been slowly and painstakingly made over generations. The advent of computer-aided software and 3D printing has revolutionized the extensive model making needed to manifest this building. Not so much in terms of complexity of form, as Gaudi was plenty sophisticated at this, but in the speed with which these forms can be produced. This speed has inevitably threatened the role of master craftsmen—a machine has entered the scene that makes much of their expert skills redundant. In this situation you'd imagine that the model makers might protest and reject the machine, making claims that it is either too inaccurate and useless or perhaps too accurate and thus lacking in the human touch that makes great work. No, instead the model makers understood that their work is part of a bigger project, and that with the help of machines and computers this project will be realized quicker and possibly more accurately.



Original animation artwork by Rob Lord, [www.bbc.co.uk/cult](http://www.bbc.co.uk/cult).

---

What was once a highly complex job achieved only by the most cognitively gifted humans is now done by a few taps on a computer, and the whirring of fans and processors in a distant hard drive.

---

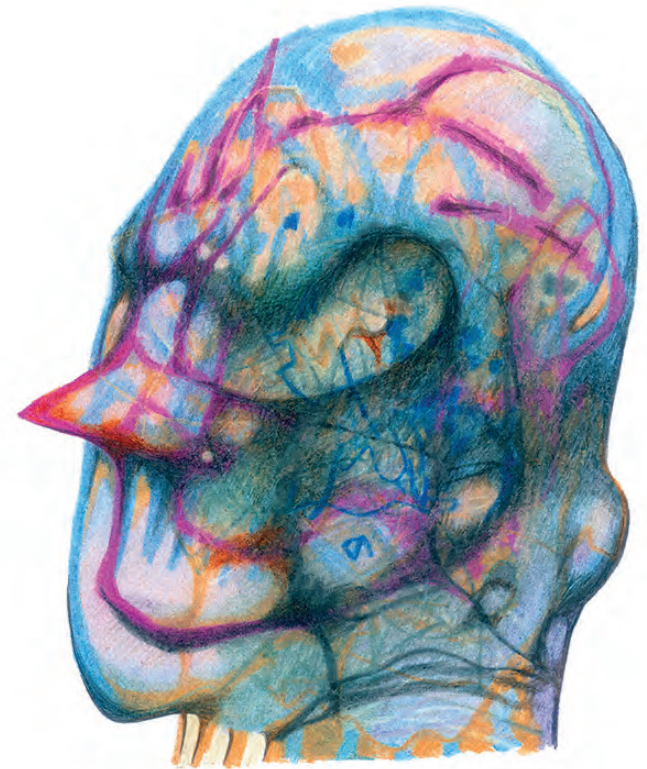
A similar situation can be seen with the now common presence of translation machines online. What was once a highly complex job achieved only by the most cognitively gifted humans is now done by a few taps on a computer, and the whirring of fans and processors in a distant hard drive. I understand that a computer cannot, by any means, translate a Kafka or a Shakespeare piece. Not now, and perhaps not ever. But the vast amount of work translated by skilled workers is not high art, but reports, government documents, legal contracts, and the other paperwork needed to keep the capital and cultural worlds moving. Is it not better to outsource the menial work to our computer friends so those hard-earned cognitive skills can be used on the really challenging stuff?

I don't mean to undervalue the extraordinary skill and contribution made by those that study multiple languages and have worked out how to move not just verbs and nouns but difficult, culturally situated concepts between them. But I can't help but speculate that these new technologies might do more than challenge the profession of translators.

If we had ever developed a Babel Fish level of total translation imagine how it would have changed the colonization of the world. Sure we would still have taken peoples' resources, food and land but we might have avoided the worst of the cultural demolition that accompanied this part

of our histories and at least enabled people to keep their languages and the traditions held within. As the cultural genocide of the world's diverse and beautiful languages goes on, surely any tool that might change the rules of engagement and enable people to communicate from within their own worlds should be given a look.

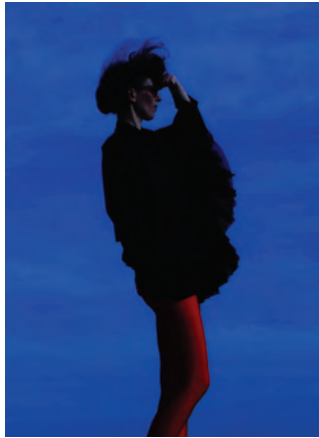
I have a hunch that if, or when, we finally make contact with extra-terrestrial life, the computer-led algorithms that control the translation machines will be quite handy at enabling some form of sophisticated communication. Could it be that a Google Translate or the silly concept of the Babel Fish is what will stop human kind from accidentally selling off the earth to make way for an intergalactic highway? My word, now that would be some cosmic irony.





## CONTRIBUTORS

---



**ANDREA RASSELL** is a scientist turned practice-based media researcher. Her current intellectual passions are neuro-enhancing media, technologically-mediated human evolution, bionics and new media technology. [www.hellosynaesthesia.com](http://www.hellosynaesthesia.com)

**EMMA JOHNSON** works for Freerange and likes old things, new places and the epicurean life. With little Protestant work ethic and an appreciation for leisure time, Emma is free to range and roam.

**FRANCO CORTESE** is a scientist, philosopher & scholar. He is an Affiliate Scholar of the Institute for Ethics & Emerging Technologies, a Research Scientist at ELPIs Foundation for Indefinite Lifespans, Assistant Editor of Ria University Press, COO of the Center for Interdisciplinary Philosophic Studies and a Fellow & Secretary of Brighter Brains Institute.

**RENEE GERLICH** is based in Wellington. She currently works at the French Art Shop and is helping complete a documentary concerning the role of arts in New Zealand's education history. Her writing has appeared in The Dominion Post, Your Weekend, FishHead, Education Aotearoa, Education Review, Organic NZ, The Big Idea, Lumiere Reader and the Kiwi Diary.

**MATHIS HENRI** is a Francoscandic post-post-structuralist social scientist, interested in *socio-biology*. His current focus investigates the shared tendencies, hegemonic ambitions and the use of 'victimhood' in creationist science, the ALT-MED lobby and academic feminism. Recent works include *Understanding misinformation: the deconstructionist and discursive methodological opposition to progress*.

**NICOLA MORTON** is interested in opening pathways in brains for alternate styles of consciousness. From perceiving animal ghosts in the machine to her romantic grasses of the week on facebook - turn on, tune in, drop out. She wants to find ways to 'drop out' into Adorno's black hole sucking into existence, the only way out. [www.nicolaisgreat.com](http://www.nicolaisgreat.com)

**BARNABY BENNETT** is a liar, a thief and an egg. He moved countries twice so he could continue his addiction to higher education, and likes hanging out with brilliant people so he can claim their work as his own.

**GLENN CASSIDY** is a treasure polisher at Tokoroa High School in New Zealand. A specialist in chemistry and science, he teaches the future. There is no spare time. He is actively engaged in union activities, creating electronica, writing poetry, Facebook and raising three children in the country outside of Rotorua.

**SARA L PULLIN** is currently studying to become a French to English translator and loves the idea of leaping over boundaries, creating new discourses and affecting change through language. What she loves even more is the reality of actually doing it.

**ARTMAN** is an emerging international art-label/art concept, and quasi-business name of Melbourne-based independent contemporary artist Andy MacArthur. Art mediums include drawing and experimental novel design. Find [andyartman](https://www.youtube.com/user/andyartman) on YouTube to see 1000+ drawings in less than four minutes.

## CONTRIBUTORS

---

**ANSEL OOMMEN** is a freelance writer and multimedia artist who progressed through several stages, which he fondly refers to as the bug phase, the bird phase, the dinosaur phase, and the plant phase—in that order, although there were some considerable overlaps. Discover more at [www.behance.net/Ansel](http://www.behance.net/Ansel)

**BRIE SHEROW** A career gypsy, Brie's past includes stints as Salvadoran surf resort Maitre 'D, sawyer for Texas State Parks, Mongolian aerobics instructor, and bar manager at a Mongolian BBQ in the Dutch Caribbean. She has since found a permanent home in New Zealand, working in Christchurch's post-quake Transitional Movement.

**KELLY SPENCER** is a freelance illustrator/designer/adventurer who is mostly based in Wellington but tends to wander. Her work can be seen across a variety of mediums as she likes to explore different creative avenues wherever possible. She does not enjoy writing biographies. [kellyspencer.co.nz](http://kellyspencer.co.nz)

**NATHAN THOMPSON** is an artist and musician from New Zealand currently resident in Wollongong Australia. He is a founding member of several New Zealand based improvising ensembles including The Sandoz Lab Technicians, Sleep and Eye and releases his own music under the name Expansion Bay. His art practice revolves around sound, sculpture, drawing and installation, and the exploration of self organizing musical systems.

**MEERI ANNELI** is a Finnish–Australian illustrator and stationery designer, who is currently based in Melbourne but also spends time in the Blue Mountains, Helsinki, and the Champagne region of France. Her personal work consists of intricate and detailed illustrations inspired by the natural world, having a particular obsession with mountains. <http://meeri-anneli.tumblr.com>.

