

ZĒTĒSIS³

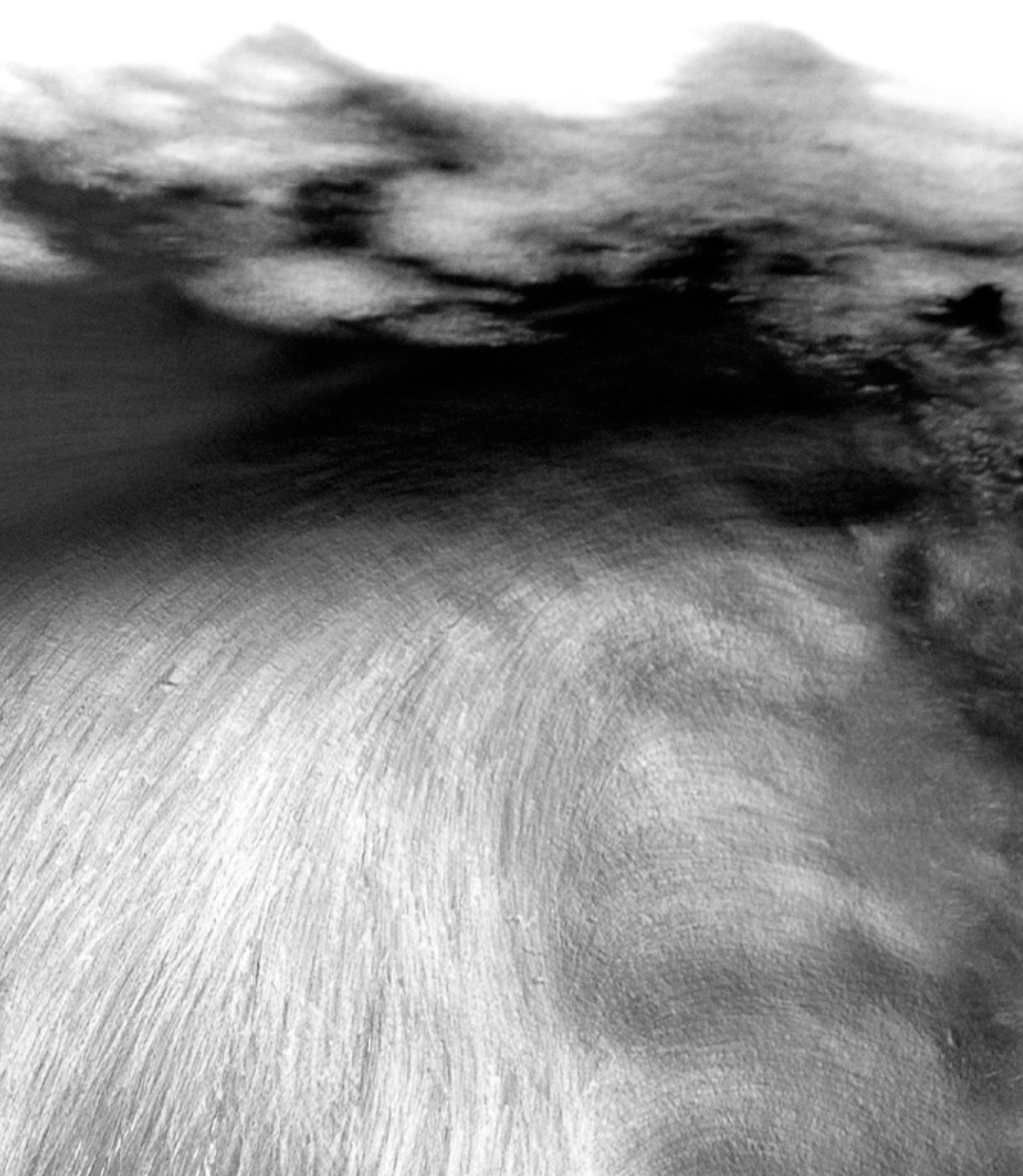
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Twice Upon A Time: Magic, Alchemy
and the Transubstantiation of the Senses





Page 2, 4, 6 - Sarah Goudie (artist), *A Summons* (detail),
paper and graphite, 220x150x15cm. 2014

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Prelude:

Twice Upon A Time: Magic, Alchemy and the Transubstantiation of the Senses

In this, the third volume of *Zētēsis*, a neatly packaged Molotov was launched into the 'out-there' of art, of science and of life in the disguised form of an international call for papers.

We were curious if there might be a different way to re-think/re-make the links between and amongst speculation, materiality, performativity, the senses and sensualities, with bodies both real and imagined, without having to resort to the somewhat staid methodologies of “dialectical materialism” or “objected oriented ontologies” or the seemingly overrated metrics of “scientific deduction.” Recognising, at the same time, that we were riding the wave of a massive, revolutionary paradigm shift brought on by advances in complexity, radical materiality and the quanta, quarks and feedback loops, robotics, artificial intelligences, transsexualities and ecological verisimilitude our task could not have been more urgent.

The Call went out. But rather than ask for a direct or literal response to this 're-think/re-make', the collective chose instead to journey onto a slightly more dangerous, curious path, one not usually linked with formal research, but instead cast often as frivolous or whimsical, illusionary, religious or just plain wrong. We chose to partner with the wild side and take a stronger look-see at the forerunners to all contemporary art, philosophy and science; to wit: magic, alchemy and the transubstantiation of the senses.

Under the illusive cloak of magic, the curiosity of alchemists introduced a means for experimentation into the innate properties of materials. The transformation of raw matter into precious metals, the combination of hot sulphur and wet, cold mercury to birth the philosopher's stone; to bring the inanimate to life, to vanish miraculously and conjure the body, as well as providing a foundation for the laws of substance based on sensory interaction and its potentiality. The scientific practices of today echo this inherent desire for material vitally 'alive' transformations, yet Western tradition remains cautious of unreasoned sensorial data, often treating it with trepidation. While this paradigm has proven an efficient methodology, it has installed a discriminatory partition between that which can be rationalised or mathematized and that which is supposedly 'only' sensory.

These energised and sensate transformations mark the beginning of a new challenge against tradition, returning to curiosity, experimentation and the intensity of the senses away from conventional modes of thought.

The Centre for Fine Art Research (CFAR) and the Research Centre for Creative Making (S.T.U.F.F.) based at the Faculty of Arts, Design and Media



(ADM) joined forces at Birmingham School of Art – BCU to welcome papers/performances/exhibition installations that responded to magic/alchemic practices in all their forms, including but not limited to the origins of alchemy and its contemporary relevance in science, magic performance, illusion, automata, the sensory in artificial intelligence and radical thinking in relation to concepts of time. We invited artists, scientists and philosophers to explore again the threshold between these paradigms, dwelling on curiosity and the tradition of scientific questioning.

This bold and viscerally complex conference, laid the groundwork for this **volume 3** of *Zētēsis: Twice Upon a Time: Magic, Alchemy and the Transubstantiation of the senses*. The exhibitions, artwork, papers and prose contained in this volume include some of the best international practice-led and theoretically emboldened research on this topic today.

By foregrounding the alchemist's vision, we now present here in *Zētēsis* our initial findings: a profane renegotiation of the very boundaries that seemed heretofore always insistent upon separating into binaric unities the so-called texture-realities of representation vs thought, sensation vs logic, image vs text. In challenging those easy divisions, we celebrate the (re-)turn to a 'twice upon a time' when transubstantiation, metamorphosis and morphogenesis gives succour to this energy we so nonchalantly call art.

Johnny Golding

David Cheeseman

Once Ever After: Twice Removed

Precise.
Sumptuous.
Degree of light.
Carpet.
Glass.
Discontinuous.
Logics of
Sense.
Time.
Dimension.
Tiles.
No distraction.
Playful.
Painful.
Demanding.
Politically sussed.

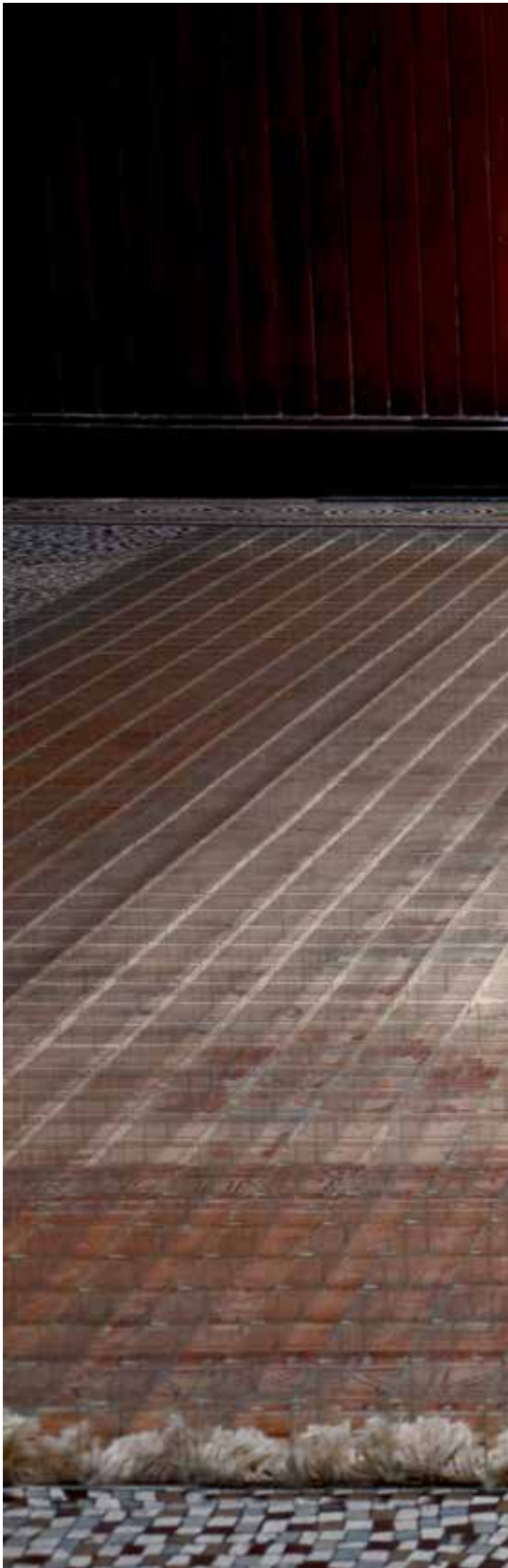




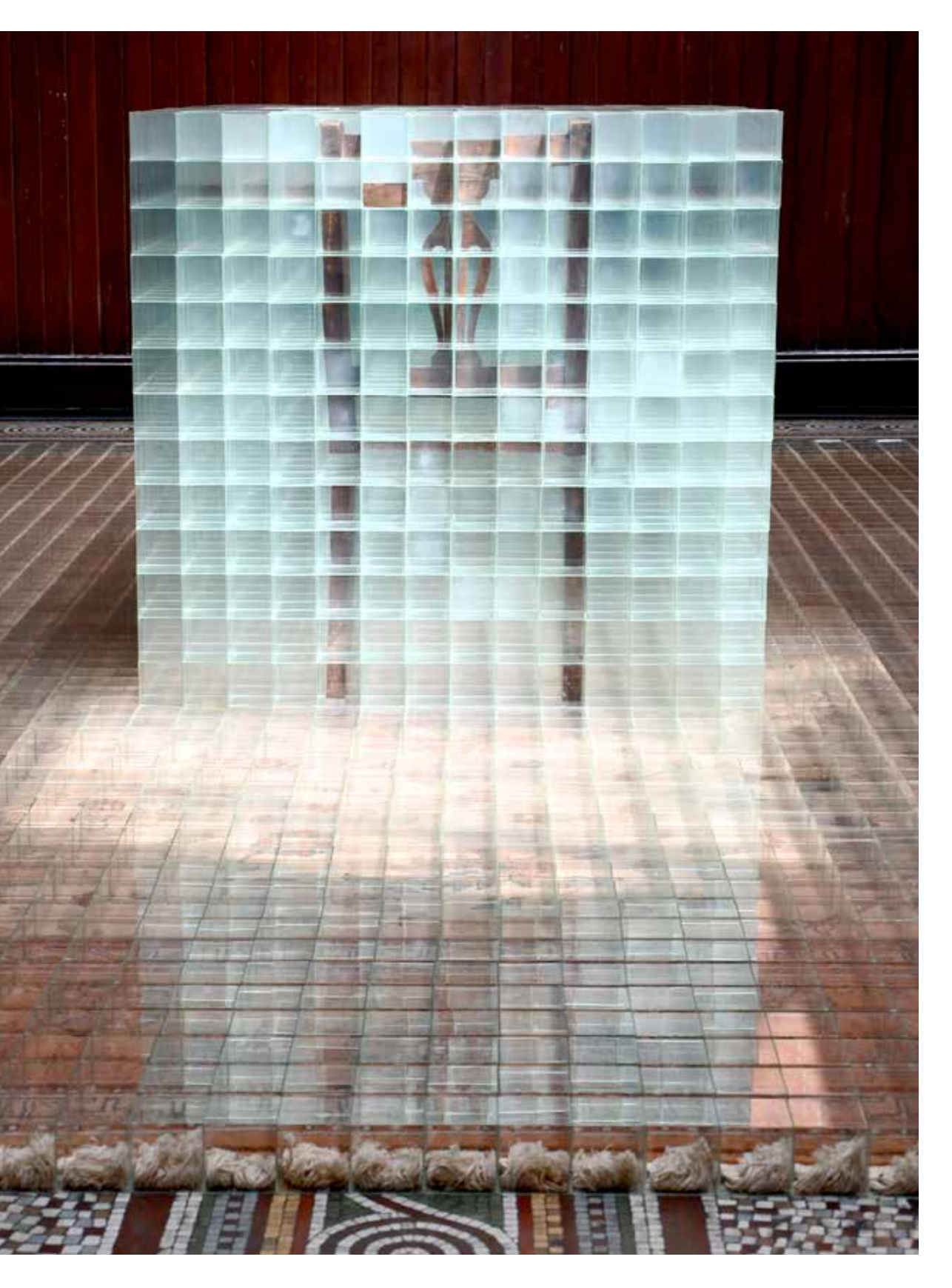


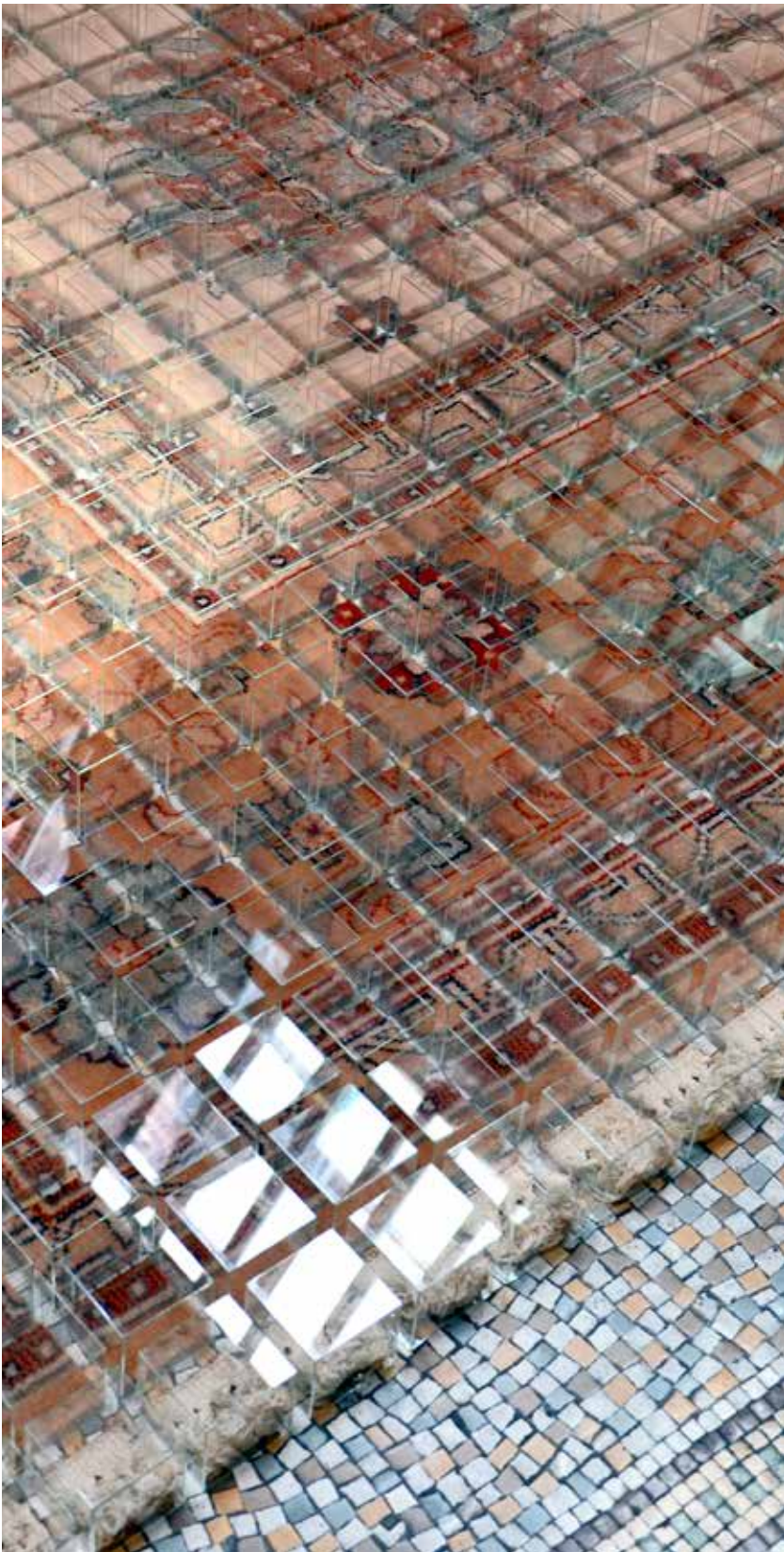
David Cheeseman (Artist),
Once Ever After: Twice Removed, Installation completed over
the duration of the *Twice Upon A Time* conference, 2014





David Cheeseman (Artist),
Once Ever After: Twice Removed, Detail, 2014







David Cheeseman (Artist),
Once Ever After: Twice Removed, Overview of artwork
installed during *Twice Upon A Time* conference, 2014





David Cheeseman (Artist),
Once Ever After: Twice Removed, Artwork installed during
Twice Upon A Time conference, Detail, 2014

David Cheeseman (Artist)
Once Ever After: Twice Removed,
Natural light reflects off artwork installed
during *Twice Upon A Time* conference, 2014







Martin Reinhart

Spirited Away

magic
film
science
art
media

Every great magic trick consists of three parts or acts. The first part is called “The Pledge” in which the magician shows you something ordinary: a deck of cards, a bird or a man. He shows you this object, perhaps he asks you to inspect it to see if it is indeed real, unaltered, normal, but of course... it probably isn’t. The second act is called “The Turn”. The magician takes the ordinary something and makes it do something extraordinary. Now you’re looking for the secret... but you won’t find it because of course you’re not really looking to find it, you don’t really want to know. You want to be fooled, but you wouldn’t clap just yet because making something disappear isn’t enough; you have to bring it back. That’s why every magic trick has a third act, the hardest part, the part we call “The Prestige”.¹

Introduction

Nowadays the fields of magic, spiritualism and science do not appear to have much in common, however this notion was completely accepted for the fairly long period between 1860 and the late 1920s. A surprisingly large number of scientists and inventors of that time believed in the existence of paranormal forces and around the same time professional magicians started to utilize up-to-date technology for their stage tricks in order to make the latest scientific discoveries look like magic. They played with the notions of the impossible and the unreal in order to demonstrate the very contrary: Repeating the paranormal phenomena every evening in front of hundreds of witnesses IS the very definition of a scientific experiment, but what does it prove?

“The Prestige” - a 2006 British-American film directed by Christopher Nolan – perfectly illustrates the strange alliance between natural science, spiritualism and magic performances. Not only does the movie visualize the close relationship between turn of the century technology with the popular magic-biz, but it also introduces a meta-discourse about scientific truth and the will to believe the impossible.

What we learn from the movie’s opening sequence is that in a great magic performance there are always two gaps - one between the “Ordinary Something” and the “Unexpected” and the second one between the “Unknown” and a magically restored order. I believe it is exactly these two gaps are the key to decode and understand an interesting crossover between the utopian vision of a boundless technology and an anti modernist thought-space that is filled and nourished by ghost stories and a dazzling array of esoteric philosophies.

In this context - and in the movie - the praxis of the commercial magical show plays a very interesting intermediate roll that connects and correlates these distant spheres; it turns out that at the time they were not considered in opposition, but

1. Quoted from the opening sequence of the feature film "The Prestige", directed by Christopher Nolan (USA-UK: Touchstone-Warner Bros, 2006). The film is based on the 1995 novel by the same name by Christopher Priest.

rather as implementations of the very same uncertainty that started to thrill the scientific community and the wider public to the same extent. One reason that this specific era was so receptive to the supernatural and occult lies in the fact that science opened new and puzzling doors that radically questioned established doctrines and revealed even more mysteries of an unknown immaterial world almost everyday.

Independently from the fact that a lot of the strange phenomena observed in the laboratories were poorly understood for decades, quite a few of them were instantly turned into new and useful applications like wireless transmission or X-ray technology.

The Pledge - Speaking with the Dead

In the wonderful sequence of Jean Cocteau's 1949 movie, Orpheè sits in his parked car listening to the radio playing encrypted codes transmitted from an unknown source². Although his wife Eurydice thinks that the messages are without any meaning, Orpheè insists that these codes are more beautiful than any poem he has ever written. "I'm on the trail of the unknown" he defends his strange new obsession. The others might not understand yet, but Orpheè is sure that he is receiving wireless messages from the dead, amplified voices from the hereafter, and he is right! This intense cinematographic moment clearly shows how modern spiritualism and the technical possibilities of the time overlapped and intersected.

In 1877 the invention of the speaking machine came completely unexpectedly and was regarded as a miracle. It was also due to this invention that Thomas Alva Edison got his nickname the "Wizard of Menlo Park". The most interesting fact about the Phonograph is the radical paradigm shift it implied. Starting in the mid 19th century a lot of physiology experiments were conducted to visualize sound, a significant number of which produced graphs that looked almost the same as the mechanical soundtrack Edison engraved in his Phonograph cylinders. Edison was the one to invent the idea of playing the recording back in order to recreate the original input signal, but since this was obviously possible, could other aspects of life itself also be reproduced or at least re-played in this way?

The phantasm that death could be overcome with the means of science and technology was certainly not new in 1880, but until then associated with mechanics, animal magnetism and electricity rather than with transforming life into abstract signals and playing them back. One main difference between Edison's attempt and the experiments conducted by Galvani (and his notorious nephew Giovanni Aldini) a hundred years earlier was the absence of the dead body. Describing the genesis of her novel *Frankenstein*, Mary Shelley wrote: "perhaps a corpse would be re-animated; Galvanism had given token of such things." The main difference between Shelley's butt-jointed monster and the kind of reanimation Edison proposed was the bodiless quality of the latter. The Phonograph

2 In the English speaking world the film was released as "Orpheus". See *Orpheè*, directed by Jean Cocteau (France: Films du Palais Royal, 1949).

allowed us to hear voices from people absent or long gone - a fact that equally troubled and amazed his contemporaries. The previously unimaginable possibility of listening to a dead person's voice spurred not only the imagination of the public, but also that of authors such as Salomo Friedlaender. In his 1916 short story "Goethe speaks into the Phonograph" a certain Dr. Pschorr builds a tube-type-enhanced version of the Phonograph that is able to listen into the past and to record the residual vibrations of words spoken by people some hundred years ago.³ Such ideas were certainly also inspired by a number of other inventions such as electromagnetism, radioactivity and the theory of relativity, that ignored the formerly unquestioned relations of cause and effect in a Newtonian universe.

In 1896 the 22 year old Italian inventor Guglielmo Marconi began building up a worldwide network of radio stations. Marconi based his work on that of Heinrich Hertz and despite having no understanding of the fundamental electromagnetic principles by 1902 he was able to send the worlds first radio message across the Atlantic and a few years later almost had the worldwide monopoly on wireless communication. With the help of the military and prominent supporters like Thomas Alva Edison he was able to extend his influence and power enormously over the years. In 1915, with the introduction of new tube technology, he was finally able to transmit the sound of a human voice where prior to that, signals only could be transmitted as single rappings.

So within a few years Edison's Phonograph, Bell's telephone and Marconi's wireless radio created an entirely new media-space filled with bodiless voices. The novels and movies of the time deal with the un-canniness and alienation of a voice that has been disconnected from its speaker: the criminals and detectives that tapped the wire or secretly recorded conversations;⁴ erotic fantasies surrounding the female switchboard operator.⁵ The human voice, formally an "Ordinary Something", was now transformed into something extraordinary. Suddenly it could travel through space and time, becoming immortal and ubiquitous. One could listen to it with excitement and fear. To a certain degree these technical possibilities were soon accepted and became part of everyday life, on another level, however, they maintained a disturbing undertone.

Although he also experimented with electric ghost-traps, Edison always refused any connection between his projects and the spiritualistic practices of his time.⁶ Still his audience must clearly have seen this convergence since not far from his factory, and almost for the same timespan as Edison's work, three spiritualistic mediums from New York thrilled the world with Morse-like messages from the dead: Leah, Margaret and Kate Fox, who played an important role in the upcoming of modern spiritualism. The

3 Salomo Friedlaender, *Schwarz-Weiss-Rot: Grotresken* (Leipzig: K. Wolff, 1916); the short story is also reprinted in Friedrich A. Kittler, *Gramophone, Film, Typewriter*, trans. Geoffrey W. Young and Michael Wutz (Stanford, CA: Stanford University Press, 1999), 59-68.

4 For this aspect see also: *Allegories of Communication: Intermedial Concerns from Cinema to the Digital*, edited by John Fullerton and Jan Olsson (New Barnet: John Libbey Publishing, 2004).

5 This aspect is discussed in great detail in: *Fräulein vom Amt*, edited by Helmut Gold, Helmut and Annette Koch, (Annette (Edit.) 1993. *Fräulein vom Amt*. Munich: Prestel, 1993).

6 "Edison's Own Secret Spirit Experiments," *Modern Mechanix and Inventions*, October 1933, 34-36

trio enjoyed recognition as mediums for many years and were also extremely successful outside the USA. Kate Fox especially was considered to be a powerful medium, capable of producing spirit lights, direct writing, and the appearance of materialized hands, as well as the movement of objects at a distance. Between 1871 and 1874 she was one of the mediums examined by William Crookes, who later became one of the forerunners of radio technology.

Edison himself also took his invention to another level. In a *New York Times* interview dating from 1921 he claimed that the human body could be seen as a mortal storage medium that records his lifetime experiences, feelings and memories to invisible particles called “life units”.⁷ According to Edison every human body holds 100,000,000,000,000 of such tiny and indestructible memory-bubbles. When the body expires the “life units” still stay for a while, but later diffuse into other life forms. In the same interview Edison announced an extension to his phonograph capable of extracting thoughts and feelings from dead bodies and allowing them to be stored and played back again. This was immortality achieved in a modern, but strangely unphysical way.

Some years later, in 1927, Manfred von Ardenne - one of the fathers of German pre-war television - came up with a device that was intended to transfer thoughts as a substitute for the telephone.⁸ Like Ardenne, many of the broadcast pioneers of his time took it as given that sooner or later radio waves would allow us to communicate with worlds beyond our understanding.

The Turn - The Age of Rays

Next to the bodiless voices produced by Edison, Bell and the Fox Sisters, other and even more irritating phenomena can be observed on the borderline between science and the super natural. Unlike the Phonograph and the radio, Doctor Roentgen's “Memento-Mori-Rays” did not make the body completely disappear, but transformed it into a transparent and anti-substantial ghost image by blinding out the flesh. Same as Marconi, Roentgen initially did not understand the origins and properties of his invention. This is also the reason his first publication was titled “On a New Kind of Rays” in which he referred to the new rays with the letter X. What initially meant to be provisional, soon was adopted as a synonym for his discovery.⁹

Today the relation between wireless communication and X-rays is evident, since both are fundamental implementations of electromagnetism. Around 1900 however this correlation remained mysterious and the border between science and esoteric theories still permeable. During the nineteenth century influential scientists still

7 A.D. Rothman, “Mr. Edison's Life Units” *The New York Times*, January 23, 1921.

8 The original German Article was published in: Manfred von Ardenne, “Kann man Gedanken hören?,” *Funkschau* no. 27, July, 1928. A translated version was printed in: Manfred von Ardenne, “Thought Transference - Some Experiments on the Exchange of Ideas,” *Science and Invention*, September, 1928. Also see the article by Wolfgang Hagen, “Manfred von Ardenne's ‘Gedanken hören.’” in *Trancemedien und Neue Medien um 1900*, ed. Marcus Hahn and Erhard Schüttpelz (Bielefeld: transcript, 2009), 341-350.

9 More about this subject in Simone Natale, “A Cosmology of Invisible Fluids: Wireless, X-Rays and Psychical Research around 1900,” *Canadian Journal of Communication* Vol 36 (2011): 263-275

speculated about the existence of the ether - an invisible and all-embracing substance, that continued to appear well after 1910, until its existence was finally denied by the scientific community. A similarity between ether and the X-rays was seen in the shared ability to penetrate objects and bodies without leaving any trace. The nature of the X-rays was also taken as a strong evidence for the existence of other forms of invisible energy like Mesmer's Animal magnetism and Baron Carl von Reichenbach's Odic force. Telepathic transfers seemed to be scientifically proven by electromagnetic waves, neither of them being perceived by the human senses alone, but both having powerful effects on reality.

Besides James Clerk Maxwell, who developed equations for the electromagnetic field as early as in 1862 and German scientist Heinrich Hertz who was the first to deliberately produce radio waves in 1887, British chemist and physicist William Crookes is one of the most important and dazzling pioneers that helped to connect the loose ends. Apart from his other important scientific contributions and discoveries, the so-called Crookes tube was to become his most momentous innovation in this context. More than just a scientific marvel, this early electrical discharge tube eventually turned out to be the first device capable of visualising electromagnetic fields. One decade later, the Crookes device would evolve into the coupling link between the radio tube and the cold cathode X-ray tube, both of which are based directly on his invention.

Almost at the same time as Marie Curie, William Crookes turned his attention to the newly discovered phenomenon of radioactivity and, same as she, Crookes regarded mediumistic séances as scientific experiments of equal value. Both scientists thought it possible to discover in spiritualism, the source of an unknown energy that would reveal nature's secrets. Around 1870 Crookes claimed that science had a duty to study preternatural phenomena associated with spiritualism. Among the mediums he examined was Kate Fox and among the phenomena he claimed to have witnessed were movement of bodies at a distance, rappings, levitation, appearance of luminous objects, appearance of phantom figures, appearance of writing without human agency, and circumstances which "point to the agency of an outside intelligence".¹⁰ As a consequence Crookes joined the Society for Psychic Research, becoming its president in the 1890s. He also joined the Theosophical Society and the Ghost Club, of which he was president from 1907 to 1912.¹¹

The ray-craze of the 1900s certainly did not stop at the laboratory door and X-rays especially were soon adopted for stage tricks and by the early cinema.¹² Georges Méliès, who at the time was the owner of the Théâtre Robert-Houdin, came up with a show he called "Les Rayons Roentgen" as early as 1896. Two years later he made the short film "A Novice at X-rays" that unfortunately is lost today. In 1897 "The X-Ray Fiend" a British short silent comedy film, directed by George Albert Smith, was released featuring a courting couple exposed to X-rays. One main feature

10 William Crookes, "Notes of an Enquiry into the Phenomena called Spiritual during the Years 1870-1873". *Quarterly Journal of Science*, January (1874).

11 More on the pre-history of wireless communication in Wolfgang Hagen, *Das Radio - Zur Geschichte und Theorie des Hörfunks* (Munich: Wilhelm Fink, 2005).

12 See also the relating chapter in the exhibition catalogue "The Perfect Medium: Photography and the Occult," edited by Clément Chéroux, Pierre Apraxine et al. (Yale: Yale University Press, 2005), 114-170.

in all this presentations was the sudden transformation of a person into his skeleton. In a strange mix of horror and voyeurism, instead of the naked body the bones beneath were exposed - a burlesque but harmless striptease that did not conflict with the decency or morality of those days. The erotic connotation however also was nourished by the rumour that X-ray film could be used in normal cameras to see through women's clothes.

In a series of stage tricks called "Neoöccultism" a more sophisticated, and dangerous use was made of X-ray technology.¹³ The trick was based on the effect that objects made of glass, porcelain or zinc sulphate glow in the dark when exposed to X-rays. In this way spirits or skeletons could be painted on dark cloth with glass powder or zinc sulphate and would only appear as soon as a hidden X-ray tube pointing at them was switched on. The name of the trick certainly referred to the occultist's scéances which had become extremely popular since they were introduced by the Fox sisters. The founder of Modern Magic, Robert-Houdin divided magic into five classes.¹⁴ According to his definition "Neoöccultism" is a crossover between the second class "Experiments in Natural Magic" which is defined as "Expedients derived from the sciences and which are worked in combination with feats of dexterity, the combined result constituting conjuring tricks" and the fifth class "Mediumship" which deals with "Spiritualism or pretended evocation of spirits, table-turning, rapping and writing, mysterious cabinets, etc."

The Prestige - Struggle for Differentiation

Same as for their somehow similar strategies, so too are the exponents of these arts sometimes difficult to distinguish. Think of Edison and Tesla, of Charcot, Mesmer or Houdini: showmen and presenters rather than scientists, technicians, or magicians. All of them stepping in front of their audience, bowing low and eager to show their newest tricks. In this context the spiritualist that discovers a new chemical element and the technician that believes in the hereafter are not contradictions, but exponents of the same mind set. All of them have learned to deal with the phantasmatic space of the unknown in a creative way. They are the ones who specialised in dealing with the "gaps" while the audience is still busy with "not really looking" and not "really wanting to know". Despite their

13 Albert Hopkins, *Magic: Stage Illusions and Scientific Diversions Including Trick Photography* (New York: Munn & Co, 1906), 97-98.

14 Magic is divided, according to old writers on the occult, into: White magic, Black magic and Necromancy. Modern magic, or conjuring, is divided by Robert-Houdin into five classes, as follows: (1) Feats of Dexterity. The hands and tongue being the only means used for the production of these illusions. (2) Experiments in Natural Magic. Expedients derived from the sciences, and which are worked in combination with feats of dexterity, the combined result constituting "conjuring tricks". (3) Mental Conjuring. A control acquired over the will of the spectator; secret thought read by an ingenious system of diagnosis, and sometimes compelled to take a particular direction by certain subtle artifices. (4) Pretended Mesmerism. Imitation of mesmeric phenomena, second sight, clairvoyance, divination, trance, catalepsy. (5) Mediumship. Spiritualism or pretended evocation of spirits, tableturning, rapping and writing, mysterious cabinets, etc. See Albert Hopkins, *Magic*, 2.

differences, all these proponents contributed something that became a rare virtue today: curiosity, faith in the new and unexplored, and a playful and unprejudiced approach to knowledge.

It is interesting how much more aggressive the fight for differentiation was just a couple of decades prior to this period. One interesting example in this respect is the case of Étienne-Gaspard Robert, in his days better known by the stage name “Robertson”. Robert was a prominent Belgian stage magician and influential developer of phantasmagoria. Charles Dickens described him as “an honourable and well-educated showman”. Born in Liège in 1763 Robert studied at Leuven and became a professor of physics specializing in optics. Soon he started to use his skills for magic performances and developed a show around his projection system and the use of other scientific based effects and techniques. He set up a successful performance that involved actors and ventriloquism alongside his projections, creating a convincing impression of the appearance of ghosts. The climax of every evening was the eerie appearance of a spirit that was projected onto a large pieces of wax-coated gauze or white smoke.

Although Robert actually was a studied man and educated not only in optics, his occupation as a magician seemed improper to his fellow physicists. In 1804 André Jacques Garnerin, one of Roberts academic critics went so far to discuss in public into which of two categories “Professor Robertson” would fit. His suggestions were:

The Physicist who observes phenomena in nature and tries to find results which can be proven by experiment. One who tries to explain the phenomena but will never trick his audience. He will be paid for his efforts and discoveries only. We admire his ingenuity, and he earns our respect. He usually stays in one place and often receives important government positions.

The Conjurer who uses the physicist’s results and conducts experiments of his own, but does not explain them, instead he constantly tries to fool his audience and demands payment for these illusions. One admires his dexterity, but he does not gain any respect. Usually he travels the country and receives no government positions.¹⁵

Robert for his part did everything to resolve all doubt about his professionalism by giving lectures about electricity after each of his phantasmagoria shows and even explaining the scientific principles he used in his tricks. For him the magical show was simply a lesson in applied physics, performed to amaze and educate his audience.

In my understanding the main reason why, from the 1850s on, there was a much more tolerant attitude toward go-betweens like Robertson was the radically changed economic situation. In an age dominated by the principles of capitalism and industrialisation, scientific research was no longer considered a valuable contribution to human knowledge, but a source of enhanced productivity and the key to new products and processes. In England and Germany the formally rather neglected

15 Both quotes from: Oliver Hochadel, “Zauberhafte Aufklärung,” in *Rare Künste: Zur Kultur- und Mediengeschichte der Zauberkunst*, ed. Brigitte Felderer and Ernst Strouhal (Vienna and New York: Springer, 2006), 433-499; translation into English by the author.

discipline of chemistry became of key importance for both industry and the military. The same is true for physics and especially for progress in the field of electricity. In this highly competitive environment the pure scientist became an obsolescent model. What was needed were visionary men like Guglielmo Marconi, Nikola Tesla and his outspoken enemy Thomas Alva Edison - eccentric geniuses with a disposition for megalomania, grandiose projects and ideas. Academic institutions were not necessarily the getaway to scientific research anymore and this new breed of entrepreneurs was much better prepared to meet the challenges of an ever-growing market. In a stock market financed research environment however, results have to be presented on a much tighter schedule and the potential for monetisation must be agreed beforehand. In this context the “scientist” becomes a seller of ideas, a dazzler, a conjurer - a magician.

I also believe that the rise of spiritualism in the mid nineteen hundreds is directly connected to these changes. To my knowledge, spiritualists in no way rejected technology - on the contrary they often used it to prove their theories and utilized it to communicate with the spirit world. This approach was often criticised as pseudo-scientific and esoteric, but the sheer number of active spiritualists, some sources counting up to 8 million in the English-speaking world, is a strong indicator that their ideas had carried into almost every corner of society. Their approach to investigation of the invisible and techniques for dealing with unknown forces does, in a strange way, correlate with the up-to-date scientific methods of today. It is often stated that spiritualism only mimicked scientific methods in order to legitimize its own claims, but I believe this is only half of the truth. Considering the large numbers of scientists and intellectuals who where declared spiritualists, Marie Curie and William Crookes just to mention the most famous exponents, I would suggest an investigation into their influence on scientific praxis is well justified. This unfortunately goes beyond the scope of this paper, but it is very interesting to see that the most profound enmity against spiritualism did not come from the scientific community but from the stage magicians.

The “Neoöccultism” stage trick colourfully illustrates how magicians often mixed advanced technology with elements of spiritualistic séances. Meanwhile, showmanship became an increasingly important part of spiritualism and mediums began performing to paying audiences. The main difference in this competition was that the spiritualists claimed there were no tricks involved and the witnessed phenomena proof for the existence of the afterlife, while the magicians neglected the existence of spirits and were proud of deliberately hocusing their audience in a skilful way. Since the magicians put a lot of energy into feigned evocation of spirits, they were keen to uphold their professional standards by exposing fraudulent spiritualists. The most famous scourge of fake magicians and spiritualists was Harry Houdini. Being one of the most recognized showmen of his time, he was also a member of a Scientific American committee that offered a cash prize to any medium who could successfully demonstrate supernatural abilities. Houdini chronicled his debunking exploits in his book *A Magician Among the Spirits* and gave public lectures to reveal the secrets of the admittedly often rather clumsy shams performed by spiritualistic mediums.¹⁶

16 Harry Houdini, *A Magician Among the Spirits* (New York: Harper & Brothers, 1924).

Conclusion

What really interests me in all this, is the connotations of truth and the scientific praxis in an environment where neither the nature of the object of investigation nor the expected result is clear anymore. Albert Einstein has analysed and dissected this situation in a wonderful way by introducing the figure of the “unscrupulous opportunist” and isolated the different aspects involved.

The scientist, however, cannot afford to carry his striving for epistemological systematic that far. He accepts gratefully the epistemological conceptual analysis; but the external conditions, which are set for him by the facts of experience, do not permit him to let himself be too much restricted in the construction of his conceptual world by the adherence to an epistemological system. He therefore must appear to the systematic epistemologist as a type of unscrupulous opportunist: he appears as realist insofar as he seeks to describe a world independent of the acts of perception; as idealist insofar as he looks upon the concepts and theories as free inventions of the human spirit (not logically derivable from what is empirically given); as positivist insofar as he considers his concepts and theories justified only to the extent to which they furnish a logical representation of relations among sensory experiences.¹⁷

In my understanding the three personality traits Einstein refers to are the requirements a modern scientist must possess in order to cope with the post-Newtonian conceptions of the world. Einstein is aware that a pure positivist view can't possibly cover the full extent of what is comprehensible by the human mind. He therefore introduces two other components. One that does not stop at the point where things are not longer “objective” in terms of our ability to perceive them, since by the mid 1900s the fundamentals of physical laws no longer appear evident, but often remained invisible and obscure. The second, idealistic view, must always take in account that there are “external conditions” limiting the free inventions of the human spirit that are not logically derivable. I tried to show how magic, spiritualism and science intersected and how each sphere adopted aspects and techniques of the other. Personally I believe that in an odd, but still traceable way, magic and spiritualism contributed to modern physics in a much more tangible way, than one would expect.

In Christopher Nolan's “The Prestige” the real magic is performed within the sphere of science and not by the magicians. The trick becomes reality in terms of an unbelievable, but proven fact. The “Ordinary Something” is turned into a terrible reality, that has to be hidden and must not be revealed. The magic trick in this context is to obscure the truth and to bring to the audience something they can understand. If this would not already be enough “The Prestige” introduces another meta-level by turning the cinematic narration into a magic trick by itself. We, the meta-audience, are tricked as well.

17 Arthur Schilpp, *Albert Einstein: Philosopher-Scientist* (Evanston, Ill: Library of Living Philosophers, 1949), 683-684.

Clone

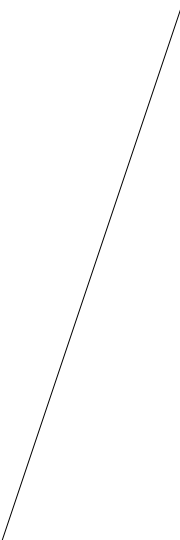
I know that I'm unique

to science. This will be the only time
in history that a triumph of this kind is put down
in the press - they're frightened! The one occasion
when all humanity could be celebrating itself,
and we suffer a lack of vision.

Think of this as the answer to all our problems -
and you're getting close to the truth.

Consciousness may never catch up
with technology. Suggest, as some do, that
the human has become blurred
in me, and as the product of this experiment, I say
yes - I've altered the meaning of the word. There are impurities
controlled by this process.

I am the first of many - a new humanity.



I am the first of many. A new humanity
controlled by this process.

Yes, I've altered the meaning of the word. There are impurities
in me. And as the product of this experiment, I say
the human has become blurred
with technology. Suggest, as some do, that
consciousness may never catch up
and you're getting close to the truth.

Think of this as the answer to all our problems
and we suffer a lack of vision -
when all humanity could be celebrating itself.

In the press, they're frightened. The one occasion
in history that a triumph of this kind is put down
to science: this will be the only time

I know that I'm unique.

Gregory Leadbetter, 2014

Jakub Ceglaz

Fatima, 2014

Do Laseczka // To The Forest - Transubstantiation of bodies into alter-gender-egos. Fatima - sings and dances, translating these bodies again and again into palimpsestuous versions of themselves. Fatima - a series of performances and works including photography, sound and writing.





Photo's by Richard Short.
Courtesy PEA/Centrala

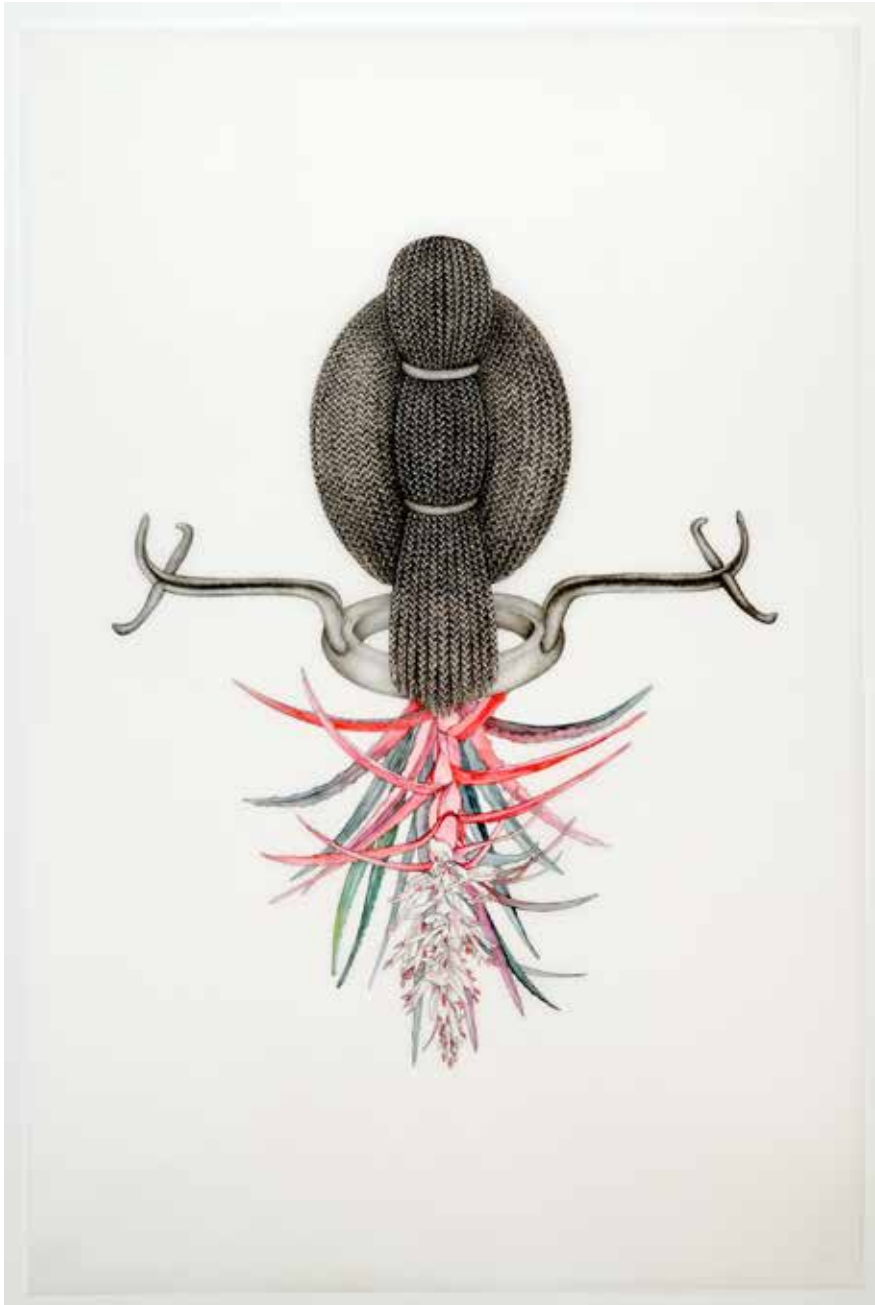


Joscelyn Gardner

Creole Portraits III

Creole Portraits III (2009-10), a collection of printed “heads” in which exotic botanical specimens have been decoratively incorporated into inverted portraits, alludes to the physical and psychological brutality faced by women in Caribbean slave societies and to the crucial role these women played in the reproduction of plantation slave labour. This suite centers on a brief revelation gleaned in Maria Sybilla Merian’s beautifully illustrated 1705 natural history publication, *Metamorphosis Insectorum Surinamensium*, where, in an aside accompanying her exquisite hand-coloured engraving of the “peacock flower” (*Pulcherima poincianna*), she noted that slave women she had met while she was travelling in Suriname had told her they were using this flowering plant’s seeds to secretly abort their children as an act of political resistance against their exploitation as ‘breeders’ of new slaves and to protest the inhumanity of slavery. Armed with knowledge passed on orally from their African ancestors and/or Amerindian counterparts, they were concocting potions and tinctures and sometimes even using this particular plant and other natural abortifacients to commit suicide or to kill their newborn offspring.

In *Creole Portraits III: “bringing down the flowers...”* the hand-coloured lithographic portraits reveal intricately braided Afro-centric hairstyles entwined within the horrific iron slave collars which were used to punish female slaves accused of inducing abortion (some of whom were forced to wear the collars until becoming pregnant again). Each portrait also displays one of the thirteen ‘exotic’ botanical specimens identified as having been used for this purpose in the 18th century. Delicately hand-painted with watercolours, as was characteristic of natural history engravings of the period, each portrait is ‘named’ for one of the botanical specimens using the established Linnaean binominal system of nomenclature of the period in tandem with each slave’s plantation name.



Joscelyn Gardner (Artist), *Bromeliad penguin* (Abba) 2011
Hand-coloured lithograph on frosted mylar 36" x 24"



Joscelyn Gardner (Artist), *Veronica frutescens* (Mazerine) 2009
Hand-coloured lithograph on frosted mylar 36" x 24"



Joscelyn Gardner (Artist), *Eryngium foetidum* (Prue) 2009
Hand-coloured lithograph on frosted mylar 36" x 24"



Joscelyn Gardner (Artist), *Trichilia trifoliata* (Quamina) 2011
Hand-coloured lithograph on frosted mylar 36" x 24"



Joscelyn Gardner (Artist), *Mimosa pudica* (Yabba) 2009
Hand-coloured lithograph on frosted mylar 36" x 24"



Susan J. May

Mobilising Mob Mentality: The Miracle of
the Relic of Saint Andrew

For the conference *Twice Upon A Time: Magic, Alchemy and the Transubstantiation of the Senses*, the call for papers cast the context for the conference in the following terms:

... Western tradition remains cautious of unreasoned sensorial data, treating it with illusory trepidation. While this paradigm has proven an efficient methodology, it has installed a discriminatory partition between that which can be rationalised or mathematized and that which is 'only' sensory.¹

Pius II
Processions
Holy relics
Pienza
Cosmography

This paper takes a backward glance to a pre-Enlightenment age, when 'unreasoned sensorial data' was accepted as part and parcel of everyday life. It touches on the unquestioning belief in the supernatural power of holy relics, exemplified here by a 'miraculous' event brought about by a sacred fragment from the head of Saint Andrew the Apostle (first century AD).² The occasion was orchestrated by Pope Pius II, the learned humanist Aeneas Silvius Piccolomini (b.1405-1464); the setting, the village of his birth, Corsignano, which he renamed Pienza, after himself.³ As well as thus creating a memorial for posterity, the buildings and streets of Pienza - indeed also the surrounding countryside - provided the scenography for his ultimate foundational act, the performance of religious ritual in time and space, lifted onto a cosmographical plane by the endowment of the relic on the occasion of a holy feast day falling at the autumnal equinox.

As well as charting Pius's *modus operandi* to extrude optimum effect - hence personal kudos and a place in history - from the holy relic, this paper also addresses the culturally embedded cultic superstition and ritual behaviour in which Pius partook and on which he was drawing. Finally, it is found that Pius had an implicit

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- 1 Call for Papers, "*Twice Upon A Time: Magic, Alchemy and the Transubstantiation of the Senses*", 26-27 June 2014, The Centre for Fine Art Research, Birmingham School of Art.
 - 2 On the arrival from Patras and the temporary sojourn in Italy of the relic of the head of Saint Andrew, see Ruth O. Rubinstein, "Pius II's Piazza S. Pietro and St. Andrew's Head", in *Enea Silvio Piccolomini, Papa Pio II. Atti del Convegno per il quinto centenario della morte e altri scritti*, ed. Domenico Maffei, (Siena: Accademia senese degli intronati, 1968), 221-44. Pius removed the mandible (lower jawbone) from Saint Andrew's head in order to permanently retain a fragment of the relic on Italian soil, in advance of the sacred head being returned to Patras; Jan Pieper, *Pienza. Il progetto di una vision umanistica del mondo* (Stuttgart/London: Axel Menges, 2000), 124. In splitting the relic, the power of each part, it was believed, was as full of potency as the original whole; Joe Nickell, *Looking for a Miracle: Weeping Icons, Stigmata, Visions & Healing Cures* (New York: Prometheus, 1993), 73. Pius bestowed on Pienza the relic of Saint Andrew's mandible in the Italo-Byzantine, silver gilt 'body-part' reliquary in which Saint Andrew's head had arrived from Patras; pictured in Rubinstein, "Pius II's Piazza", her Fig. 9.
 - 3 The wide literature on Pienza is summarised by Christine Smith, *Architecture in the Culture of Early Humanism: Ethics, Aesthetics and Eloquence 1400-1470* (New York/Oxford: Oxford University Press, 1992), 98-119.

understanding of tropes of human behaviour identified by Elias Canetti, winner of the Nobel Prize for Literature, in his study of *Crowds and Power*.⁴

To give a flavour of intellectual context, Aeneas Piccolomini had composed in 1457 his *Historia rerum ubique gestarum* (*A History of Things and Events Everywhere*),⁵ a compendium of all the scientific and geographical knowledge of the time, later owned and used by Christopher Columbus. Piccolomini explicitly expressed there his indebtedness not only to Ptolemy's *Cosmographia*, of which he owned a fine copy,⁶ but also to Strabo,⁷ whose *Geographia* he had in two manuscript volumes.⁸ Strabo stresses throughout his entire *Geographia* the interconnectedness of all terrestrial and celestial phenomena. For Pius and his intellectual circle, which included architect and polymath Leon Battista Alberti and cosmographer Paolo dal Pozzo Toscanelli, this interconnectedness was a given: geography, mathematics, astronomy and theology all melded together in a seamless continuum. Now practised as divergent forms of scholarship, these disciplines in the fifteenth century shared common roots and common modes of inquiry. It should be mentioned at this point that the coterie around Pius II was vitally interested in astronomy. His close and trusted friend, theologian and cardinal Nicholas of Cusa prefigured Copernicus in positing a universe which did not have the earth at its centre. The Greek Cardinal Bessarion, who could himself compute planetary positions, was in 1462 presented with an astrolabe by his friend, the German astronomer Regiomontanus.⁹ Pius's own attitude to astronomy and astrology (confused and enmeshed in the fifteenth century)¹⁰ can be inferred from his disapproving observation that of all the scholars whom Alfonso of Naples consulted, one never saw an astrologer (*astrologos*) amongst them.¹¹ A relative of Pius, Alessandro Piccolomini (1508-1578), was to produce the first star atlas to be published in the west.¹²

This encyclopedic and holistic conception of *rerum ubique gestarum* – of the universe and everything in it - is epitomised by Pius's all-encompassing vision for Pienza, former Corsignano. The future pope had grown up in this tiny agricultural village, since his immediate family, an impoverished branch of the noble Piccolomini of Siena, had been exiled from its native city since 1368, his sense of

4 Elias Canetti, *Crowds and Power*, trans. Carol Steward, (London: Phoenix Press, 1960).

5 Pius II, *Historia rerum ubique gestarum* (Venice: Iohannem de Colonia, 1477).

6 The whereabouts of this volume no longer known, Pius's ownership of it is recorded in his nephew's will: Alfred A. Strnad, 'Francesco Todeschini-Piccolomini; Politik und M zenatentum im Quattrocento', *Römische historische Mitteilungen* 8-9 (1964-6), 101-425, here 355.

7 Pius II, *Opera omnia* (Basle: Per Henrichi Petri mense Augusto, 1551), fols. 281-386, here 282.

8 Biblioteca Apostolica Vaticana, Vat. Chigi J.VIII.279 and Vat. lat. 2051.

9 David A. King, *Astrolabes and Angels, Epigrams and Enigmas: from Regiomontanus' acrostic for Cardinal Bessarion to Piero della Francesca's Flagellation of Christ* (Stuttgart: Steiner, 2007), 7-9.

10 Eugenio Garin, *Astrology in the Renaissance: The Zodiac of Life*, trans. Carolyn Jackson and June Allen (London/Boston: Routledge & Kegan Paul, 1983).

11 Pius II, *De dictis et factis Alphonsi regis memorabilis, part-transcribed in Berthe Widmer, Enea Silvio Piccolomini, Papst Pius II: Ausgewählte Texte aus seinen Schriften* (Basle: Schwabe, 1960), 416.

12 Alessandro Piccolomini, *De la sfera del mondo. Dele stele fisse* (Venice: Volpini, 1540).



Figure 1. Plan of Pienza. Reproduced from Enzo Carli, *Pienza: la città di Pio II* (Rome: 1967) (© Editalia S.p.A., Rome).

injustice surely contributing to his drive for dynastic and self-aggrandisement.¹³ The transformed settlement of Pienza is renowned as an early example of renaissance town planning actually brought into existence and still extant today. As, however, I have argued elsewhere, with the donation to the tiny city of a holy relic, Pius simultaneously instituted for it a new feast day and an annual procession to be repeated into perpetuity.¹⁴ On each of these occasions Pienza's inhabitants were kinaesthetically reminded of the full scale of their benefactor's patronage.¹⁵

My claim that processions were part of Pius's vision for Pienza is partially grounded in the premise that he thought in terms of movement through space, evident from many passages in his autobiographical *I commentarii*.¹⁶ In his descriptions, the forward dynamic and consequent transitoriness of the world as visually experienced is almost cinematographic. In philosophical discourse, it was Pius's close friend, Nicholas of Cusa, who encapsulated the idea that perception of the universe is relative to the place of the observer.¹⁷ Pius's general conception of

13 Fabrizio Nevola, *Siena: Constructing the Renaissance City* (New Haven/London: Yale University Press, 2007), 72-3.

14 Susan J. May, 'Pienza: Relics, Ritual and Architecture in the City of a Renaissance Pope', in *Foundation, Dedication and Consecration in Early Modern Culture*, ed. Maarten Delbeke and Minou Schraven, (Leiden: Brill, 2012), 99-128.

15 Pius's other processions are treated in Fabrizio Nevola, "La piu gloriosa solemnità che a di de padri nostri giammai fusse veduta: Feste ed apparati urbani durante il pontificato di Pio II Piccolomini", in *I luoghi del Sacro. Il sacro e la città fra medioevo ed età moderna*, ed. Fabrizio Ricciardelli, (Florence: Mauro Pagliai: Polistampa, 2008), 173-88.

16 Pius II, "The Commentaries of Pius II", trans. Florence A. Gragg, intro. and notes by Leona C. Gabel, in *Smith College Studies in History*, 5 vols (Northampton, MA: Dept of History of Smith College, 1936-57), henceforth Pius II. For the Latin, see *Pius II, Pii II Commentarii rerum memorabilium que temporibus suis contigerunt*, ed. Adrianus Van Heck (Vatican City: 1984).

17 'Non enim apprehendimus motum nisi per quandam comparationem ad fixum'; Nicholas of Cusa, *De docta ignorantia* XII 162 6-7, in *Nicolò Cusano, Opere Filosofiche, Classici della Filosofia*, ed. Graziella Federici-Vescovini, (Turin: Unione Tipografico Editrice Torinese, 1972), 147. Edmund Husserl (1859-1938) returned to the idea that lived body and lived place link up with each other through the simple



Figure 2. Present-day Corso Rossellino, Pienza, facing east (photo: author).

Figure 3. Monte Amiata viewed from the present-day Corso, looking south along present-day Via dell'Amore, Pienza.



the urban landscape as a series of vistas seen on the move stemmed from his early career as secretary to a number of prominent ecclesiastics and subsequently to the Holy Roman Emperor Frederick III, in all of whose service he travelled extensively through Italy and Europe, as far north as Scotland. Time and time again the young Piccolomini witnessed - from within - grand entries amidst meandering processions of visiting dignitaries. Taking account too of the layout of Pienza (Fig. 1) and some of its architectural features, such as the unifying effect of cornices, uninterrupted string courses, and perhaps a continuous bench along the main thoroughfare (Fig. 2), I have argued that Pius conceived of the revamping of the small city in terms of its potential for processions, with vistas appearing like a series of theatrical stage sets (Fig. 3), all aimed at culminating on the dedication day in a grand finale of sacred ritual under the gothic vaults of its new cathedral.¹⁸

In terms of when to schedule the inaugural procession, this was an age when dates in the year were invariably and as a matter of course understood by reference to saints' days. Pius was thus accustomed to planning important visits and events to coincide with festivals marked out in the religious calendar.¹⁹ The choice of the feast of the Beheading of Saint John the Baptist (29 August 1462) as the day on which to dedicate Pienza's new cathedral and to donate the holy relic was influenced to a certain extent by the rate of building. Pius had witnessed work-in-progress on the construction of his summer residence there, the Palazzo Piccolomini, during his travels in September 1460 and was personally up-dated during a visit to Rome by the architect Bernardo Rossellino in July 1461.²⁰ By the time of the prolonged stay at Pienza by Pius and his entourage from June or July to September 1462, the pope could report that:

All of these buildings except the bell tower which was still unfinished were completed from foundation to roof in three years.²¹

The buildings to which he refers include the Palazzo Piccolomini, the lower and upper churches of the cathedral and the sacristy. The campanile at that time was built to only two-thirds of its intended height, however the well (Fig. 4) had already been completed and the piazza had been 'paved with bricks laid on their sides in mortar'.²² Although construction or refurbishment was to extend to at least forty buildings by the pope's death in 1464, by August 1462 the cathedral and its environs were sufficiently advanced to perform the dedication ceremony and officially 'show off' the new nucleus of the recently elevated city to its inhabitants and, more importantly, the curia.

basic action of walking; Edward S. Casey, *The Fate of Place: A Philosophical History* (Berkeley, L.A.: University of California Press, 1998), 224-30.

18 Charles R. Mack, *Pienza: The Creation of a Renaissance City* (Ithaca/London: Cornell University Press, 1987), 128, 150, 157.

19 A *Missale Romanum* was made for Aeneas Silvius in 1456 and illuminated by Benozzo Gozzoli. Fols 1r-6v comprise a calendar recording saints' days and religious feasts and showing the seven-day phases of the moon. The missal contains annotations in Pius's own handwriting: Codex G III 11, Biblioteca Communale degli Intronati, Siena.

20 Mack, *Pienza*, 40-1.

21 Pius II, Book 9, Vol. 35 (1951), 603.

22 Pius II, Book 9, Vol. 35 (1951), 601.

The choice of the feast of the Beheading of Saint John the Baptist was, moreover, subject to a further consideration. In his seminal studies of ritual behaviour, Richard Trexler has shown that throughout the middle ages and renaissance, astrologers were routinely consulted to read the configuration of the stellar sphere before governmental or military events were planned, in order to ensure the stars' beneficence on the saint's day in question. Religious processions were likewise planned according to the conjunctions of the heavens: for example Florence's official herald, Francesco Filarete, was regularly consulted on such matters.²³

In his study of the architecture of Pienza's cathedral and its piazza, Daniele Del Grande has shown that, according to the Julian calendar (which was still in use until its reform by Pope Gregory XIII in 1582), the day of the feast of the Beheading of Saint John the Baptist, 29 August, was also the calendrical date of the autumnal equinox, one of the two points in the year when day and night are purportedly of equal length.²⁴ For the pope and his cardinals, astronomical events were laden with religious symbolism. The regularity of the seasons was teleological evidence of divine order, the calendrical succession a temporal sign, by contrast, of God and eternity.²⁵ Solar imagery was widely applied in descriptions of Christ: the birth of the sun in the winter solstice symbolised the birth of Christ, the coming of the spring his Resurrection, the vernal equinox his conception, the autumnal equinox his forthcoming sacrifice, winter the season of his death.²⁶ The coincidence of the feast of the Beheading of Saint John the Baptist with the autumnal equinox, namely the coincidence of a religious festival with a significant astronomical and symbolical event, would have made the date of 29th August an especially auspicious one for the dedication ceremony of the new cathedral. As will become clear below, the astronomical phenomenon would have manifest consequences during the dedication proceedings.

The day's events on 29th August 1462 can be envisaged with the aid of the *Pontificale Romanum*, a ceremonial handbook written by *Agostino Patrizi Piccolomini*, erstwhile secretary to Pius II, extended family member, clerk of papal ceremonies for twenty years, canon of Pienza cathedral and finally its bishop.²⁷ The work puts into written form the traditional ritual procedures of the pope and curia that had been practised for centuries. Without doubt in the case of Pienza the procession gathered in the piazza in

23 Richard C. Trexler (ed.), *The Libro Cerimoniale of the Florentine Republic by Francesco Filarete and Angelo Manfredi* (Geneva: Droz, 1978), 49. See also Richard C. Trexler, "Ritual Behaviour in Renaissance Florence: the Setting", *Medievalia et Humanistica* 4 (1973), 125-44, here 134-7.

24 Daniele Del Grande, "Pienza: la 'città di Pio'", in *La rifondazione umanistica dell'architettura e del paesaggio: Pio II, la città, le arti*, ed. Giuseppe Giorgianni (Siena: Protagon, 2006), 17-31.

25 Saint Augustine, *De Civitate Dei*, 4:46.

26 As often repeated in early Christian literature; George M. A. Hanfmann, *The Season Sarcophagus in Dumbarton Oaks*, 2 vols (Cambridge M.A.: Harvard University Press, 1951), here 1, 201.

27 Compiled under the pontificates of Sixtus IV (1471-84) and Innocent VIII (1484-92), the *Pontificale Romanum* is transcribed in Latin, with commentary in French, in Marc Dykmans, *Loeuvre de Patrizi Piccolomini ou le cérémonial papal de la première renaissance*, 2 vols (Vatican City: Biblioteca Apostolica Vaticana, 1980), here 1, 7-15. Apart from references to the founding and naming of Pienza, the only eye-witness report of the proceedings on 29 August 1462 is a cursory note by Pius II, quoted below (n.41).



Figure 4. Bernardo Rossellino, Palazzo Piccolomini (east facade) and well (both built 1459-62), viewed from Piazza Pio II, Pienza.

front of the cathedral (Fig. 1), with the imposing flank of the *Palazzo Piccolomini* rising immediately to the left (Fig. 4). The adjacent well, literal and metaphorical fountain-head for the populace, announces by way of an inscription on its *all'antica* well-head the name of the new city's founding father, 'PIVS PP II MCCCCLXII' (Pius Pontifex Pientinus II, 1462).²⁸ According to custom, processions were preceded by a sermon, probably given on this occasion by the city's bishop-elect, Giovanni Cinughi, the intention of which was to invoke an atmosphere of heightened spirituality and emotion, the presence of a holy relic often eliciting tears.²⁹ At a parallel moment at the first public appearance in Rome of the relic of Saint Andrew's head, Pius recorded that there was no-one who did not weep:

... there was profound silence except for the sobs of those who beat their breasts and could not control their tears.³⁰

In the medieval and early modern period, the dignity of any place was customarily measured according to the number and importance of its holy relics. These, furthermore, were believed to have the ability to perform miracles, bringing about *inter alia* healing, levitation and holy apparitions.³¹ To be in the presence of a sacred relic was to have a direct and open line of communication with God, without the need of cleric as intermediary. Sites housing sacred relics thus took

28 Architectural precedents for the buildings around the piazza are discussed by Fabrizio Nevola, 'Architettura civile' in *Pio II e le arti. La riscoperta dell'antico da Federighi a Michelangelo*, ed. Alessandro Angelini, (Milan: Silvana, 2005), 182-213, here 184-98.

29 For the name of the bishop, Mack, *Pienza*, 77. On the pre-processional sermon, Trexler, *Public Life*, 353-4.

30 Pius II, Book 8, Vol 35 (1951), 529.

31 Nickell, *Looking for a Miracle*.



Figure 5. Bernardo Rossellino, cathedral facade across Piazza Pio II, Pienza, built 1459-62.

on special cultural agency as gateways to the divine, deriving large economic benefits from miracle-seeking visitors. The principles moreover for demonstrating discernment of a supernatural presence were known to literate and illiterate alike, women and men, clergy and laity. The public was a willing participant in shedding communal tears: these were the visible manifestation of invisible emotions, an outward communication of the inner movement of the heart in response to an unearthly power.³²

Patrizi's handbook helps conjure the animation, festive colour, sounds and aromas of a small city embellished with tapestries, flags and ceremonial garb, and decked out with strewn flowers, fragrant herbs and hung branches. In the forefront of the parade went standard bearers carrying banners. Four honorary equerries followed, carrying caps of crimson velvet atop long staffs. Before the papal cross went two master ushers carrying silk-covered rods; immediately after it followed twelve footmen with lighted torches. Two clerks carried silver

32 William A. Christian Jr, 'Provoked Religious Weeping in Early Modern Spain', in *Religious Organization and Religious Experience*, ed. John Davis, (London: Academic Press, 1982), 97-114

lanterns with perpetually-burning candles.³³ The pope was borne aloft in the sedia gestatoria beneath a baldacchino, a portable fabric canopy, emblazoned with the Piccolomini crest.³⁴ Judging by events in Rome, Pius himself carried the reliquary.³⁵ If crowds pressed too close to the pontiff, his almoner scattered a few coins out to the people, while servants-of-arms with silver staffs ran back and forth keeping order. Finally, the local clergy wearing white vestments brought up the rear.³⁶

Thus the procession must have edged forward in flamboyant splendour, east along the present-day Corso Rossellino, with occasional breathtaking views of the pope's beloved, wooded Monte Amiata fleetingly glimpsed between shady buildings (Fig. 3). Making an anti-clockwise circuit within the city walls, the column would eventually find itself back in the square, in front of the majestic, classical facade of the duomo (Fig. 5). This was a suitable venue for the enactment of a *sacra rappresentazione*, a sacred drama, customary during such occasions, with the silver gilt reliquary doubtless taking centre stage.

It will be recalled that 29 August was also the date in the Julian calendar of the autumnal equinox. If we suppose that participants regrouped around the town square in time for mid-day, they would then be witness to a 'miracle' performed by the holy relic of Saint Andrew, whereby the cathedral operated as a colossal sun dial casting its great, dark shadow to fall fully, squarely and exactly into the articulated grid of the piazza, the oculus of the facade echoed by the central, white, paved circle.³⁷ A phenomenon not recorded in the *Commentaries*, this astonishing 'performance' was nonetheless unlikely to be a coincidence.³⁸ Needless to say, calculations that could calibrate the orientation and height of the newly-built church and the size and tilt of the recently-cleared and paved piazza with the astrological equinox meridian would require the greatest mathematical minds of the age. The names of those in Pius's circle qualifying for this epithet barely need repeating: one thinks above all of Cusa and Toscanelli.³⁹ Gillian Beer's observation can be applied to this moment, that cosmology and the

33 Dykmans, *L'oeuvre de Patrizi*, 1, 181-2 paras. 494-5.

34 Dykmans, *L'oeuvre de Patrizi*, 1, 182 para 496; 183 para. 498.

35 Pius II, Book 8, Vol 35 (1951), 534, 536.

36 Dykmans, *L'oeuvre de Patrizi*, 1, 183-4, para 499.

37 Del Grande, "Pienza" 24.

38 Del Grande, "Pienza" 26. Two reasons for its absence from the *Commentaries* are put forward in May, "Pienza: Relics, Ritual and Architecture", 123. These pertain to the surreptitious manner by which Pius acquired the holy relic for Pienza (see n.2), and his failure to address a reform of the Julian calendar. As Pius and his circle were well aware, the vernal and autumnal equinoxes marked in the Julian calendar were, by 1462, eleven days adrift from the actual astronomical occurrences. This latter is also explicated by Del Grande, "Pienza", 26-8.

39 Del Grande favours Toscanelli, "Pienza", 30. Around 1468 Toscanelli calculated the gnomon for Florence cathedral which records the summer solstice to within half a second; Francesca Fiorani, *The Marvel of Maps: Art, Cartography and Politics in Renaissance Italy* (New Haven/London: Yale University Press, 2005), 54. Eamonn Canniffe notes the correlation between the facade of Pienza cathedral and the grid of the piazza, commenting that 'theatrical attitudes were a significant component of renaissance urbanism'; *The Politics of the Piazza: The History and Meaning of the Italian Square* (Aldershot: Ashgate, 2008), 83-88.

natural sciences have often rubbed shoulders with the unstable territory of the supernatural.⁴⁰ The possibility that the pope had his cathedral designed to register its presence every spring and autumn equinox on the grid of the piazza belies Pius's aspirations that his papal city should participate in some small way in the divine rhythm of the universe.

The formal proceedings of the day were brought to a close inside the cathedral. *Agostini Patrizi's* ceremonial details the sprinkling of holy water, burning of incense, and the procession into the nave that would have ensued, to the accompaniment of the canticle *Te Deum laudamus*.⁴¹ One imagines the scene as Pius described it at the equivalent moment in Rome:

The faces of all expressed solemnity, reverence, and devotion. There was not a single unseemly gesture and the procession of cardinals passed with such dignity that the watching crowds ... were stirred to worship.⁴²

Mounting the steps to a chorus of chanted hymns, Pius 'anointed the front of the high altar and when the relics of the saint had been deposited in it he affixed the seal'.⁴³ In Rome, and surely again here, Pius and the cardinals wept, their eyes streaming 'with tears of joy and adoration' for the relic of Saint Andrew.⁴⁴ For saying of the mass, Pius was enthroned in his pontifical cathedra,⁴⁵ still extant in the centre of the choir chapel below its enormous (by Italian standards) gothic window (Fig. 6). The light flooding through the chapel window has the effect of creating an aureole above the pope with, in the right conditions, a shadow of the peak of Pius's 'sacred mountain', Monte Amiata, silhouetted against the glass.⁴⁶ It was against this blaze of almost incandescent light before the eyes of the congregation that the host was elevated in the act of transubstantiation.⁴⁷ Thus formal ritual drew to a close, giving way, as was customary, to outdoor games, dancing and feasting.

As has been suggested, Pope Pius II was a charismatic diplomat and shrewd politician: he knew how to put on a show, how to win 'hearts and minds'. That Easter, for the arrival in Rome of the relic of Saint Andrew's head, Pius had insisted that for the two-mile procession, 'all should go on foot': those who 'were too old or ill ... were to walk as far as they thought they could, choosing the place from which they estimated that their feet would carry them to Saint Peter's'.⁴⁸ The import of the occasion for each participant was thus to be experienced as a

40 Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction* (Cambridge: Cambridge University Press, 2000), 9.

41 Dykmans, *Loeuvre de Patrizi*, 1, 188 paras 516-7.

42 Pius II, Book 8, Vol 35 (1951), 533.

43 Pius II, Book 9, Vol 35 (1951), 604.

44 Pius II, Book 8, Vol 35 (1951), 527.

45 Pius II, Book 9, Vol 35 (1951), 602; Henk van Os, "Painting in a House of Glass: The Altarpieces of Pienza", *Simiolus: Netherlands Quarterly for the History of Art*, 17:1 (1987), 23- 38, here 35.

46 Del Grande, "Pienza", 27.

47 Van Os, "Painting in a house of glass", 35.

48 Pius II, Book 8, Vol. 35 (1951), 531.



Figure 6. Pienza cathedral, interior view of nave toward high altar (© Photo SCALA, Florence 2010).

panoramic spectacle unfolding with each new step. Pius well understood what Elias Canetti identifies in his study of the psychopathology of power, namely, the unifying effect of a large number of people directed forward in movement to a common destination.⁴⁹ As Canetti further observes, the ritual itself, ‘the movements of the priests in their stiff, heavy canonicals, their measured steps’ is ‘the element in any religion which has the most immediate effect on an assembly of believers’.⁵⁰ It seems perfectly consistent with Pius’s character and ambition that in his own memorial to himself he would seek to make a public statement of such vast proportions, not only stage-managing the time, place, architectural backdrop, panoramic mise en scène, curial and local players, but also recruiting the relic of an apostle of Christ and the fall of the ‘miraculous’ equinoctial shadow, with all of its macrocosmic symbolism, to play a part in his foundational act.

49 Canetti, *Crowds and Power*, 29.

50 Canetti, *Crowds and Power*, 155.

Grace Williams

Escamotage ~ Sleight of hand, Trickery,
Conjuring, Vanishing

Taking its name from the *Bautier de Kolta* illusion *Escamotage d'une Dame* - an 1800s magical vanishing trick in which the female body was spectacularly disappeared under a heavily patterned covering - *Escamotage* negotiates the language of the Persian rug as a motif for female vanishing. Fraternizing the violence of enchanted disappearance with the bizarre 'hidden mothers' photographs of the Victorian age – in which mothers concealed themselves under carpets in order to hold their children still for portraits - the Persian rug is ever present for its ability to simultaneously reveal and conceal an exposure of the female form. The use of projection onto a darkened surface further enhances the sense of liminality, whilst the gradual degrading of the slide through prolonged contact with the light creates a new layer of vanishing.

Grace Williams (Artist), *Escamotage I*, Slide Projection, 200 x 140 cm, 2014







Grace Williams (Artist), *Escamotage II & III*, Slide Projection, 200 x 140 cm, 2014

Grace Williams (Artist) *Escamotage IV*,
Slide Projection, 200 x 140 cm, 2014









Grace Williams (Artist), *Escamotage V*,
Slide Projection, 200 x 140 cm, 2014

Grace Williams (Artist) Cabinet, Black & White Photograph, 80 x 100cm, 2014







Jivan Astfalck

Rosa Rubea Homuncula

Rosa Rubea Homuncula references the making of a fictional and mythologised entity with its variety of possible combinations and compositions; it refers to the madness of the artist to make something living or at least something which has the ‘the power’ of affecting life. The making of the ruby, the making of a homuncula, the tenuous on/off clipping of decorative elements and the transitional magic of a wearable object where some of the passionate projection is situated in the construction, the design of the object.

&

In 1510, Heinrich Cornelius Agrippa von Nettesheim writes the first book of his *De Occulta Philosophia*, a synthesis of Christianity and magic, inter woven with neo-platonic mysticism. He designs sigils to attract/capture angels and ban/capture demons, Christian figuration of duality, signifying energies outside of human control and in this context not forces of nature, but of morality and power. Agrippa explores systematically the design development expedient to create objects, which affect life and if believed, are living objects.

alchemy
magic squares
angel
‘what’ am I
care of the self

&

In *Sometimes a Great Notion* the 13th episode in the fourth season of *Battlestar Galactica*, Starbuck (Kara Thrace), accompanied by the Cylon Leoben, is looking for the beacon, which had led them to Earth. They find the wreckage of a fighter plane with a charred corpse. Starbuck rips the dog-tag necklace from the corpse to discover her own name and a sigil of an angel. Kara asks, "If that's me lying there, then what am I?"

&

In *The Hermeneutics of the Subject* Foucault talks about ‘the care of the self’ and its modern replacement ‘self-knowledge’. At the end of his lesson he focuses on what he calls ‘spirituality’ and goes on to say “that for the subject to have right of access to the truth he must be changed, transformed, shifted, and become, to some extent and up to a point, other than himself”, and later he says “*eros* and *askesis* are, I think, the two major forms in Western spirituality for conceptualizing the modalities by which the subject must be transformed in order finally to become capable of truth”.

One

Within the area of metaphorical symbolisation I am interested in jewellery pieces that map out the demarcation lines, where body meets world, a place, or idea of a place, where narratives are invested in objects with the aim to negotiate that gap, complexity, confusion or conflict in relation to private and subjective mental experience. My aim is to achieve an imagery of the unconscious and address symbolisation by using metaphoricity to cross-map emotional investments conducive to new creative articulation and representation.





Figures 1 & 2. Rosa Rubra Homuncula, Necklace, Jivan Astfalck. Materials: Sterling silver, powder-coated brass press-studs, which are detachable from the core piece vintage garnets in settings & black Sapphires, 380 carat of Al2O3 synthetic raw and semi-finished rubies and sapphires.

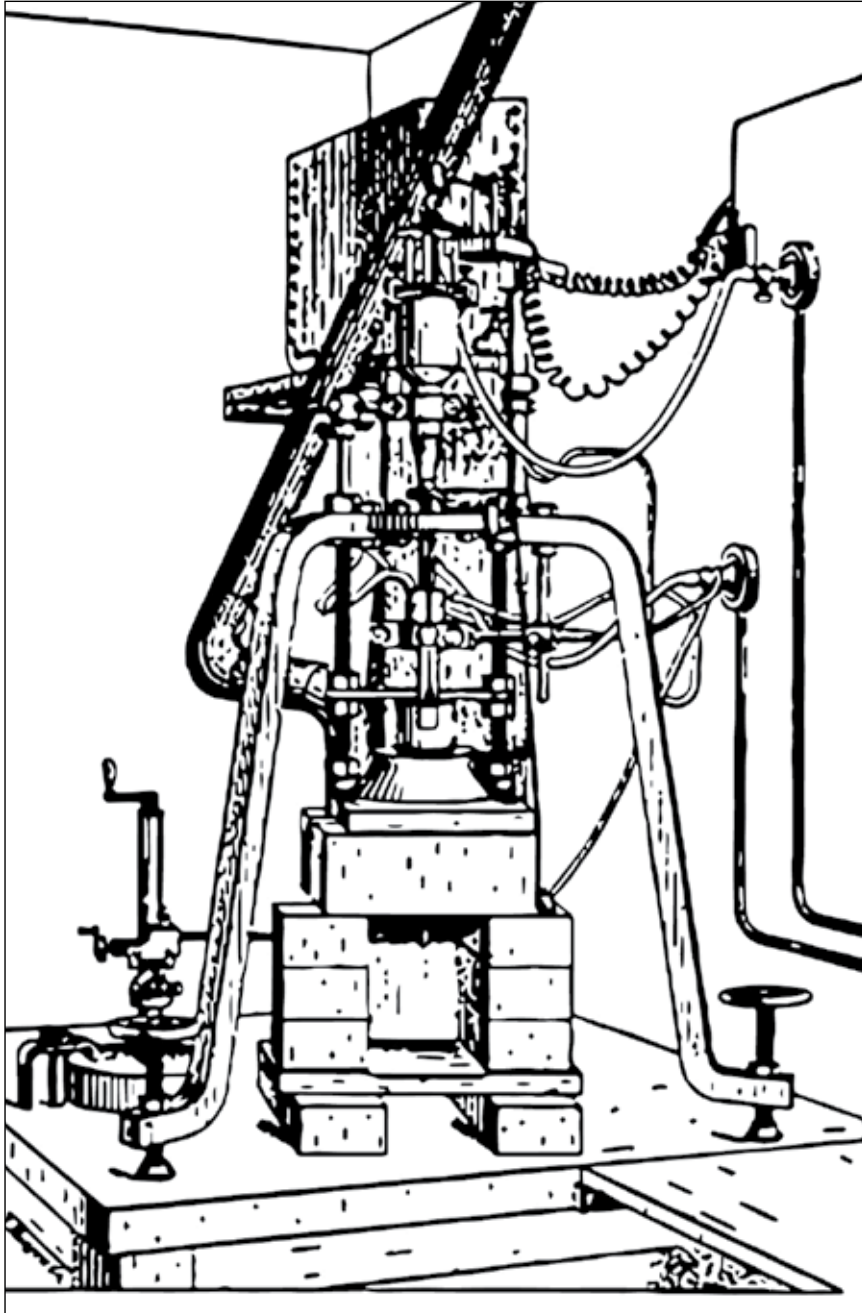


Figure 3. Verneuil, torch sketch.

Figure 4. A symbolic homunculus/a, from *The Pretiosissimum Donum Dei - The Most Precious Gift of God*, an important 15th century alchemical work by Georgius Aurach de Argentina.



Rosa Rubea Homuncula references the making of a fictional and mythologised entity with its variety of possible combinations and compositions; it refers to the madness of the artist to make something living or at least something which has the “the power” of affecting life. The making of the ruby, the making of a homuncula, the tenuous on/off clipping of decorative elements and the transitional magic of a wearable object where some of the passionate investment is situated in the construction of the narrative; so much so that at times the fictional interest overtakes the need for facts and so questions the nature of scholarship as a kind of literature.

These synthetic rubies and sapphires have been made using the AI2O3 Verneuil Flame-Fusion Method. The physical and chemical characteristics are the same as natural rubies and sapphires... Imagine 380 carat, if made in nature, would turn out to be very valuable.

Auguste Verneuil published his paper (*Reproduction artificielle du rubis par fusion*) in 1904, making it possible for anyone with chemical and mechanical knowledge to reproduce rubies. The Verneuil process, the flame fusion, is a method to manufacture synthetic gemstones, primarily used to produce ruby and sapphire varieties of corundum, as well as the diamond simulants rutile and strontium titanate. The principle of the process involves melting finely powdered substance using an oxyhydrogen flame and crystallising the melted droplets into a ‘boule’.

Rosa Rubea is the alchemical Rubedo, the ultimate phase of the ‘Opus Magnum’ or ‘Opus Chemicum’ announcing the transmutation of vile metal into gold. But *Rosa Rubea* is also the essence of the red rose, here depicted as a homunculus, a crowned king (fig.4)

The rose is one of the alchemical symbols for the Rubedo, but also the symbol of the Virgin Mary. In another symbolisation, the rose is flesh and the creative power embracing the cross that represents death and resurrection.



Figure 5. *Rosa Rubra*.

To create the essence of the red rose, all matter that can decompose must be separated from this essence. The distilling process is complicated and difficult – I have tried. Because the material rots so fast, you crush a rose petal to enjoy the incredible smell and after only a fraction of a second it starts to smell bad. I cannot enable the sensuous experience of the smell of rose attar using words, but imagine an old essence of inferior quality, those with very acute sense of smell can get the ambivalence between utterly gorgeous and stinking rot, a coexistence of opposites, a duality and a sensuous example of alchemical ‘coniunctio’, which is usually depicted as a concurrent coexistence of sun and moon. Equally challenging is the process of trying to make rose petals in fine-silver, aiming to achieve an equivalent ephemeral qualities in metal and trying to represent the idea of ‘conciunctio’ in goldsmithing.

Two

In 1510, Heinrich Cornelius Agrippa von Nettesheim writes his first book *De Occulta Philosophia*, a synthesis of Christianity and magic, interwoven with neo-platonic mysticism. The book was very influential throughout Europe until the Counter-Reformation. In the book Agrippa sets out to develop a methodology through which he aims to capture the energies of “higher” worlds, with the aim to affect the “lower.” For him, this is not at all a god-less doing. Agrippa is one of those very intense and interesting multi-talented artist/scholar/writers, who one week is the best friend of the Pope, while next has to be on the run from one monk group or another

to not end up on the stake for blasphemy and, of course, he was a goldsmith. Most alchemists have been goldsmiths, or at least something like the equivalent to today's bullion dealers, but not every goldsmith is an alchemist.

What makes him a very different writer to many other sorcerers and "devil-students" as he called them is the systematic collection and analyses of all available knowledge of magic of his time: astrology, number magic in the Kabbalah, angels, demons, spirits, necromancy, magic ceremonies, omens, dreams, amulets and talismans. The other aspect, which differentiates his scholarship from much of his peers, is that he, as early as 1510, is conscious of embedded interpretation, he says: "Only that the meaning is another, than that what the naked letter offers" (my translation from German). He distinguishes "true" magic from other "superstitious nonsense" through the proto-psychoanalytic belief that it is a power in the soul, which when passionate, is capable of affecting and transforming mensch and things. While the word mensch translated into English means "human being", the Yiddish word means a person of integrity and honor, and is regarded as a state of being which must be earned or forged, often through struggle.

With this in mind Agrippa designs sigils to attract/capture/use angels and ban/capture/manipulate demons, figurations of duality, signifying energies outside of human control and in this context not forces of nature, but of morality and power. Agrippa explores systematically the design development expedient to creating sigils, which are then applied to carriers e.g. jewellery, tattoos or paper-based objects. They are designed to affect life and, if believed, are "living" objects.



Figure 6 (top). An example of a design for an amulet, which comes from the *Black Pullet*, a *Grimoire* believed to be written much later in the 18th Century.

Figure 7. Magic Ring on the hand of artist RonAthey. Photo: Ron Athey



In a later edition, Agrippa explores the magical virtues of *Magic Squares*, each associated with one of the astrological planets.

The sigil of *Hagiel*, the planetary intelligence of Venus, is drawn on the magic square of Venus, whereby each Hebrew letter provides a numerical value, situating the peaks of the sigil and subsequently mapping out the shape of the sigil.

The sigils of spirits, angels and demons are derived from the design method with which the *Magic Squares* are created, whereby the letters of the entity's name are changed to numerical values, and lines are traced through the pattern. In the context of magic, *Magic Squares* include a variety of word and number squares found in *Grimoires*, other text books on magic which teach how to make magical objects like talismans, amulets, magical spells, charms and divination tools.

I do not mess with angels and with demons, but I know from Rilke that 'Ein jeder Engel ist schrecklich': *every angel is terrifying*¹. But I cannot stay away either... My first *Magic Square* ring I saw in a small museum in Tangier, in Morocco, and then a few days later in the shop of Mister Kafka in Essaouira I was able to buy one. My second ring I found on Portobello Market in London.

Islamic mathematicians in the Arab world also knew *magic squares* since the early seventh century.

This undergarment I photographed in the museum of the *Topkapi Palace* in Istanbul. It took a very large number of magic squares to protect this precious child. It is believed that *magic squares* originated in India, and that Arabs learned about them and other combinational mathematics and astronomy, when they came in contact with Indian culture.

Three

I will not go on to talk about *Sudoku*, arguably a contemporary permutation of the *Magic Square*, even though while preparing for this paper and spoke with some members of my family and friends, I noticed the repeated confession to be *Sudoku* 'addicts'. The aspect of obsession and/or addiction is very interesting in the context, referring to the fixing aspect of magical practice, where instead of affecting an outside aspect, the practitioner is frozen, or arrested, in time and only when the solution to the puzzle is found, release is achieved...if in some cases only momentarily, before the cycle repeats itself.

I would like to follow this trail in a different way:

In *Sometimes a Great Notion* the 13th episode in the fourth season of *Battlestar Galactica*, the fleet and its Cylon allies have united in a joint search for Earth. They encounter a devastated world where their expectations are crudely shattered by events that echo down the millennia from the original destruction of their home of humanity.

Fighter pilot and warrior Kara Thrace, call-name: Starbuck, accompanied by the cylon Leoben, is looking for the beacon, which had led them to Earth. They find the wreckage of a fighter plane with a charred corpse. Starbuck rips the dog-tag

1 Rainer Maria Rilke, "Die Erste Elegie", *Düneser Elegien* (Insel: Verlag, 1923)



Figure 7. Stills from Battlestar Galactica, episode: *Sometimes a Great Notion* (season 4, episode 13)

necklace from the corpse to discover her own name and the sigil of an angel.

Kara asks: “If that's me lying there, then what am I?”

She does not say “who am I” but “what am I”... why, in a moment of great distress and trauma, does she refer to herself not as a subject, but an object? It seems to me that the switch to the existential level has been initiated or ‘magicked’ by the necklace.

In Daybreak the last 74th and 75th episode, a world to settle on has finally been found for humanity. After having said her final ‘good byes’ and having indeed led humanity to safety, Kara disappears into thin air. What happened to Kara is left ambiguous in the film, but every fan who followed the carefully laid out signs along the path of the story, will realise that Kara is indeed an angel.

In the Lacanian perspective, we are “who we are” only in relation to other people. Our aims and desires are shaped by the desires of others, by interpersonal dynamics, social expectations and prohibitions. Our knowledge of the world we learn from other people, and the language we speak pre-exists us. So our thoughts follow pre-established concepts and linguistic structures. A transcendental ‘soul’

Figure 8. Jivan Astfalck (Artist), *Starbuck*, dog-tag reproduced and transfigured vintage votive, gold-plated sterling silver, crystal-glass, swan-down





is denied and the existence of a 'self' questioned. The effect is that when we assimilate these social conventions, the pressures of instinctual drives appear to us as threat, danger, and the demonic, including the ultimate impossibility to imagine ourselves dead and our flesh decomposing.

Most, if not all alchemical, transformative, magical and spiritual tropes include a period where matter is separated from essence – *a something is extracted* – the ruby boule, the rose essence and now Kara's necklace from the corpse. These things seem to me “place holders” of an important and much deeper existential shift.

The *otherness* of the image the subject perceives when mirrored creates a negative dimension in the subject's existence. I am never, in Lacan's thinking fully myself. The relationship within which my ego – my “I” – comes into being is a relationship with an image that is *not me* and is an unattainable ideal.

Four

Foucault asserts that Lacan has, in his reflections on subjectivity and the mirror stage, reintroduced into psychoanalysis the oldest interrogation and the oldest disquiet of the *Epimeleia Heautou*, “the care of the self”, a most general form of spirituality and specifically concerned with the question of the price the subject must pay for being able to speak truth.

Foucault defines “spirituality” as the methods the subject uses to transform him or herself in order to gain access to truth. He describes the conflict between spirituality and theology as being the important historical issue rather than a conflict between spirituality and science. Foucault notes a number of differences in the ways pre-Cartesian and post-Cartesian systems approach the problem of acquiring knowledge and the notion of self-transformation. He describes this as the difference between the “spiritual exercises” and the “intellectual method”².

In *The Hermeneutics of the Subject* Foucault talks in chapter “One, 6 Jan 1982: First Hour” about “The care of the self” and its modern replacement “self-knowledge”. At the end of his lesson he goes on to say “that for the subject to have right of access to the truth he must be changed, transformed, shifted, and become, to some extent and up to a point, other than himself.”³ Later he says “*eros* and *askesis* are, I think, the two major forms in Western spirituality for conceptualizing the modalities by which the subject must be transformed in order finally to become capable of truth.”⁴ He also asserts that a reactivation of spirituality foretells the return to ethics.

Lacan's approach is for Foucault problematic insofar transformation is thought of in terms of self-knowledge and therefore the acquisition of knowledge, which relates to science or at least to scientific methodologies, to fulfill the function

2 See Michel Foucault, *The History of Sexuality III: The Care of the Self*, trans. Robert Hurley (New York: Pantheon Books, 1986)

3 Michel Foucault, *Hermeneutics of the Subject*, trans. Graham Burchell (New York: Palgrave Macmillan, 2005), 15

4 Michel Foucault, *Hermeneutics of the Subject*, 16

of spiritual transformation. We do not know how psychoanalysis can produce spirituality, though it must be other than purely through knowledge. For Foucault we cannot have spirituality unless we acknowledge this sphere of subjective practice. For him the subject “is not a substance. It is form, and this form is not primarily or always identical to itself”⁵. Foucault claims that the subject is a reality distinct from the body. Thus the self-constitution of the subject is not the subject producing itself but shaping what is already there.

Finally, I quote from Mark G. E. Kelly in *Foucault, Subjectivity, and Technologies of the Self*:

The subject, then, is something that is founded on a kind of ontological split between itself and the body, but a split that is only relative rather than substantial or absolute. Moreover, the subject can be said to lack self-identity inasmuch as it has, because of the split, the capacity and tendency to change continuously, indeed to take on different forms even at the same time. It is always changing and always plural, giving it a distance from itself that allows it to work on itself.⁶

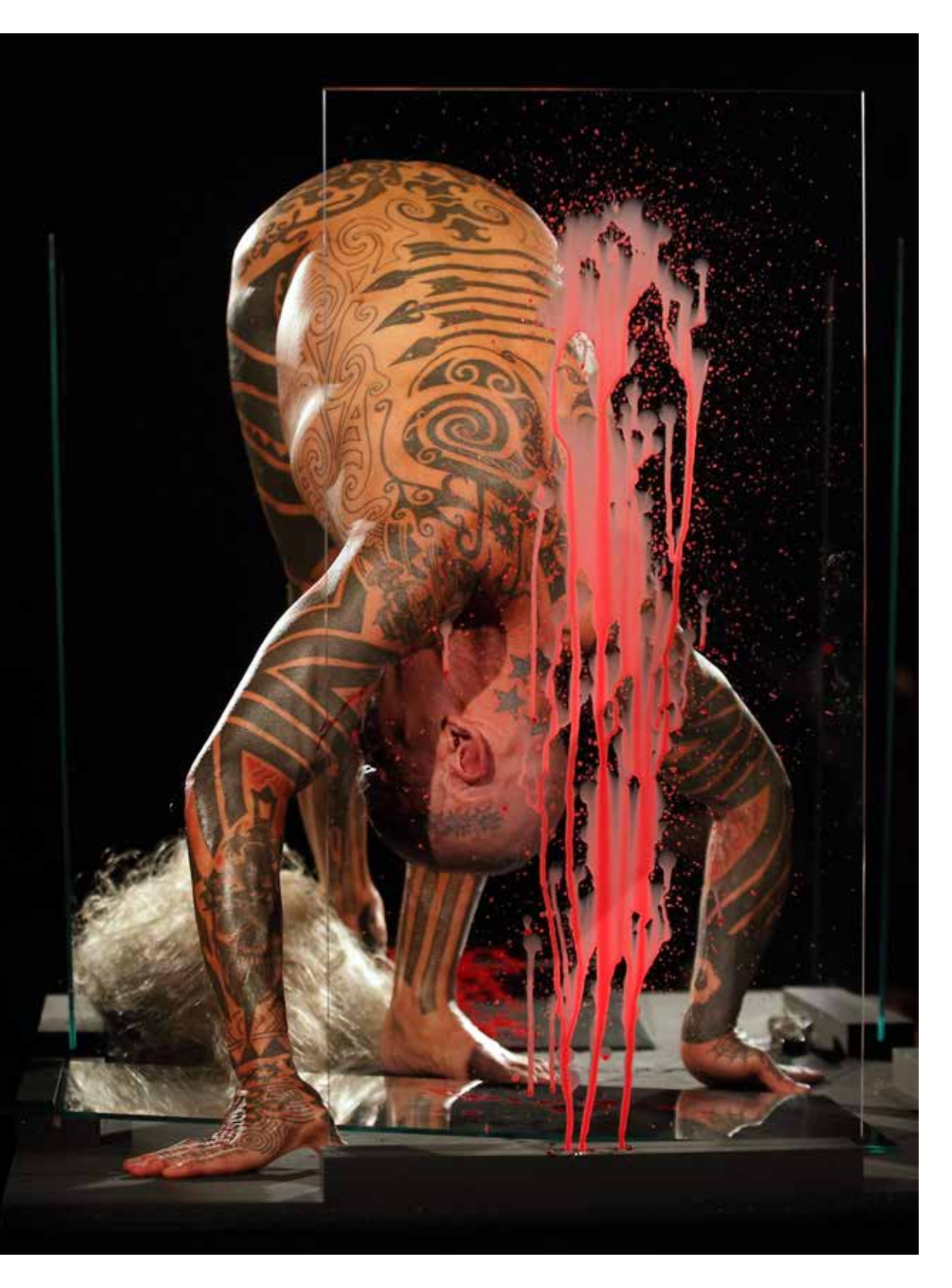
5 Michel Foucault, *Ethics, Subjectivity and Truth. Essential Works of Foucault, 1954-1984*, ed. Paul Rabinow (New York: The New press, 1997), 290

6 Mark G.E. Kelley, “Foucault, Subjectivity and Technologies of the Self” in *A Companion to Foucault*, eds. Christopher Falzon, Timothy O’Leary, and Jana Sawicki (Oxford: Blackwell Publishing, 2013), 510-525

Ron Athey

Self Obliterations I&II























John Mowitt

Hegel and Hambone¹

“What is a text, and what must the psyche be if it can be represented by a text?” (Derrida)²

One of the more scandalous assertions of the exilic text *Dialectic of Enlightenment*, a fact emphasized in Habermas’s tormented “The Entwinement of Myth and Enlightenment,” is the way it joins at an onto-historical level disenchantment and re-enchantment. Precisely because myth requires a positivism of mythic proportions to defeat it, myth returns in its overcoming. While the point has yet to be emphasized, this insight—indeed the very force of its provocation—would appear to be crucial to, for example, Freud’s need to wrestle with the discourse of magic or mysticism in his *Psychopathology of Everyday Life* or, to take the example that will concern me here, Hegel’s squaring off against phrenology and physiognomy in *The Phenomenology of Mind*. In both cases, the work of disenchantment (the dispelling of the explanatory powers of various so-called pseudo-sciences) appeals essentially to discursive practices and intellectual traditions in order to establish its otherwise tenuous intellectual authority. As Horkheimer and Adorno insist: this is no paradox. It bears precisely on the extent to which the world brought into being through the long march of secularism can be grasped at all in the absence of the specters that haunt the discourse of the historical victors. Perhaps thought cannot convince itself of anything in the absence of the risk of failing to do so. Does this have something fundamental to do with what Bernard Stiegler might call the “techno-genesis” of the being of thought?

In chapter three of *Percussion: Drumming, Beating, Striking*, titled “Different Strokes for Different Folks, one will come upon the following paragraph.

Fundamentally, musicking insists that one treat dance as part of music, a state of affairs crystallized, as we have seen, in the trap set itself. Although this might lead one to erase the distinction between dancer and musician altogether, an erasure that would complicate—perhaps definitively—the very structure of interpellation, I regard this as a mistake. What is clear in Chernoff’s discussion of the Kondalia, for example, is that although the dancers are fully integrated into the “piece,” their participation is organized by a persistent—and, yes, repetitious—turn taking or shifting. At one moment, a dancer might hail (call to) the drummer, and at another moment, the

drumming
fear
jouissance
transgression
art
material process

1 I would like to thank the conveners of the Winter School in the Centre for Humanities Research at the University of the Western Cape—specifically, Premesh Lalu, Gary Minkley and Helena Pohlandt-McCormick—for inviting me to present these remarks to their colleagues and students. But I would also like to thank Rembert Hüser (for his hilarious cinematic demonstration of “cuffing”) and Carla Farrugia (for her puzzled threading together of the beads of my argument). Enablers all.

2 Jacques Derrida, *Writing and Difference*, trans. Alan Bass (Chicago: University of Chicago Press, 1978).



Figure 1. *Hambone* - Steve McCraven (stills taken from movie)
mycompassv (2011) available at <<http://www.youtube.com/watch?v=v8r5wxpa3hg>>

drummer would hail the dancer. In effect, all performers are interpellated by the beat—that is, their bodies are called into position by the relations they themselves have struck up in articulating the ritual. A vestigial trace of this dynamic in rock-and-roll dancing is the role played by finger snapping and clapping, both complex forms of beating with the body against the body (essentially patting juba) in response to the hail of the beat. Ventura has, I think, challenged those of us thinking about such processes to recognize that what must be confronted here is precisely what often gets dismissed as hysterical—if not simply ideological—projection: the phenomenon of possession.³

Many important and difficult issues are raised here—the status of the body in the dynamics of interpellation; the relationship between interpellation and demonic possession, and so forth—but, if I begin by citing this particular passage it is because I am concerned, in the context of a meditation on the concept of percussion, to pick up the thread of “*patting juba*,” or as it has come to be better known in the US, “hambone,” so named because of the central—both physically and aesthetically—role played by the thigh, the ham bone, in this percussive practice. My aim is to deploy hambone so as to revisit and replay certain themes from my book *Percussion* and do so for the purpose of animating a discussion of this concept as it might stir our thinking about the contemporary subject of the humanities. More specifically, I will deploy hambone as a way to rewrite the epigraph from Derrida thus: what is a drum, and what must a subject be if it can be represented by a drum?

For those of you unfamiliar with hambone or juba, I urge you to view the following clip <http://www.youtube.com/watch?v=v8r5wxpa3hg> (fig. 1) and pay close attention to the acoustic and visual performance. While it is true that this performance is distinctly professional (Steve McCraven performs regularly with jazz saxophonist Archie Shepp), it provides rather direct, even blunt, evidence for my characterization of hambone as “beating with the body against the body.” In a very direct even literal way, the body of the performing subject has become a drum and in ways that may not strike one at first. Of course, Derrida’s shuffling of psyche and text was conducted so as to elaborate a very ambitious theoretical program, one designed to throw the concept of the psyche—especially as understood by pre-Freudian psychology—into question. While different, my motivations are no less ambitious in that by grasping the subject as a drum I hope to theorize the “techno-genesis” of the body, an entity formed as much through drumming, beating, striking as through sexual reproduction. Percussion is not simply played by a drummer, it is the play that is the drummer. Let me now try to earn this extravagant formulation, however ham-handedly.

In my recent work I have been thinking about and with the hands. I find that I touch upon them at every turn. What has struck me about the hands is how consistently they, and their morphogenesis, have figured in Western thinking

3 John Mowitt, *Percussion: Drumming, Beating, Striking* (Durham, NC: Duke University Press, 2002), 83.

about the very constitution of the human subject. For example, in Friedrich Engels' fragment, "On the Part Played by Labor in the Becoming Human of the Ape," he presents the hand as both the organ and the product of labor, attaching it, through the related achievement of erect posture, to the emergence of language, the very event thought to separate (and thereby constitute) the human and the animal. If this "becoming" produces the very human thought to provide the humanities with its object, then labor has a hand in the humanities. Perhaps because the text is a fragment and because Engels has other fish to fry, he does not more fully tease out the implications for the subject of his paleontological account of the hands. Perhaps not surprisingly, Hegel—from whom Marx and Engels took so much—does.

At the risk of obscenely under-reading a difficult and hugely significant text, I want to direct attention to the section of *The Phenomenology of Mind* titled, "Observation of the relation of self-consciousness to its immediate actuality."⁴ Famously, this is the section in which Hegel takes up for consideration the then wildly popular "sciences" of physiognomy and phrenology, a discussion later fretted over by Adorno in his North American writings about radio. While it is clear that he is concerned to protect the concept of science and thus reason from such "sciences," he does not do so by indulging in mere ridicule. Instead, he tries, in the spirit of *Dialectic of Enlightenment*, to think what is true, what is scientific in both physiognomy and phrenology, urging us, as Slavoj Žižek, puts it, "to make the wrong choice first," that is, to affirm that both "sciences" are indeed accounts of how to think the vexing articulation of inner and outer individuality.⁵ For Hegel, this articulation is philosophically decisive because it addresses directly both the mind-body problem and the phenomenologically crucial question of how life enters self-consciousness. It cannot, therefore be uninteresting that labor and the hand figure prominently here.

Hegel writes:

What, then, we have to consider here is the relation subsisting between the two sides; the point to observe is how this relation is determined, and what is to be understood by the inner finding expression in the outer. This outer, in the first place, does not act as an organ making the inner visible, or in general terms, a being for another; for the inner, so far as it is in the organ, is the activity [*die Tätigkeit*] itself. The mouth that speaks, the hand that works, with the legs too, if we care to add them, are the operative organs effecting the actual realization, and they contain the action [*das Tun*] qua action, of the inner as such; the externality, however, which the inner obtains by their means is the deed [*die Tāt*], the act, in the sense of a reality separated and cut off [*abgetrennte*] from the individual. Language and labor are outer expressions in which the individual

4 Georg Wilhelm Friedrich Hegel, *The Phenomenology of Mind*, trans. J. B. Baillie (New York: Harper Torchbooks, [1807] 1967), 174-197.

5 Slavoj Žižek, *Tarrying with the Negative: Kant, Hegel and the Critique of Ideology* (Durham: Duke University Press, 1993), 245.

no longer retains possession of himself per se, but lets the inner get right outside him, and surrenders it to something else.⁶

Before picking up the thread of my commentary here, it seems worth observing (a concept Hegel is concerned with here) that this passage, in tracing the logic and structure of expression, is raising some interesting questions about what might be meant by a “social act.” Perhaps it is necessarily entangled in the matter of thinking the very “bearer” (to use Marx’s term, *Träger*) of the social, thus the disciplinary problematic of approaching social acts as such.

To return, then, to the passage. In drawing out its implications, indeed he does so repeatedly, Hegel underscores the fickle nature of the lesson to be drawn from the examples of mouths and hands as forms of expression. The problem is that they generate a paradox. They tell us both too much and too little. Too much, in the sense that the hand, as an organ of labor, is no longer an *expression* of the inner, it simply is this inner in actuality. Expression has grown a hand. Too little, in that the hand, precisely to the extent that it actualizes the inner, in fact surrenders the inner to someone or something else. Either way the inner is lost to observation: it becomes a corporeal gesture, or it is no longer an expression of “our” individuality. For those familiar with Hegel, and *The Phenomenology* in particular, you will recognize that what is missing here—and this is the gist of his critique—is the proper *dialectical* character of the relation between the inner and the outer, in effect the point he wants to make against the pseudo-sciences of physiognomy and phrenology. For him, their overcoming of the difference between thought and matter is, in effect, alchemical. Enchanted.

For my immediate purposes, three points bear emphasis. First, it should be clear that the matrix of Engels’ later discussion of the hand is cut and pasted from this discussion. His link between the hand and labor; that between the hand and the mouth and by extension language; as well as the dialectical stress on the hand as both organ and product of an emerging human individual all find their source code in Hegel’s observations on observing the expression of human consciousness. Second, taken or otherwise clasped together, Hegel and Engels point to the Western philosophical habit of using the hand to think—even, or especially, while complicating the event and agency of thinking—the incorporation, or morphology of the human subject. And it is important to note here that a key proposition advanced by Hegel against Gall and the phrenologists is the notion that the shape or size of someone’s skull tells us nothing about that person’s individuality, or, to invoke King’s “I Have a Dream” speech, that the color of a person’s skin tells us nothing about the content of his or her character.

My third point will seem a bit obtuse, and this despite the fact that it leads us immediately back to hambone. It involves grasping the hand as an organ of percussion. True, as an action (by the way, *die Handlung* in German) percussing

6 Hegel, *The Phenomenology of Mind*, 340.

is covered in general by Hegel's discussion, but I would like to point to a more surprising and specific engagement in the piece with striking. Consider the following remarkable passage:

When, therefore, a man is told, "You (your inner being) are so and so because your skull-bone is so constituted," this means nothing else than that we regard a bone as the man's reality. To retort upon such a statement with a box on the ear [*ein Ohrfeige*]⁷—in the way mentioned above when dealing with physiognomy—removes primarily the "soft" parts of his head from their apparent dignity and position, and proves merely that these are no true inherent nature, are not the reality of mind; the retort here would have to go to the length of breaking the skull [*den Schädel einzuschlagen*] of the person who makes a statement like that, in order to demonstrate to him in a manner as palpable as his own wisdom that a bone is nothing of an inherent nature at all for a man, still less his true reality.⁷

As the passage makes plain, Hegel has already had recourse to the gesture of *die Ohrfeige*, or what might better be translated as "cuffing," in his engagement with the two pseudo-sciences under observation. Indeed, in this section there are four separate instances of cuffing. They culminate in the final one cited here where cuffing—otherwise rendered as producing the sorts of "bumps" of interest to phrenologists (see page 362)⁸—gives way to bludgeoning as if the man of science is justifiably provoked to demonstrate the falsity of the proposition that inner life is truthfully expressed in the shape of one's skull by using his hand, not to labor, but to belabor, as it were.

Striking here, of course, is the fact that in the arc of Hegel's argument, the hand which earlier embodied a certain paradox, is here used to resolve a false resolution of the paradox through violence, specifically, the hitting of the body of another. This gesture reaches beyond the formulation of the paradox and invites speculation. One such speculation might be: is labor a concept adequate to the work of the hand? Another, and it is the one that interests me, what happens when the hand is used to strike, to percuss one's own body not as an act of working, but of an act of reworking? In effect, hambone.

To begin to answer this and edge these remarks to conclusion, a closer consideration of the practice of patting *juba* is necessary.

In Eric Lott's *Love and Theft* he devotes several important pages to the figure of William Henry Lane, aka, Master Juba, observing that this virtuoso dancer gave his rivals among the crowd of blackface minstrels a real run for their money.⁹ Indeed, Lott reminds us that Master Juba is almost certainly the dancer that appears on the pages of Dickens' *American Notes* with the moniker, "lively hero".¹⁰ Doubtless because Lott's impish aim is to tease out the ambivalent

7 Hegel, *The Phenomenology of Mind*, 365.

8 *ibid.*, 362.

9 Eric Lott, *Love and Theft: Blackface Minstrelsy and the American Working Class* (New York: Oxford University Press, 1993).

10 Charles Dickens, *American Notes* (New York: Modern Library, [1859] 1996), 120.

racial identification at the core of blackface, his discussion of Master Juba tells us little about the techno-genesis of hambone performance. As with all African drumming in the wake of the “Middle Passage,” it was marked by a profound and violent displacement. By which I mean, and the details are discussed at some length in *Percussion*, that because drumming was considered—with a smidgen of ethnomusicological evidence to back it up—a signifying practice and, in particular, a signifying practice for which the signifieds eluded white slave owners, slaves were routinely stripped of any and all percussive instruments. If, as I have suggested, drums and subjects can be taken as stand-ins for one another, then one might recognize in this practice something like a massive techno-genetic reiteration of slavery as such. The black bodies are, in effect, twice removed even if, as Derrida argued about the spirit of Marxism, their spirits never leave.

In *Percussion* I pursue this in thinking about how the space of a clapboard church might be transformed, by hands and feet, into a resonating chamber, or how the trap set formed out of debris poached from soldiers after the US Civil War. Here I want to think about how the black body itself, emerged as a drum, as a self-resonating chamber in the same context. In light of the material from Hegel’s *Phenomenology* it might seem that the more immediately pertinent part of that text might be his well-known discussion of the master slave dialectic—a discussion tied, if tenuously (he read the newspaper?), to the slave revolution in Haiti by Susan Buck-Morss—and while that is certainly not irrelevant, more relevant is the special focus on the hand and mouth as means by which to “frame,” to “play” the articulation of the inner and outer limits of the subject. Precisely because of the double displacement of the black body (the body as confiscated drum), hambone assiduously and joyously reworks the hand and the mouth as techno-genetic organs, giving special, even decisive, importance to one hambone stroke in particular. I am thinking, of course, of the “mouth pop” move wherein by shaping the mouth into an aperture into the thoracic cavity and striking it with the flattened hand, the inner comes out and strikes the ear in a series of percussive pops. Spirit is not hereby reduced to bone, but breath (a persistent figure for spirit) is given a grain through the collaboration of hand and mouth, a grain that conveys signs resistant to linguistic reduction, but which are addressed both horizontally and vertically, that is, to one’s brothers and sisters, but to the master as well. These are “spooky” sounds whose agents cannot die because they were never granted life to begin with.

Hambone can thus be taken up as a form of “beating back,” not as an incarnation of absolute resistance, but as a practical assemblage within which resistance and self-expression rub together in a manner that puts a subject—whether black or not—in play. As such, hambone—read from a certain theoretically charged angle—calls the humanities and its subject to respond, to play back. Our business, the business of humanists, may well involve sorting the matter of how did, or could, it respond. And, perhaps most challenging of all, must this response avoid the logic of enchantment, after all, a term fundamentally ensnared in song? Not the song sung by a body, but the very embodiment of song. Especially, of course, a hit.

Rachael Colley

Spurious Luxus

Jewellery and regalia can be used to undercut status and class; through the manipulation and transformation of materials illusions of preciousness and cultural value can be created. Throughout history social signifiers (such as jewellery and regalia) have prevailed as time-tested social indicators, with which to map common standing and personal relationships. Cultural boundaries or horizons have been negotiated by presenting 'blingin' forms of display, with the intention of conveying power and significance. This physically embodied transmutation of matter links readily with the alchemic process of smelting and forming metal elements and alloys. With the addition of jewellery and regalia the wearer's character or class transfigures, magically reimagining them in an alternative, romanticised existence.

Spurious Luxus is a developing collection of adornments which aims to defamiliarise everyday organic materials (such as jelly, beef and blood) in a satirical and narrative way through denaturing processes and the materials' re-presentation in specific symbolic forms. Degradable materials' limited lifespans highlight the passing of time, suggesting the ultimate end that conventional jewellery circumvents through its endurance.



Rachael Colley (Artist), *The Yorkshire Rose (Dodgy Dodger)*
Gold plated silver, biscuit, jelly, blood, sugar and stainless steel.



Rachael Colley (Artist), *Wafers*
100% British beef, gold plated brass, oxidised silver,
elastic, flour, egg white, stainless steel







Rachael Colley (Artist), *Beefin' Up*
Gold plated silver, 100% British beef, flour and egg white.



Rachael Colley (Artist), *Doggy Dodger? (Chewed a Roast)*
100% British beef, gold plated silver, stainless steel.



Micah Silver

Sound, Audio, Music // Physics, Intentions

sound
physics
audio
listening
reciprocity

What I would like to do in this paper is to practice some philosophy in the terms of the philosopher Jan Zwicky which I find to be particularly resonating. She says: “Philosophy is thinking in love with clarity.”¹ In the interest of this, I am going to discuss my thinking around audio and why we are using it as if enacting an instance of it were an act of transubstantiation. To get there I’ll first differentiate sound from audio so you have a better sense of what I am discussing. The final phase is to disambiguate music and audio that brings more precision to the subject and emphasizes that music has actually very little necessity for sound or audio and can be more clearly understood through the lens of intentionality.

Sound

In one sentence: Sound is the domain of physics.

It is a generic category for compressing waves through a medium; even though our physiology has a relationship to it as a sensation to varying extents, sound has nothing to do with what we can or can’t hear or sounds we can or cannot make. Sound is a scientific term, and we have technology to roughly measure sound both within and outside of the provenance of our senses. Importantly, these tools are not seeking meaning but attempt to quantify, and via quantification make sound an intellectually operable “*thing*,” which has largely been accomplished to support various dimensions of engineering.

It is imperative that we keep in mind, however, that while we “know” a lot about sound, accurate measurements of it remain “good enough” for many practical applications, but in no way yet reflects the true complexity of the phenomena. For example, computational models used in acoustic design still use raytracing to simulate sound’s movement in space and in combination with materials in the form of reflections, absorptions, diffraction, etc. when in fact as we all know, sound is not a ray, but a complex often chaotic wave. These models remain beyond our current computing power – and according to Ben Markham, an acoustician for Accentech in Boston, attempts solely remain within the domain of supercomputers.

When we draw sound or use software related to multichannel composition of some kind, we draw paths – and these paths do not represent sound but represent our subjective localization of it. If we could see sound bouncing around a room, we’d understand that it is a complex 4-dimensional form whose characteristics for self-interference, rupture, and unpredictability are magnificent. Sound is the domain of physics.

It isn’t easy to be a sound artist by this definition. As a thought experiment

1 Jan Zwicky, *Lyric Philosophy* (Toronto: Brush Education Inc., 2011), 32

let us imagine for a second how music history and theory would be different if all along we could have seen the acoustic energy moving through space as complex multidimensional forms? Very quickly composers and the public would have become involved with this dimension and there would be a long history already of combining this graphic listening with other forms, be it what is demanded of us listening to romantic narrative constructions of orchestras, or techno at Berghein. Imagine how we would deal with landscape design or office cubicles. Instead we built light shows in discos, control the staging and costuming of music in order to make what is invisible, visible or shape bilaterally: most of the field of acoustics can be reduced to curating absorption.

There have been a few sound artists and composers to meet these terms, even though we can't see or entirely quantify sound and we should feel free to use audio, music...any acoustic means as a tool for knowledge of areas we've foreclosed to science and in this frame. At the same time we should be aware of how simplistic demonstrations of quite mundane scientific facts is perhaps performing free labor for the false sense of science's grip on knowledge of what this world and its things are.

Sound can and has been interfaced with as a tool to explore speculative edges of physics, this is where we would find a true sound artist by this definition and where I locate the work of Maryanne Amacher, for example. Her work is most profoundly understood as being in large part an approach to highly speculative acoustics dealing with chaotic spatiality formed from the extremely subtle use of reflection. There are others, but I think Amacher shines a light into a future we should pay close attention to.

Yet to say that sound, in this definition is a "material" for art is again a grotesquely desubjectifying position for an artwork. I discovered in the past two years that I am more or less a strict Piagetian, I believe in his quite esoteric notion of "schema" which claims that we accumulate schematic impressions of how "things" work, their relations and interconnections, and that the content of these impressions is secondary to the dynamics of the structure. For me art is about learning in a Piagetian sense – and the material of art is not sound, not paint, not objects, but the schematic play we do with our attention in order to absorb the work. For time-based art this has a lot to do with entrainment, but not only. For this reason I also feel very strongly that to discuss temporal experience as if it were frozen representation, purely semiotic or purely phenomenological is a false binary and a total intellectual failure, actively in play within sound studies unfortunately.

So to summarize once again: sound, construction and the domain of physics, to the extent another field is involved with physics it can be involved with sound. Sound can be a tool with which to shape material – as a baton controlling a marionette, but the puppet is our attention to sound as a listener even if this means that our bodies are changed in a chain reaction beyond lightspeed; not the speed of sound but the speed of consciousness, whatever that might be for you. There are no sound objects, only listening objects, and while sound is a wave yes, for our purposes as speculative non-scientists it is but the carrier wave for modulations coming from a complex of other possible materials that build an

impression, a schema, that can receive the full riches of our subjectivity and model alternatives via listening.

Audio

As the way in which we interact with audio shifts with ever changing technologies, the nature of what audio is for us has become confusing, elusive, and ultimately fractured into multiplicity. This is true for all mechanisms through which we relate to audio from capture to production, to cataloging, to play back, to architecture and spatial expectations for how to position our bodies in relationship to it.

Our time is of multiplicity, of constellation and of crashing through the ambivalent relativism of the last thirty years and crumbling attachments to highly capitalized ideas of unity. There is no competition between an experience or possible experience, that of the original experience or any other, it's all an option; a temporary truth with specific qualities and limitations that don't preclude the vastness of possibility. We can try them on, take them off, and remain unattached – use them to expand our lexicon of schemas. In so far as audio and listening are concerned it is simply our job not to engage delusions that don't serve us, nor instead serve the last gasps of global media capital attempting to re-hand us directions to the ATM. It's too late now for any sole winner to arrive and control audio, and that's an opportunity for us to shape our relationship to it anew. To start with we can stop using it to reify our belief in transubstantiation and other forms of magical thinking and embrace instead its riches of illusion and fantasy. And audio creates first and foremost, magnificent temporary, communal illusion.

Audio, the thing, is rooted in ideas, ways of thinking, that have been embodied in technologies that provide a temporal displacement of a captured, transubstantiation of air-born sound and simultaneously offer the potential to desubliminate this de-energized potential back into the air as a representation functioning as social architecture. The inscription and re-performance of spoken language or music transcribed from performance and re-performed are both early instances of audio by this analysis. This is not to say that notation or written language in general is audio or always, but that these are both technologies that can be used within a process through which audio are committed.

In one sentence: Audio is not a technology but a process that *employs* technology to construct temporary social architectures made of air.

What follows is a little twisting so let me summarize what this is all about: I am talking around the question of what travels through audio processes, what is the *enough* or the something that makes it a convincing illusion. I am making a case for this something being a compound mined from a place that I will call temporaneity – and I don't mean to pretentiously make up words, but as best I can tell we don't have words to hold the concept of the kind of *cyborgian* codicil for time that we must if we are to understand current and recent technology relying on quantizations of time, or in this case encode, hold, and represent it as audio. While we go into this spiral of what is referred to in other situations as a “signal

chain” we should keep in mind that while audio processes can have many phases of transubstantiation — in the final phase of the process, one enacts an instance of audio, and audio processes require this of us or someone, always, it results in a temporary place, a temporary social architecture whose substance is not sound nor the transubstance we are sleuthing for, but air and this air is only partially constituted by sound and only partially encountered with the ear.

So if audio is a thing, we can find it as the delta between air with and without it. To identify this delta takes all of our senses, not only that of listening.

It is uncanny that audio perceptually functions at all. In a slightly alternate universe listening to audio could have been similar to a cat looking into a mirror. The cat will not believe the reflection to be real or related to themselves, and will not likely even recognize the representation of herself in the mirror as a representation; same with cats and photography to an even greater extent. When we record our own voice and play it back we may feel tremendous alienation from the sound, but also we don't decide it is someone else. But what is on the tape or in the MP3? What is in the air? What is the “enough” that audio achieves so readily as to set our imagination in motion to fill in the details?

The sub-technology that is the keystone of all audio technologies and can't be removed is an underlying periodicity or clock. Whether it is an electrical frequency that is modulated, a spinning wax cylinder, a record lathe, or a D/A converter, there is always a method to quantify and to maintain this quanta's logic throughout the system. Pre-digital, most technologies for encryption and decryption relied on spinning or turning, post-digital we have crystals and rare metals all working together - and with quantum computing the clock spins many ways at once. But the one component of any audio system (so far) that if degraded will trash the capacity for our imagination to fill in the details is this property of clocking. In digital audio this is the sampling rate – you can crush the bit depth to death and still find some resonance with the original character of audio with all of its bits filled. With a CD you had a laser reading at a pulse of 1/75th of a second as an additional overlay. Crush the sample rate or add chaotic periodicity as in Yusanoë Tone's work and the illusion no longer works: we become the cat in the mirror. Tone's work within this frame is not audio, but music, performance where he breaks the mirror and a machine becomes something else.

Audio really should not pass this Turing-like test, that we can imagine so much and think and feel through audio seems improbable, and implies we are entirely and sweetly gullible consumers of memory materialized. Yet it does and has from the beginning of the technology, where the media involved were capturing almost nothing except a trace in time. But this clear temporal trace is the enough for us to believe it is testimony to a humanity that it does not contain unless we do truly believe in transubstantiation.

I've been making diagrams the past few years and recently started moving into formulas. So I have attempted to write a formula for Temporaneity, to be very concrete about what I mean and read it for you now:

Temporaneity is the reciprocal of your sense of place with the change in a listening arc/entrainment episode subtracted plus your associational inventions as multiplied by the sensuality of timbre to the power of your memory shadow recalled.

This, or something along these lines is the trans-substance of audio. There is sound in the air, the earth, the water, or from nothing in a software- the affective and physical qualities of these things in place and as constituents of place are not possible to displace. There is no capturing of this there in its entirety. Audio, photography, videography, cinema – these are like fracking devices and violently mine with great increasing sophistication various *some things*. Our attention moves with our senses, we don't just mindlessly digest aurality, we build it with ongoing analysis – we compare arrival times of sound at orders of magnitude unthinkably more precise than we see color or smell chemicals. Durations are bracketed by our attention. When several years back cochlear implants became possible it was discovered just how vast our aural memory is – for timbre, for differentiating acoustics, for localization – the sensation of timbre is like touching fabrics of infinite possibility - - - association and timbre are inextricably linked – if yesterday you had a cochlear implant you would struggle to differentiate a cat from a helicopter. This recognition leads you into the shadows of your memory, recalling in extreme rapidity overlays of previous sensations, decision, feelings – all of these factors are part of what can be contained within audio's transubstance and it seems like only a human being or a humanness could produce such a dynamic response. Yet there is nobody on the other side of the phone - it's just us, daydreaming all of this to life, even to the sound of a scratchy wax cylinder with almost nothing there. This fact, that nobody is on the other end of the line - we need to take stock of this - because when we hit play, we're imaging someone there – John Coltrane is dead. You never even experienced his presence. But audio, while it may be enough it is not an old is, it is a new one that you make for yourself – like counting hits on a website or imagining the visitors to your museum show- we are having a conversation with ourselves.

So perhaps some examples are useful, some of which an exception to the rule: we are all here, holding each an object whose function is a temporal displacement. Let's say it is a reel of magnetic tape or a shellac disc we just lathed – as tangibly physical as audio has ever been, and no longer is. The metals of the tape have been shaped just moments before along the path of our own voice, you just recorded yourself singing in the shower or performing *I am Sitting in a Room* – the disc cut into a topographically ornate spiral of valleys that trace the movement on our breath made by our vocal apparatus and the room. Are we now holding our voice in this time and place in our hands? Is it just tape or just shellac? If we aren't holding our voice in our hands, yet we can enact a representation of it momentarily and these materials contain this option; what do we hold? We have to dispose of the language of the illusion – like we could say “we have a recording” or we have an “audio file.” This is, more or less, the language of consumption at this point. We need an alternative. So this tape we hold in our hands contains a *something of our voice*. We can

likely agree that the synaesthetic impression or sense of duration we experienced while making the recording has entirely disappeared. This duration is not your stopwatch but what we felt, how long we felt it was, the informational crosstalk of our other senses that influenced our time-sense during the recording (the temporality), the other presences in the room, the moments that preceded its effect, how permeable or impermeable a space is: where are the walls in this room with no walls that is time?

This aggregate temporality sensed in the moments passing and remembered as an episode is what I mean by *duration*: somewhere in Bergson's neighborhood. This experiential unit has nothing but a correlational, linguistic relationship with the quantization of durational episodes by a clock of any audio process, not only philosophically but also practically. When I say duration I mean an actual time-space impression, richly perceived but beyond quantification. Contingent, sure, but its contingency doesn't negate our attachments or specificity of value and storage location.

But in thinking about audio, duration for us need not be limited to the clearest case of recording places and their contents in time; it is also the shaping of sound into a duration by a human being that accomplishes the same thing for us as we enact it in air at another time, another place. So in this view, the audio production studio, in any form, is a means through which synthetic durations are composed. A sense of there is constructed and shaped over many episodes of there, aggregated into a composite temporality, objectified so it can then be represented in the future via playback. Audio has been and always will be a fantasy beyond death.

So now, back to the voice-like thing we may or may not have in our hand – as we listen now to our tape and observe the relationship between our memory of the original duration recorded and our un-clocked sense of it via the audio representation, we are left with a somehow related, but additional impression of the duration or an originary moment the recording is testimony to. In our most lucid moments we might experience this is an overlay and grasp the difference with some precision, or with listening training learn to do this, but quite likely it is cause for what Jean Piaget called the *deforming assimilation*. To protect the stability of our ego we deform the world to lexically slide into the sameness of our experiences rather than to understand deeply the difference and construct new schemas for what is possible based on ongoing subtle difference; the learning we can do in every instance.

So we are mutating not only the present, but our memory in this act of listening. And as we listen, likely we remember not only the duration of the inscription as an overlay, but others overlay as well. Here we can again find Bergson and consider how little choice and control we have in which memories we recall and for what purpose, our mind identifies them as salient information for informing the present. We aren't wonderful at controlling what we remember when we listen, where our senses go most of us can barely meditate for a minute holding a single word or thought without interruption of some memory, anxiety, or curiosity. During playback this sensual crosstalk is a new constellation, we can't remove it

from our experience. Even in an anechoic chamber, a sensory deprivation tank – there is no escaping the aggregate sensation of being where we are to some extent. But nevertheless, if the tape machine was calibrated accurately, we know that a quantification of the originary duration is being represented during playback with as much accuracy as was possible during the inscription. That quantity is placed into a new time, making a new episode of durational experience, and has regardless of context a spell-like quality that can be distinguished as a constant amongst other perceptions.

Let's take another modulation: as we listen online to a “real-time” feed of a microphone placed deep underwater – let's imagine something great like the oceanic waveguide where sounds travel around the world, or in a department store, a live concert stream, or a webcam of someone's garage full of illegal snakes: in these cases are we to believe that nothing originary is transferred across time and space? If that were true we would have trouble fantasizing about how many snakes there are. What do we believe to know about these places by listening via the remote microscopy? Maybe more importantly, why do we desire to believe these things against so many factors that would dissuade us if we compared these beliefs in-depth to our knowledge of the mediations present?

In the first case, we could not be there listening in the same way – with scuba gear we would hear our breathing or in a submarine; we would hear the machine and listen through another microphone, but be there in time. For the others, what is the difference even in how we imagine listening as we read or listen to a description, in this moment, either by being there or by being elsewhere, imagining this other “there.” Our experience right now, projecting these examples, can tell us a lot about these differences – and in many ways, text when used as in this paragraph can be quite close to the procedures of audio within our imagination.

Yet the confound to developing a resolution to this possible similitude of originary testimony to a human presence and representation is that we can never be in both locations at once to compare. The differences and the slope of these discontinuities in meaning with the control of our own subjectivity, however contingent, is not possible. No human has experienced this, even via say astral travel or the reports of CIA remote viewing experiments. But audio's intersubjective basis, our implicit social contract around how it means, is clear: we believe that there does exist some sense of testimony in the experience of audio that transfers not the entirety of the originating situation's qualia or even acoustic reality, but something of it.

Acoustic Ecology and Phonography >>> Sonification >>> Archeofossil

To start a summary on Audio – Audio's particular opportunity affords an uncomfortably intimate encounter with representation, as our subjective acoustic memory, our sense of place, our personal memories, our ways of thinking, feeling, and being, the social rules provoked by the audio – all of this sparks together forming so quickly it is nearly impossible to parse the resulting composites.

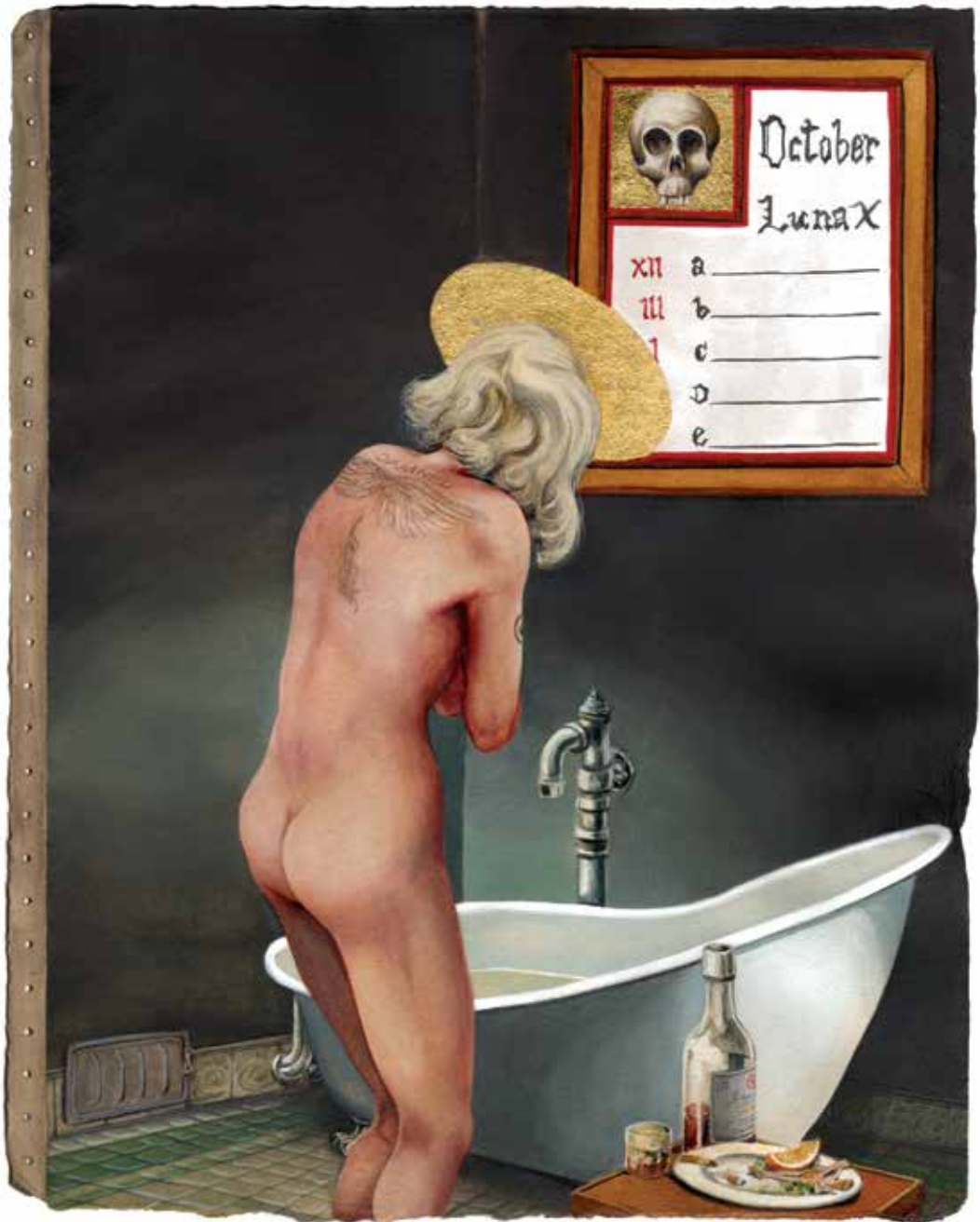
Before the walkman, audio was almost entirely social – and this “air architecture” contained an even more chaotic set of forces and possibilities. Listening requires a lot of time and attention – it is difficult – and we can’t always do it. Listening and finding a relationship to a peculiar air is contingent. We can embrace all of these forces as audio’s subjective grace and charge of possibility.

Audio’s utility is best imagined as in relation to the utility of daydreams, a swimming pool, a site of poly-dimensional osmosis; learning without the necessity of verification or truth toward justification. In the face of audio existing within such a capitalized area of culture and our life, we will need to resist this ease temporarily to develop a relationship that captures all that can be possible in the air we can make, and its capacity to imprint schemas, ways of thinking, systems of order, possibilities.

The potentiality of audio is in its address – of the air it produces – and how, as a place, it exists within the oscillations between our thinking, affect, our physiology, and its action.

Audio is always in a productive and ephemeral reciprocity with a social architecture inhabiting it, even if we are alone.

Russell Nachman
Palimpsest Series



Russel Nachman (Artist), *Palimpsest II: Apostles, Prophets & Messiahs 40*
Watercolor & gold leaf on paper 8 3/4" w x 11" h.



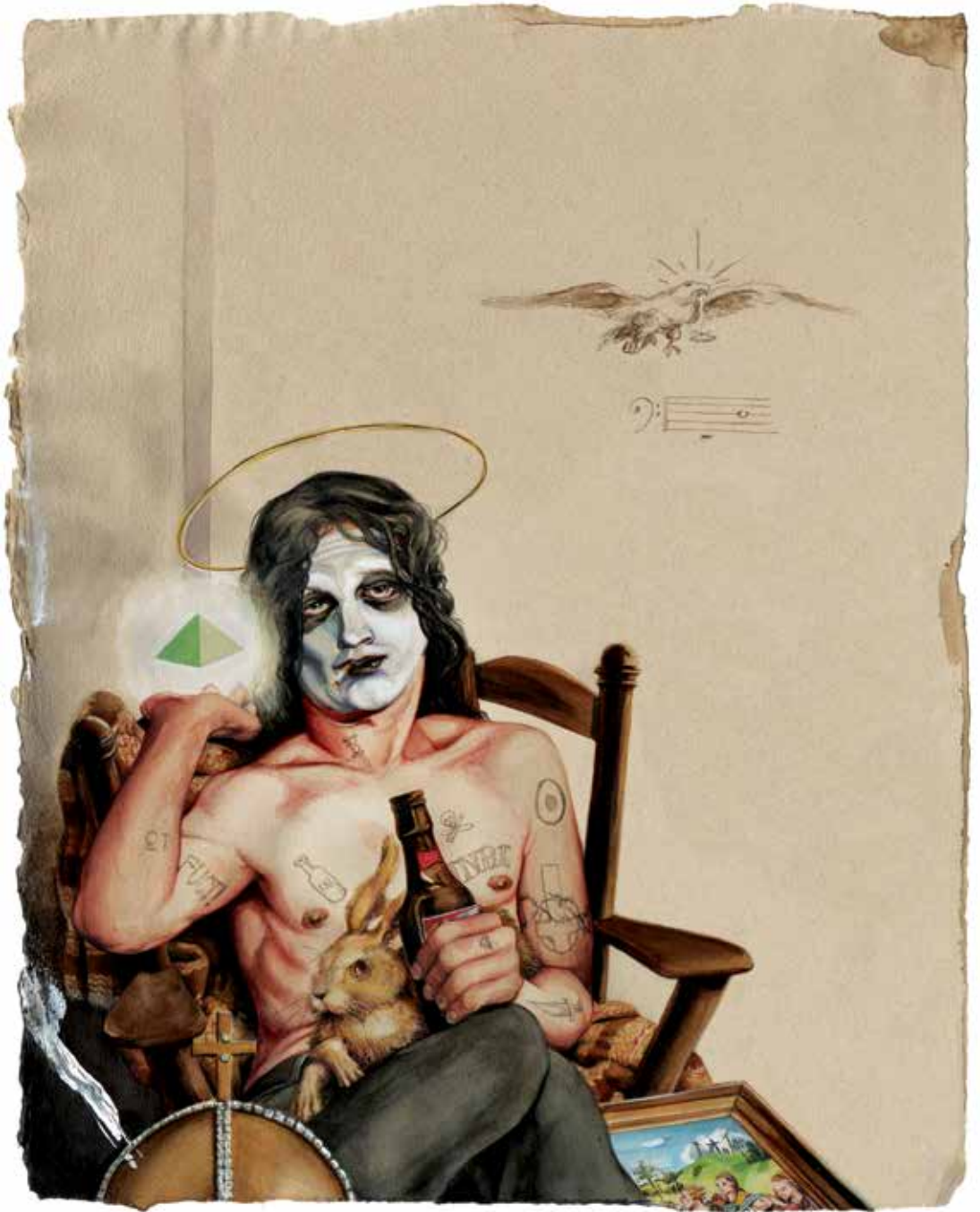
Russel Nachman (Artist), *Palimpsest III*: catalog 46c
Watercolor, gold leaf & acrylic on paper 115cm x 75cm, 2013



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Cat. 40c



Russel Nachman (Artist), *Palimpsest II: Apostles, Prophets & Messiahs 40*
Watercolor & gold leaf on paper 8 3/4" w x 11" h



Mattia Paganelli and Dane Worrallo

Eleven Theses for An Initial degree of Roughness: Transubstantiation, Materiality and Art

We are uncomfortable with the renewed attention that ontology pays to the absolute. Most importantly, we feel that a straightforward resurrection of substance is not capable or competent to engage with the multiple and simultaneous resonances of the present.

The *Eleven Theses for an Initial Degree of Roughness* put forward instead that processes of knowledge as much as ethical or aesthetic choices operate in a radically material regime; a network generated by fractals and complexity. This demands an entirely new move in order to break away from the traditional binary framework gone before, including its “post,” “neo,” or “speculative” variations. Listening to the echo of Marx’s “Theses on Feuerbach” - which is to remember that all human activity and the material conditions of that activity are sensuous - the theses propose abandoning reductionism, as the essence of ontology, and indicate tools to engage with the un-rescindable determination of givenness (roughness) via a temporal turn, starting both thinking and practice from the complex rather than the simple.

In fact, we seek to turn logic inside out and take the crisis of foundations of the past century as an opportunity, a possible opening in an otherwise closed universality. Abandoning any external observer position, these theses indicate non-linearity, fractal iterations, emergence, finitude, and superposition as some of the key dimensions necessary to inhabit this initial roughness ruled by “undecidability” and “incompleteness.” Thus offering a new logic that can elude objectivity and enable both the artist and the thinker to engage with aesthetic as a surface generated by complexity, rather than a preliminary step on the linear path leading to Being.

Thesis 1.

No aesthetic theory, practice, let alone its critique, would be possible without taking as a starting point an *initial degree of roughness*. This is a move entirely different from the binaric (zero-sum) true/false statements of logic, generalizations of inductivism, or what seems to emerge from the expectations of a ‘scientific’ observations of events.¹

1 Expectations are of course legitimate, and yet highly problematic when a filter of ‘objectivity’ is first applied to an epistemological model and then (conveniently) forgot, made transparent, and concealed. The rationality behind the STEM approach, for instance, as a model of research and knowledge, introduces guidelines for the production of thought geared toward an ever-objective structure, distinct from the object it intends to measure; this is not only without regard for the work of art or its material practices, or sensuousness in general, but actively colonizes their practices as territories without a language of their own. In contrast with this attitude, Isabelle Stengers’ reformulation of the problem of knowledge is enlightening and refreshing. She indicates that a model and its measuring tools are not providing objectivity, but should instead be adopted as a useful platform for raising and discussing objections. Popper’s argument about inductivism and conjectures, and the selective process that supports the validity of scientific theory or cohesion in general come to mind. Equally the necessary constraint (roughness indeed) that Mandelbrot discovered in fractal iterations, and the ‘natural interpretations’ that Feyerabend emphasizes are both inevitable and necessary for a fruitful

emergence
time
materiality
undecidability
epistemology

Thesis 2.

After the crisis of foundations of the last century, networks and digital transformations renew the challenge to ontology. Emphasizing once again that the very ground upon which realities emerge (virtual, artificial, augmented, real) is better addressed as ‘surfaces’ (immediately emerging in the plural), ‘sensuous or libidinal economies’, folds or dimensions, organizations that do not point to a whole. The question thus becomes one of how to inhabit sense as a regime, or logic of incompleteness, which no longer relies on identity as its principle, but evolves precisely because it is unbound; a dynamic form of consistency that grows rather than being established a priori.

Thesis 3.

With and beyond Kant, the intertwining of phenomena and expression also rings true for contemporary scientific (physics/meta-mathematics) enquiry. Perhaps it is appropriate to speak of both contemporary ‘art’ and ‘science’ knowledge-practices as embodying discourses not dissimilar to that of quantum mechanics; that is as an “entanglement” or shared existence; each being distinct, but affected by what the other does, and even more interestingly, contributing to the emergence of time and space (Kant’s a priori, which would seem not so unconditional after all)². Observation (indeed, being present) is a powerful tool; it does not just discover results or data, but here contributes to its very existence.

Thesis 4.

If we are to assert that an *initial degree of roughness* grants us the means by which to begin the work of science and/or art, discovery and/or invention, then perhaps a lesson we can take from Kant is that we do not forego or leave it (this initial degree of roughness) behind when experience may smooth over the peaks and troughs of intuition and intensity or when said experience may try to reduce reason to a linear cause-effect historicity.³ Kant attests to reason’s distinction from understanding in its ability to think in a creative or non-linear manner. This finitude or roughness, as Heidegger puts it in light of Kant, is not to be abandoned, but “safeguarded”.⁴ In light of our initial roughness we can see the emergence of a *techne* of complexity, where finitude does not just exist as constitutive of a subject, but gives materiality to everything else in the universe as well (it is not something that can be “detached” by reason to find its unconditional metaphysical essence). But what sort of logic/epistemology/method/practice/regime – call it what you will – could accomplish this?

scientific research contribute to the formulation of this concept. All indicating that it is precisely some degree of opacity, of problematization, rather than the transparency of idealized objectivity, that permits both the process of knowledge and the production -be it of objects, art, or sense- to take place. See respectively: Isabelle Stengers *Cosmopolitics I & II*, trans. Robert Bononno (Minneapolis: University of Minnesota Press, 2010) where this theme is developed, and her lecture “Provocations of Gaia” <http://www.nottinghamcontemporary.org/event/isabelle-stengers#field-field-vents-video>, accessed February 20, 2015; Karl Popper, “Conjectural Knowledge, My Solution to the Problem of Induction” and “Of Clouds and Clocks, An Approach to the Problem of Rationality and the Freedom of Man”, both in *Objective Knowledge, An Evolutionary Approach*

Thesis 5.

In a non-ontological regime of emergence, matter is at once *univocal and radically other*. What has always been assumed as absolute foundation is revealed as epiphenomenon, a form of coherence whose synthesis is a posteriori, retroactive.⁵ Some have named this “distributed representation,” where identity, instead of being concentrated on a pineal point, emerges from the multiple folding of the processes already active in a system and cannot be reduced to basic elements; integrability is possible but only at the cost of destroying it.⁶ In this progressive testing and including of possibilities, description coincides with history and non-linearity becomes the main trait of processes of emergence. Thus, temporality is intimately linked to judgment.

Thesis 6.

The fallout from this temporal-judgment intimate dance produces an odd cathectsis, what Prigogine and Stengers, in studying how entropy leads to the emergence of ever more complex organization, namely the concept of “active matter”.⁷ The internal fractal dimensions of such processes, and how the open process of emergence is a form of judgment without concept, emphasizes the poetic character of aesthetic judgment, while it also annihilates the distance between matter and representation. In this sense, shifting from representation to emergence could be called: the transubstantiation of logic. Materialism famously claimed to aim at changing the world rather than merely interpret it, yet this change is without absolute criteria and can follow only its internal contingent constraints.

Thesis 7.

Our initial degree of roughness shows itself as inherent in any sufficiently powerful system. Building on claims 1-6, we turn to Kurt Gödel’s incompleteness theorems. As is well known, Gödel shows not only how a “synthetic” system will (necessarily) produce *undecidable* propositions, but also shows that whenever this *undecidability* can be “solved”, it again produces another undecidable proposition *ad infinitum*.⁸ Like prime numbers (Gödel’s “pattern” of choice), there is no analytically condensed formula for expressing such infinitude, therefore our reliance on algorithms and feedback becomes essential if we are to account for development and emergence without foreclosing the territory within which we are making, thinking and doing. While Gödel and Kant reveal “flaws” in totalities of empirical thought or axiomatic methods, they are relegated to very specific instances, and are

(Oxford: Oxford University Press, 1972), 1-31 and 206-255; see also Benoit Mandelbrot, “Chance as a Tool in Model making”, in *The Fractal Geometry of Nature* (New York-San Francisco: Freeman and Company, 1983), 200-204; and Paul Feyerabend, *Against Method* (London-New York: Verso, 2010), 49-59.

2 See “Quantum Experiment Shows How Time ‘Emerges’ from Entanglement” (The Physics Arxiv Blog). Accessed January 25, 2015. <https://medium.com/the-physics-arxiv-blog/quantum-experiment-shows-how-time-emerges-from-entanglement-d5d3dc850933>. For the technically detailed article see: Ekaterina Moreva et al., “Time from Quantum Entanglement: An Experimental Illustration”, published October 17, 2013. Accessed

a small degree of roughness in a very complex but otherwise deterministic system, meaning they can be largely ignored.⁹ We are not looking to overcome traditional goals with traditional methods; rather, a whole new territory is taking shape based on this roughness, a kind of purposiveness without purpose of aesthetic judgment – a cohesion without concept- where aesthetic and judgment have to be indissoluble for givenness to give itself.

Thesis 8.

For cohesion without concept to take place, the undecidability that Gödel exposes in the system must become dynamic; only in this way can incompleteness reveal its radically other ‘material’ side and expose givenness as finitude.¹⁰ It is not enough to pass from the identity of being to the being of identity; multiple circulations and reciprocities must be allowed to take place simultaneously in order to explain the emergence of sense. Wittgenstein had already spread out the ontological root of the proper name into the relational surface generated by the correct application of rules/grammar (epistemology).¹¹ A dynamic interpretation of the transcendental would bring, to paraphrase Leibniz, God’s operations on the level playing fields of the present – the compossibility game of multiple open series where one is the segment and zero an uninhabitable and meaningless smooth infinity.¹² Such incompleteness, beyond all postmodern abysses, reveals itself as ‘positive.’ That is, transubstantiating from a notion of matter separated from its form/dimensions and representing meaning on the background of necessity, to *dimensionality*; a process of emergence that lies outside the teleology of a totality to be fulfilled, or the opposition of otherness to be reconciled, or of lack to be overcome. Positive incompleteness cannot and must not be approached, let alone solved, from inside undecidability as the paradox of linear thinking.

Thesis 9.

Contemporary art practices (and theoretical immersions) require a radical *dis/position* from the paradigms gone before. The Kantian/Enlightenment pursuit of rationality as equivocal to ontology, makes logic and reason (no matter how flexible Kant envisioned it to be) always to lead to specific ends, teleologically justified or otherwise; and, in so doing always objectifies “sense” as the means to that end. Wittgenstein certainly had the right idea to counteract this epistemologically, and his objection to Turing’s notion of artificial intelligence is based on this.¹³ Similarly, Gödel’s challenge to Turing on this subject was that the human mind “evolves”

January 25, 2015, <http://arxiv.org/pdf/1310.4691v1> .

- 3 Cf. Immanuel Kant, *Critique of the Power of Judgment*, ed. Paul Guyer, trans. Paul Guyer & Eric Matthews (Cambridge: Cambridge University Press, 2010), 59-60.
- 4 Martin Heidegger, *The Fundamental Concepts of Metaphysics*, trans. William McNeill, Nicholas Walker (Bloomington/Indianapolis: Indiana University Press, 1995), 6.
- 5 With the notion of plastic control, for example, Popper links the progress of knowledge to the selective

and is dynamic, whereas Turing's universal machine was just a universal "number cruncher".¹⁴ It seems Gödel, Turing and Wittgenstein were all stretching themselves towards similar ideas, but disagreed on issues of ontology, infinite possibility, judgment and the production of truth (certainty). Then the radical dis/position is to (re-)consider time, as itself a singular materiality, whose singularity is irreversible, due to its being emergent from an entanglement that is not limited by physical nearness or distance, but is primarily self-organization.¹⁵ This temporal dimensionality is perhaps the only marker required with regard to the possibility and production of sense, which relies on a recursive foundational move, not one that is closed or deterministic (again reducing a system to mere cause and effect) or rooted in an uninterrogated *a priori*.

Thesis 10.

The consistency or cohesion that presents itself is, in fact, all that is required to sustain an entangled relation of the emergence of givenness. There is no need for recourse to ontology, regardless of how much "possibility" or "freedom" is promised or attempted to be built into its Russell-esque scaffolding. If these traditional systems persevere, we may become trapped between (old-ish) postmodernism that nullifies any attempt at universal coherence/consistency and (new-ish) contemporary speculative trends that forfeit dimensionality to once again impress on us the significance of an object-oriented method, by which movement takes place once again in a hierarchical manner.¹⁶ The algorithm as instruction for the continuation of the series, rather than an exhaustive description of the whole expressed by the equation, is a strategy whose only prescription is to be tactical and local. That is, the instruction can only function adopting the present and the present's organization as ground; thus the results of the last development become parameters for the new evolution of the system. Mandelbrot, named this form of *recursiveness self-constrained chance*.¹⁷ In this sense, the growth of consistency by fractal iterations is not different than the selection by testing compossibility proposed by Leibniz. As such the totality of infinity is never contemplated and only the present/local pattern is engaged, as the only information the process can implement. Such self-constraint, or finitude, engenders a *positive* limit. It provides that initial degree of roughness necessary for the algorithm to function and turns the present/pattern into a set of dimensions. This transubstantiation of logic retains the cohesion of sense and, at the same time, overcomes the mournful attitude that stems from the interpretation of the undecidability of entanglement that conflates it with

process of increasing consistency (evolution), a kind of consistent materiality or coherence. Interestingly, this position of Popper's takes us quite close to Leibniz's compossibility. For Leibniz there is still an external processor that selects (God as a *Deus ex Machina*), even if already inescapably submitted to logic, while for Popper judgment becomes disembodied from a singular figure and (re)embodied by the system in the entirety of its processes. See Karl Popper, "Of Clouds and Clocks", 206-255; and Gottfried Wilhelm Leibniz, *Theodicy, Essays on the Goodness of God, the Freedom of Man and the Origin of Evil*, ed. Austin Farrer, trans. Eveleen M. Huggard (London: Routledge, 1996), 73-123; and "The Principles of nature and Grace Based on Reason", in *Discourse of Metaphysics and Other Writings*, ed. Peter Loptson, trans. Robert Latta and George

pure difference; thus not dispelling a certain postmodern ambiguity that risks maintaining metaphysics by disguising Being with the paradox of its absence.¹⁸

Thesis 11.

There is no need to build a system to “contain” undecidability, in order to bestow said system with *degrees* of freedom, or to derive it from axioms only to retroactively undermine them; we are not looking at parts of a whole, but segments that are localized, but not constrained by a physical-spatial-temporal limit of measurement. It may be that entanglement offers emergence and a relation across immeasurable distances, but leaves wanting a more specific locality (a Heideggerean “nearing”), which is what holds a coherence and dimensionality together with the roughness and consistency that we have discussed.¹⁹ To forfeit these discussions to onto-philosophical systems, such as those that “produce” undecidability as a mere consequence do indeed create this sense of “lack” which generates an objective to fill or complete it. Arthur Kroker’s caution to the embracing of the de-centralised, discursive digital is that, while it empowers radical connectivity and possibility across non-linear trajectories unimpeded by physical restrictions, it also contributes to a radical resurgence of the religious ideological battleground, as a means to fix the “burden of undecidability” brought about by the will to technology. In both this context and with the points discussed above, perhaps we must take the position that it is time to declare the century-long mourning period for the death of God announced by Nietzsche as well and truly over: To find truth in its telling and its difference, rather than as a sameness of ground, method or concept.

R. Montgomery (London: Broadview, 2012), 103-114.

- 6 The notion of “distributed representation” comes from the neurosciences field. See Paul Cilliers, *Complexity and Postmodernism, Understanding Complex Systems* (London: Routledge, 1998), 59-88; also John Holland, *Emergence, From Chaos to Order* (New York: Basic Books, 1998), 81-114, 188-201.
The chrono-logical irreversibility of events is the argument developed by Prigogine and Stengers in their early collaboration, moreover, this implies the mathematical impossibility of an external observer position at the base of the Newtonian model. See Ilya Prigogine and Isabelle Stengers, *Order out of Chaos, Man’s new Dialogue with Nature* (London: Harper-Collins, 1985), 286-290.
- 7 This is the crux of Gödel’s second incompleteness theorem. See Kurt Gödel, *On Formally Undecidable Propositions of Principia Mathematica and Related Systems*, trans. Brian Meltzer (New York: Dover Publications, 1992), 65. Gödel was well versed in Kantian philosophy, having read his work when he was sixteen years old, and the same age as one of his best friends in later life was reading Kant – Albert Einstein. See Pallo Yourgrau, *A World of Time: The Forgotten Legacy of Gödel and Einstein* (New York: Basic Books, 2005), 16.
- 8 Gödel is relying on the argument made in *The Critique of Pure Reason*, but some of the *Critique of the Power of Judgment* also has some resonance – in particular the sections in which Kant differentiates teleology and decidability (§74 and §75). Not only does the faculty of understanding for Kant not account for the sensuous material of art, but other problems also pervade the faculty of judgment, which pursued to its limits will give rise to its own antimony (§70).
- 9 The ‘givenness’ of something (that a material can ‘give’, ‘shift’, ‘stretch’) always implies a degree of roughness, be it during scientific observation – as Feyerabend noted – or in the impossibility to separate matter/technology from what its history evokes when making/speaking of art. In fact, “natural interpretations” are common to primitive cosmologies as much as to scientific analysis. See Feyerabend, *Against Method*, 49-59. Leibniz had already found himself at this same crossroads when he placed God in a third position tangent on both the absolute and the contingent, implementing the laws of logic between the created monads, presented as finite sets/segments of information on the side of contingency, and actualized infinity on the side of substance; thus providing through selection that initial degree of roughness necessary to set the universe in motion. See Leibniz, *Theodicy*, 73-123; and “Monadology”, in particular § 6, in *Discourse of Metaphysics and Other*

- Writings*, 115-134. For a longer discussion on this point, see Gregory Chaitin, "Leibniz, Complexity and Incompleteness", http://videlectures.net/ephdc08_chaitin_lc.ai/, last modified on Oct. 15, 2008, accessed on Jan. 28, 2015
- 10 See Ludwig Wittgenstein, "The Proposition and its Sense", in *Philosophical Grammar*, ed. Rush rees, trans. Anthony Kenny (Berkeley: University of California Press, 2005), 39-196; and *Remarks on the Foundations of Mathematics*, eds. G.H. Wright and G.E.M. Anscombe, trans. G.E.M. Anscombe (Oxford: Basil Balckwell, 1978), 35-123.
 - 11 It is important to warn off the risk of confusion here and to distance our position from the interpretation of ontology reintroduced by Speculative Realism. The focus is precisely the finite dimensionality of the patterned segment, never sizing it with actualized infinity. Meillassoux's attempt to sever all correlations by reinstating an absolute object and with it the possibility of a non-human sense, which he identifies with pure possibility, is a sophisticated twist aiming only at the reintroduction of a priori necessity under the disguise of its absence. Active matter is not conscious matter, nor the product of a present other; rather it is an entirely different process whereby contingency generates necessity locally and retroactively. The concept of Zero and One as infinity and segment, rather than a simply binary yes/no, yet not coinciding with Deleuze's notions of virtual and actual, has been introduced by Golding; see Johnny Golding, "Fractal Philosophy, Trembling a Plane of Immanence and the small matter of Learning How to Listen: Attunement as the Task of Art", in *Deleuze and Contemporary Art*, eds. Stephen Sepke and Simon O' Sullivan, (Edinburgh: Edinburgh University Press, 2010), 133-154; and her "Ana-materialism and the Pineal Eye: Becoming mouth-breast (or visual arts after Descartes, Bataille, Butler, Deleuze and Synthia with an 's')", in *Philosophy of Photography* 3, no 1 (2012): 99-120.
 - 12 For Wittgenstein's and Turing's various differences with regards to logic, mathematics and computation, see Ludwig Wittgenstein, *Lectures on the Foundations of Mathematics*, ed. Cora Diamond (Chicago/London: University of Chicago Press, 1976), 105-106, 109, 186-187, 218-220.
 - 13 Rebecca Goldstein, *Incompleteness: The Proof and Paradox of Kurt Gödel* (New York/London: Atlas Books, 2005), 117-119. Wittgenstein only ever mentioned Gödel's work on incompleteness on one or two occasions (Which can be found in the posthumously published Lectures on the Foundation of Mathematics), and he seems to never have quite understood its implications, referring to it as a mere "trick" or novelty of logic, as evidenced in Goldstein's book that publishes an unsent letter from Gödel to his friend Karl Menger.
 - 14 The temporal character of self-organization is the core of Prigogine and Stengers collaboration; see Prigogine and Stengers, *Order out of Chaos*. A theme that Stengers developed also in the second volume of *Cosmopolitics*, see Stengers, *Cosmopolitics II*; a parallel argument, shifting from discovery to invention is put forward by Wittgenstein, see Wittgenstein, *Remarks on the Foundation of Mathematics*, 168. See also Johnny Golding, "Ecce Homo Sexual: Eros and Ontology in the Age of Entanglement and Incompleteness," *Parallax* 20, no 3 (2014): 217-230.
 - 15 An insistence on there being this object towards which we project our method or being, again impresses on us a very specific manner of movement through space, time and thought, and constructs a non-negotiability into them. This insistence on the existence of such an object forms a key part of the thought of Object-Oriented Ontology (OOO), often connected with the philosophical movement of speculative realism. For an overview of Object-Oriented Ontology see Graham Harman, *The Quadruple Object* (Winchester/Washington: Zero Books, 2011) and Quentin Meillassoux, *After Finitude, Essay on the Necessity of Contingency*, trans. Ray Brassier, (London: Continuum, 2009).
 - 16 This recursive, or feedback loop process was formalized by Mandelbrot as the fractal iteration $Z=Z^2+c$. See Mandelbrot, *The Fractal Geometry of Nature*, 200-204.
 - 17 The post-structuralist interpretation of Heidegger's groundless ground tends to see all relations through a dualistic lens, which overemphasize the irreconcilability of otherness. This undelatable echo spans across authors as different as Agamben (dispositive, capture, naked life), Lyotard (discourse, figure), and Irigaray (proximity); extending all the way to Deleuze's ontologization of differences into one pure foundational Difference.
 - 18 Technology, for Heidegger, is an overwhelming force that seeks to bring everything into availability instantaneously, placing everything in a "standing reserve" by which it can be accessed as a piece of equipment. The consequence of this however, is that such a move obliterates any notion of time, space and subsequently the possibility of relation. In this state, there can be no *techné*, as there is no space/time by which to gather or orient anything. Heidegger stresses the importance for a dwelling, in which things as things can produce a "nearing" and hence the possibility of forming relations. See Martin Heidegger, *Bremen and Freiburg Lectures: Insight Into That Which Is and Basic Principles of Thinking* (Bloomington/Indianapolis: Indiana University Press, 2012), 3-4
 - 19 Arthur Kroker, "Religion, Technology and Ideology" in *Critical Digital Studies* (Toronto: Toronto University Press, 2013), 398-407. This idea that a discursive, technological society separates us from "the real", or is antithetical to an authentic and unifying existence must be overcome if we are break the urge to seek meaning and value in onto-theological absolutes.

Irene Brown

Phantasmagoria Electric

In 2010, artist Irene Brown established the Gallery of Wonder as a discussion point and exhibition facility for research into the evocation of wonder through visual display.

“A certain kind of looking, the origins of which lie in the cult of the marvellous and hence in the artworks capacity to generate in the spectator surprise, delight and admiration...for it is one of the distinctive achievements of our culture to have fashioned this type of gaze, and one of the most intense pleasures it has to offer”¹

A sculptor and site-specific installationist, Brown's research and practice is directly engaged with wonder, focusing on the history and philosophy of science and investigating the threshold between aesthetic and scientific realms.

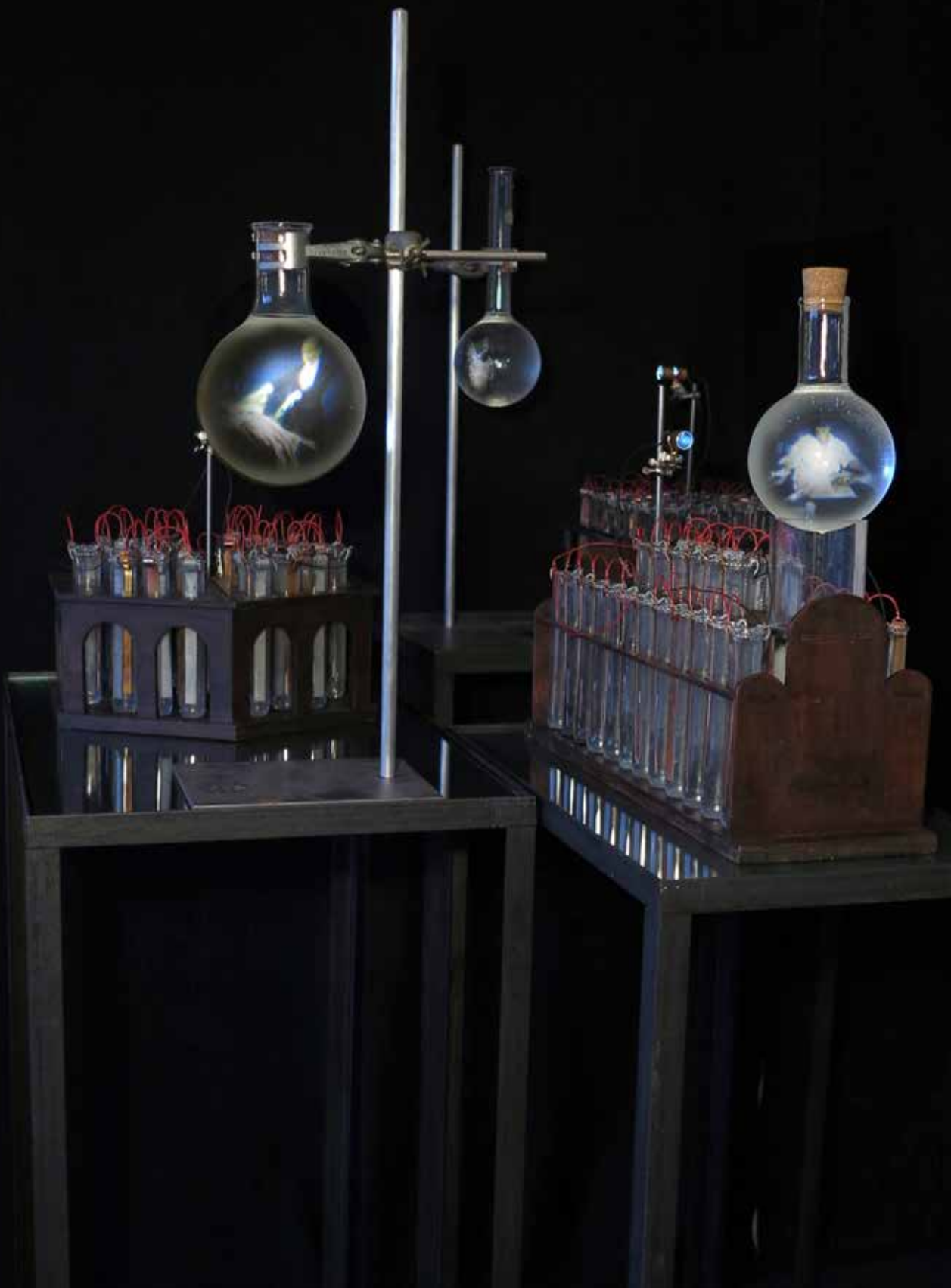
Working mainly within museums and sites of historical and scientific interest, Brown explores the potential of art to reinterpret and represent information in a manner that engages and stimulates 'wonder' in the viewer.

Phantasmagoria Electric traces connections between electricity, the supernatural and magic and is based upon investigations conducted during Brown's time as Research Fellow at the Bakken Museum of Electricity and Magnetism, Minneapolis USA, October 2013 and on-going, practice based research into electricity, mesmerism and magic.

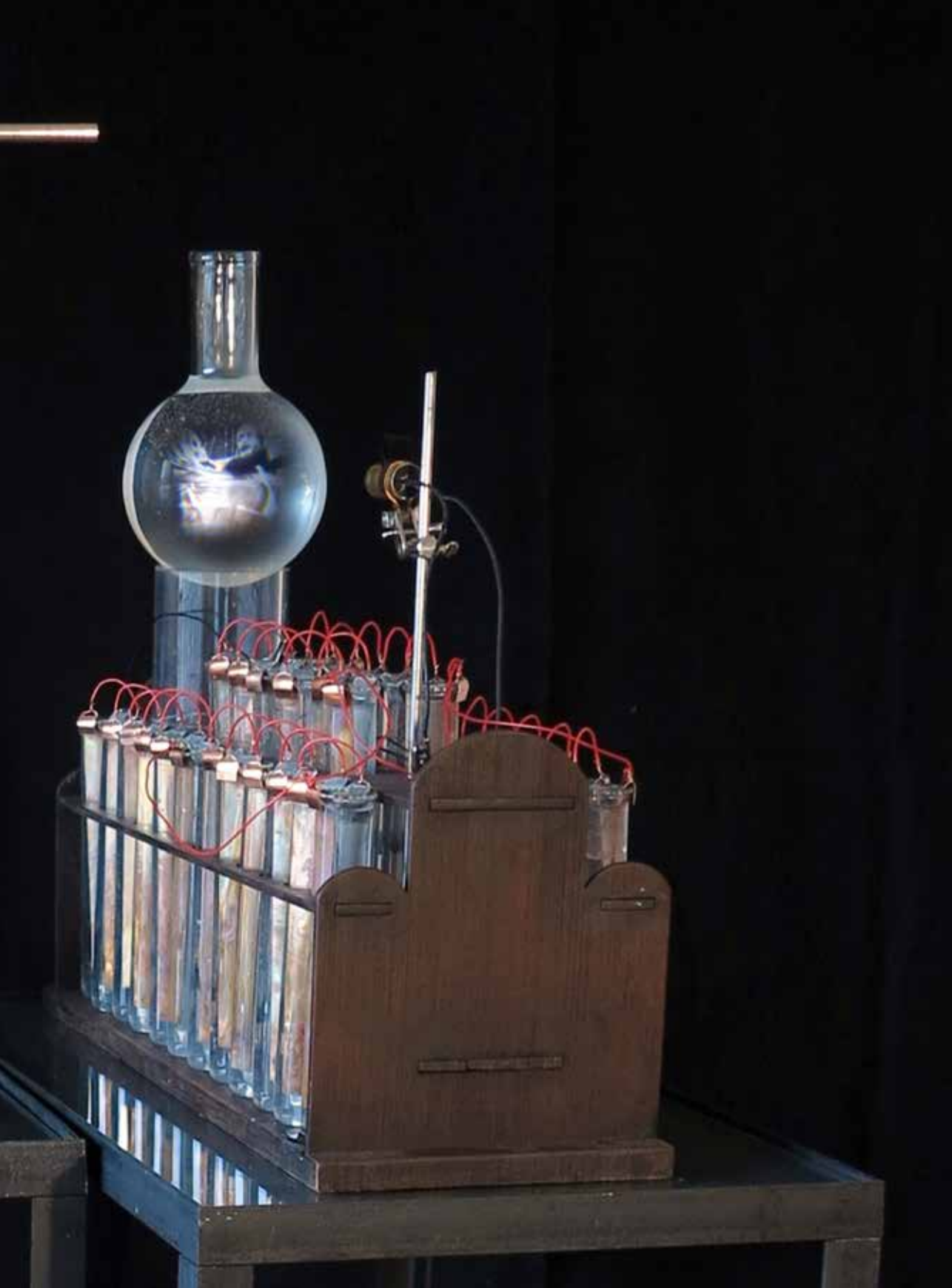
Ten salt-water battery powered projectors project images into water filled chemistry flasks. The installation utilizes technology originally developed by Alessandro Volta in 1800. Each Battery is made from 36 separate units (test tubes) containing a strip of copper and a strip of zinc wired together in series. When salt water is added, enough electricity is generated to power the LED housed in a small copper tube; with a lens at one end and a tiny, 6mm slide, thus forming a projector.

The images projected range from Charles Rabiqueau's *Le Spectacle du feu élémentaire ou Cours d'électricité expérimentale* (1753) and Jean Aldini's *Essai Theorique et Experimental sur le Galvanisme* (1804) to *Hypnotism, Mesmerism and the New Witchcraft* by Ernest Abraham Hart Smith (1896), *The Perfect Course of Instruction in Hypnotism, Mesmerism, Clairvoyance, Suggestive Therapeutics, and the Sleep Cure* published by the Psychic Research Company (1901) and finally, *Magic: 1400s-1950s* by Jim Steinmeyer, Ricky Jay, Noel Daniel (Editor), Mike Caveney. (2013).

1 Stephen Greenblatt, "Resonance and Wonder", in *Exhibiting Cultures: The Poetics and Politics of Museum Display*, Ivan Karp and Steven D. Lavine, eds (Washington: Smithsonian Institution, 1991), 42-57









Biographies

Jivan Astfalck is a visual artist, jeweller and academic. Born in Berlin, where she was trained as a goldsmith, she has been living in London for more than 20 years. She obtained her MA in the History and Theory of Modern Art at Chelsea College of Art and Design and her PhD in Fine Art at the University of the Arts London. Dr Astfalck is now Professor at the Faculty of the Arts, Design and Media (ADM), Birmingham City University and combines her studio practice, which she exhibits internationally, with teaching as the MA Course Director in Jewellery, Silversmithing and Related Products. In 2013 she became Director of the new Research Centre for Creative Making (S.T.U.F.F.) at ADM.

Her main focus and research interest is in using hermeneutic philosophy and literary theory as tools to investigate narrative structures embedded in body related crafts objects. In her view, the convergence of crafts, design and fine art practices is conducive to extending the theoretical vocabulary and map out new territories where crafts practices contribute to cultural production and dissemination.

Ron Athey is an American performance artist associated with body art and with extreme performance art. He has performed in the U.S. and internationally (especially in the UK and Europe). Athey's work explores challenging subjects like the relationships between desire, sexuality and traumatic experience. Many of his works include aspects of S&M in order to confront preconceived ideas about the body in relation to masculinity and religious iconography.

Irene Brown is an artist who specialises in site specific installations and permanently sited public art. Working methods include sculpture, photography and video and artworks often include kinetic elements, lighting and optical illusions. Irene has over twenty year's experience of combining a senior academic teaching and research role with a distinguished career as a site specific public artist and installationist.

Current research and practice is focused on the history of science, in particular, wonder and visual display, investigating the threshold between aesthetic and scientific realms. Irene is the instigator and curator of 'The Gallery of Wonder' a conference point and exhibition facility for research into the evocation of wonder. Influences are many and eclectic but centre strongly on cabinets of curiosities, museum collections and her, own extensive collection of artefacts.

Jakub Ceglarz is a PhD Candidate at Centre for Fine Art Research in Birmingham School of Art (Birmingham City University). His artistic researches deal with the notion of 'palimpsestuous making' as an innovative way of producing interdisciplinary art and by that informing the methodologies for art based research. He is working in film, sound, performance, photography and writing. He is involved with two Centres of Excellence, *Erotic Praxis and Queering of Sense and Radical Matter in Art and Philosophy*.

David Cheeseman Artist. David has studied painting at Maidstone School of Art and sculpture at the Royal College of Art. Since 1991 his practise has been concerned with the qualities of reflective materials such as glass and mother of pearl in relation to themes of illusion, temporality, transubstantiation, alchemy, magic, spatiality and performance. David have been recognised as an international, world-leading artist with residencies at Gloucester Cathedral, exhibitions at the Royal Festival Hall, The British Council and The Arts Council England. Cheeseman has taught extensively in the UK and abroad including positions at Wimbledon School of Art, The Royal Academy Schools and Birmingham School of Art. He is a Research Fellow in CFAR linked with the research theatre of excellence: Radical Matter in Art and Philosophy.

Rachael Colley is a Lecturer in jewellery design and related products at Birmingham City University. She is a member of the Research Centre for Creative Making (S.T.U.F.F) based at the Birmingham Institute of Art and Design (BIAD). She holds a BA in 3D Design (Silversmithing and Jewellery) from Loughborough University and an MA in Goldsmithing, Silversmithing, Metalwork and Jewellery from the Royal College of Art. Her practice-based research explores the fleeting and complex nature of human existence, using jewellery and regalia as modes of expression. Her current research project titled '*Spurious Luxus*' seeks to defamiliarise everyday organic materials, to resemble precious gemstones and objects of value. The outcomes aim to undercut status and class, re-presenting historic social signifiers in a satirical and narrative way. www.rachaelcolley.com

Joscelyn Gardner is a print and multimedia installation artist currently based in Canada, where she teaches in the School of Design at Fanshawe College in London, Ontario. Born in Barbados, her practice probes British/Caribbean archives to unearth the often 'unspeakable' traces of a complex and violent colonial past, which continues to haunt the contemporary Caribbean space.

Gardner's work has been exhibited in solo exhibitions in the USA, Canada, Spain, and the Caribbean, and includes site-specific interventions into museum collections and colonial buildings. She has been the recipient of several awards including, most recently, the Biennial Grand Prize at the *7th International Contemporary Printmaking Biennial* in Trois-Rivieres, Quebec (2011), and a 2013 Canada Council Visual Arts Project Grant to pursue trans-Atlantic research at museums in London, UK. The work presented in *Zetesis* has recently been acquired by the Victoria and Albert Museum, London.

Sarah Goudie Artist. Her practice works via a poetics of drawing, writing and the spoken word, sometimes violent, rough, vacant, sensuous, wild. Themes of secrecy and exposure, poise and injury find location within the alchemic pursuit of a materialities as diverse as film, lens based imaging, sculptural installation, paper and graphite to awaken and enable relations between the aural and the drawn line; tasking them as conduits for a corporeal witness. Sarah Goudie has studied at both Wimbledon School of Art and Birmingham School of Art, gaining a high distinction (MA). Currently based in the Midlands.

Gregory Leadbetter is a graduate of Trinity College Cambridge, and of the MA in Creative and Life Writing at Goldsmiths, London. After winning a Research Studentship, he completed his PhD on Coleridge at Oxford Brookes University.

He is a poet, critic and scriptwriter. A collection of his poems, entitled *The Body in the Well*, was published by HappenStance Press in 2007, and his poems have been commended in the Arvon Poetry Competition and shortlisted for the Strokestown Poetry Prize. His monograph on Coleridge's poetry and poetics, *Coleridge and the Daemonic Imagination*, was published by Palgrave Macmillan in 2011. Between 2005 and 2007, he was a scriptwriter for the BBC radio drama series *Silver Street*. In 2010, he was Poet in Residence at Radley College, Abingdon.

A research specialist in English Romanticism, and the intellectual, political and spiritual traditions in which that literature participates, his particular interests here include literary mythopoesis; the evolution of spirituality; mythological and religious syncretism; literary esotericism and occultism; antiquarianism, archaeology and folklore; the history of science; ecology; and the relationship between literary culture and the social and political constitution.

Susan J. May is Course Director of the MA History of Art and Design at the School of Art, BCU. A specialist in the visual culture of the renaissance, she has published detailed analyses of painted, sculptural and architectural programmes, addressing issues of scholasticism and humanism, neoplatonism, theological discourse, cosmology, ecclesiastical history and socio-political context in Rome, Perugia, Florence, Siena and Pienza. Her doctorate involved study of manuscript and early printed book collections and libraries - monastic, public and private. Sue's recent work investigates a nexus of issues such as (i) the role of holy relics in sacred ritual, ceremonial processions and urban planning; (ii) confraternal membership and social cohesion and (iii) the relationship of local politics and ecclesiastical governance. Her latest research, picking up threads from her doctoral thesis, turns to examine Francesco Piccolomini's role as the first Cardinal Protector of England for King Henry VII Tudor.

John Mowitz holds the Leadership Chair in the Critical Humanities in the School of Fine Art, History of Art and Cultural Studies at the University of Leeds. He was formerly Professor in the department of Cultural Studies and Comparative Literature at the University of Minnesota. His publications range widely over the fields of culture, politics and theory. In 2008 he collaborated with the composer Jarrod Fowler to transfigure his book, *Percussion: Drumming, Beating, Striking*, from a printed to a sonic text/performance, "Percussion" as Percussion. His *Radio: Essays in Bad Reception* appeared in 2011 from the University of California Press, and his current book, *Sounds*, is also forthcoming from California. In addition, he is a senior co-editor of the journal, *Cultural Critique*.

Martin Reinhart is a Vienna based documentarist and experimental film maker. He is co-founder of Indiecama GmbH, a company building high grade professional digital camera systems. He worked as a curator for photography and film in the

Technical Museum of Vienna (TMV) and as a specialist for historical cameras at WestLicht Photographica Auction.

Russell Nachman is an artist, based in Brooklyn, New York.
<http://russellnachman.blogspot.co.uk>

Mattia Paganelli is an artist and philosophy researcher whose work combines complexity theory with epistemological issues in representation, discursive and visual environments. Having exhibited widely, his art practice incorporates and variety of media/mediated technologies, live interventions and imaging, articulating how sense emerges from process rather than being represented through it. Currently an AHRC PhD candidate in Philosophy at the Centre for Fine Art Research (CFAR), The School of Art, BCU. He holds a distinction in philosophy from Università delgi Studi di Milano, and a double MA in Fine Art (Chelsea School of Art, UAL) and Media Arts Philosophy (Greenwich).

Micah Silver is an artist and curator who studied music at Wesleyan and in MIT's Art, Culture, and Technology program. His installation and performance work has been produced by Mass MoCA, Issue Project Room, Palais de Tokyo in Paris, and OK Zentrum, among other venues in the US and internationally.

Grace A Williams is the current Gertrude A Bowater award holder for practice-led PhD research based at the Centre for Fine Art Research, BIAD. Traversing photography, film and installation her research explores the performance & sexual politics of the female body within the fields of Mediumship [channeling conduits] Magick [Occult, black magic] Magic [vanishing women] & pre-narrative cinema, with a specific focus on the materialising mediums within the Thomas Glendenning Hamilton photographic archive. www.grace-a-williams.com

Dane Worrallo is an artist, researcher, and PhD candidate at the Centre for Fine Art Research (CFAR), Birmingham School of Art. His practice and research focus on algorithmic undecidability and the materiality of real-time systems; this is done alongside investigating “digital sensibilities” in artistic practices that allow the emergence of alternative configurations of sense and bodies through traditionally immaterial media. Dane Worrallo highlights the shift from object-based to system-based artwork from the 1960s onwards as a key paradigmatic shift in how time, space and identity are radically altered via the proliferation of digital and networked technology.

Zētēsis / Research Generated by Curiosity

The International Journal for Fine Art, Philosophy
and the Wild Sciences.

Vol. 2, No. 1

Twice Upon A Time: Magic, Alchemy and the
Transubstantiation of the Senses

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Twice Upon A Time: Magic, Alchemy and the Transubstantiation of the Senses

Conference held at the Centre for Fine Art Research (CFAR),
School of Art, Margaret Street, Birmingham.

In association with *Zētēsis*, the international Journal for Fine Art, Philosophy and
the Wild Sciences (ARTicle Press), Centre for Making (S.T.U.F.F.)
and DIALOGUES

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Under the illusive cloak of magic, the curiosity of alchemists introduced a means for experimentation into the innate properties of materials. The transformation of raw matter into precious metals, the combination of hot sulphur and wet cold mercury to birth the philosophers stone; to bring the inanimate to life, to miraculously vanish and conjure the body as well as providing a basis for the laws of substance based on sensory interaction and its potentiality.

The scientific practices of today echo this inherent desire for material transformation, yet Western tradition remains cautious of unreasoned sensorial data, treating it with illusory trepidation. While this paradigm has proven an efficient methodology, it has installed a discriminatory partition between that which can be rationalised or mathematized and that which is 'only' sensory. These engendered and sensate transformations mark the beginning of a new challenge against tradition, returning to curiosity, experimentation and the intensity of the senses away from conventional modes of thought.

Martin Reinhart (Keynote)

The Onto-conscious Machine

Ole Hagen, Maya Verlaak, Lauren Goode:
Dr. Gregory Leadbetter, Dane Worrallo
Paul Zaba

Grace Williams &

David Cheeseman (Keynote)

Transubstantiation of the Flesh

Rachael Colley, Dr. Kit Poulson
Dr. Gregory Leadbetter, Anneka French

The Hidden & Desired Object

Dr. Jacqueline Taylor, Dr. Jonathan Day
Dario Srbic

Ron Athey (Keynote)

Professor Jivan Astfalck (Keynote)

Producing, Defending &

Working the Talisman

Sian Hindle & Toni Mayner, AAS
Dr. Sue May, Dr. Sandra Wilson

Sensual // Audible // Exposure

Luke Deane, John Sutcliffe, Micah Silver
Dr. Daniel Rubinstein

Professor David Toop (Keynote)

Transformation/Transmutation

Stuart Mugridge, Helen Dilkes:
Mattia Paganelli

Stuart Nolan (Keynote)

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Complete video footage of the conference can be found at the CFAR website:

www.cfar-bcu.co.uk

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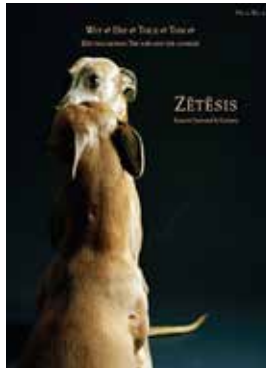
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Sarah Goudie (artist), *A Summons*,
paper and graphite, 220x150x15cm. 2014





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