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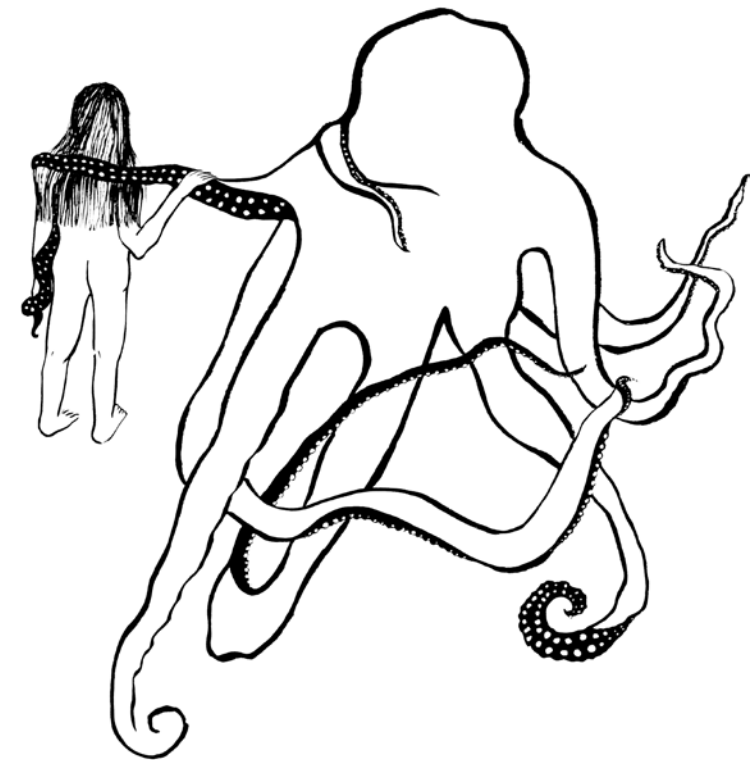
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MAITREYI MAHESHWARI

FOREWORD



What does a partnership mean? How can we, as individuals in a society, come together as partners? What would it take to allow us to share the risks as well as the benefits of working together?

Haroon Mirza has consistently sought to work in an expansive and inclusive way, opening out his practice as an artist to collaborate with others from many disciplines. The studio hrm199 has emerged out of this openness, as a platform for practitioners to come together to work on interconnected projects. Mirza's own practice creates physical experiences and compositions, drawing on art, architecture, design, light, sculpture and sound, led by an interest in their materiality that sees and treats these sources as equal.

For a Partnership Society marks ten years of the Zabłudowicz Collection at the former Methodist chapel at 176 Prince of Wales Road, London. Over this decade, our programme of activities has evolved and the gallery has established itself as a space for supporting artists, both through the acquisition and conservation of artworks and through collaboration on ambitious projects that would not necessarily be possible elsewhere. Our relationship with Mirza has spanned this

entire period since first encountering his work in 2007 at his Chelsea College of Art MA show, and then during our first Testing Ground for Art and Education exhibition in 2009. Since then, we have worked with Mirza on multiple occasions, in London and New York. The ten-year anniversary offered the appropriate context for working together on a major solo exhibition in which Mirza could extend his work to respond to the unique context of the Collection – from its founders, to its artworks, our building and the team that works in it.

The exhibition builds on the view that the sense of alienation from nature and one another, commonly experienced in our society, is the consequence of hierarchical structures that are detrimentally reinforced and replicated. An alternative partnership-led model may be achieved by altering our state of mind. This radical agenda laid the groundwork for a series of immersive installations by Mirza that both stimulate and deprive the senses and that focus on structures of knowledge production and interpretation, systems of belief in politics, religion, art and science, and the interaction of consciousness and matter. Each has manifested a different kind of partnership: existing artworks from the Collection have been re-presented as

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part of a new work, *Pathological Theology*; the Collection's founder appears, meditating on the transcendental and divisive power of belief; a wide range of performers, choreographers and musicians have generated new works using Mirza's installations as source code; and scientific researchers have devised a study for members of the public, assessing the hallucinatory potential of sensory deprivation provided within Mirza's new commission *Chamber for Endogenous DMT (Collapsing the Wave Function)*.

This publication documents these collaborations, bringing together research findings, reference texts, discussions and images that have emerged from the show's expanded scope. We would like to thank all those who have been part of this: Steven Claydon, Rachel Maclean, Sonny Sanjay Vadgama and the Estate of Stan VanDerBeek for their artworks, Rosana Antoli, Laura Buckley, Julie Cunningham & Company, Shiva Feshareki, Franziska Lantz, Okkyung Lee, Studio Wayne McGregor, TOMAGA and Nik Void, who all undertook residencies within the show; David Luke from Greenwich University and Mendel Kaelen and Christopher Timmermann based at Imperial College for developing the study within the *Chamber*; and iKoustic for helping us to build it. This exhibition, of course, wouldn't be

possible without the vision and commitment of the artist, Haroon Mirza, and his collaborators at hrm199: Ben Barwise, Matilde Cerruti Quara, Gaia Fugazza, Alice Hackney, Tom Mclean and Kenji Takahashi. We would also like to thank Emma Gifford-Mead and Louise Hayward at Lisson Gallery, Tate, Tames, the Irish Museum of Modern Art and Grand Café centre d'art contemporain Saint-Nazaire. Producing such an involved exhibition in our space has been both challenging and rewarding, and huge thanks are reserved for the team at the Collection, led by our Director Elizabeth Neilson who curated the show, Antonia Blocker who developed the residencies, and Henry Eigenheer and Marco Filippini who led the installation. Finally, our continued thanks go to our founders, Anita and Poju Zabłudowicz, for their generosity and unwavering commitment to supporting ambitious, thought-provoking and risk-taking artworks over the past decade. We look forward to continuing this ethos in the decade ahead.

Above: Gaia Fugazza, *Long Time Friends*, 2017

ELIZABETH NEILSON HAROON MIRZA: FOR A PARTNERSHIP SOCIETY

'A mathematical truth is timeless; it does not come into being when we discover it. Yet its discovery is a very real event. It may be an emotion like a great gift from a fairy.'

Erwin Schrödinger, 'Mind and Matter' in *What is Life?*, p. 142, 1944

At the very core of Haroon Mirza's practice is his use of electricity as a material with which he orchestrates light, sound and video to produce immersive installations. In essence his works are compositional – sound, images and objects are arranged both physically in space and sonically in time. Practicality, transparency and collaboration are also key to Mirza's approach: his exhibitions often deconstruct ideas of singular authorship, questioning the conditions under which art is produced.

For this new exhibition, Mirza delved into our understanding of the relationship between matter and consciousness, truth and belief. *For a Partnership Society* responds to the building, artworks and context of the Collection, to create unique physical experiences at the intersection of art, architecture, sculpture, sound and music. Each of the installations has the ability to physically move the visitor in some way, whether through the rhythm of its soundtrack or its complete lack of stimulation: each work is a unique experience.

The exhibition was structured around an invitation to Mirza to produce new work, thus the exhibition concentrated on the experiential and compositional work by Mirza, rather than

the sculptural or solar panel works he has developed over the past decade. Three of the major installations in the exhibition are based on bespoke media players produced by hrm199 and consist of moving image and LED compositions. Mirza chose to re-imagine two of his major existing works owned by the Collection: *The System*, 2014, and *Adam, Eve, others and a UFO*, 2013, and to select works by other artists from the Collection to combine in a new installation. Added to this are two new commissions, both firsts of their kind for Mirza: a short film and a completely dark anechoic chamber.

Mirza's practice continually seeks to break down traditional hierarchies or roles, exposing the realities and complexities of working together. Across four distinctive spaces, Mirza, working with his studio, hrm199, adopted various modes of partnership. Other practitioners were invited to take part in residencies: the co-founder of the Zabłudowicz Collection appears in an artwork and fellow hrm199 studio artist, Gaia Fugazza, produced a design that was printed onto T-shirts as an edition for the Zabłudowicz Collection shop, and was also added to gallery staff uniforms.¹

Some key ideas that recur and diverge in the project are explored in this publication via the

inclusion of facsimiles of several existing texts. The copies are interspersed throughout the documentation of the exhibition, making a loose-leaved reader. They explore a number of esoteric and influential areas, including how little politics and society have really altered in the past three decades, how our embracing of technology is yet to alter us as human subjects, and how far we still have to go to find a place where all humans are equal to each other, and to nature. Rick Strassman and Terence McKenna explore, via subjective analysis, the effect of two possible narcotic routes for human cultural development and experience: psilocybin and DMT. Riane Eisler and Leonard Shlain examine the ingrained biases in our language that define the structures of our thinking and living. Also included is a brief exploration of the symbols of crescent and cross by ground-breaking archaeologist Marija Gimbutas. These texts are filled with a certain trepidation, a naivety that seems connected to their time of writing (late 1980s to early 2000s) and an ongoing fear of technology and nuclear war (and energy).

While their tone may now seem outmoded, their content is insightful and they are indicative of a pivotal point for the exhibition and work of Mirza; that is the realisation that truth and belief are perhaps the same – or rather that there is no truth, only belief, that speculation plus experience is as close as we get to understanding our consciousness and its precarity. Via the inclusion of scientific or pseudo-scientific source material and imagery in his work, Mirza often references the problem of hard science and its inability to explain the phenomenon of consciousness. This, paired with a lack of deep knowledge and understanding of the brain's functions (it is the human organ we know least about) means that any theory on consciousness cannot be proven but must remain speculative. The only things we can know for sure are those that physically exist – therefore, is it acceptable to conclude that material culture is the only one we can rely on? That personal experience is all we have?

Mirza is a traditional, yet radical, artist for the contemporary moment – seeking and foregrounding human interactions. He is not led, as many in the 'post-internet' generation (those born post-1980) are, by the search for individual interactions en masse. Rather, his interest is in communal experiences that have the potential for the structuring of social behaviours. His works refuse the commercial paradigm, resisting recording and circulation. They are made for live experience and, as such, fit closer into the

music or theatre community than the increasingly divided art world.

The experience of the performances, the works, and the occupation of the space was exactly that – an experience. The documentation presented here in this book is a poor substitute, of course, but it's one of the only means by which those moments live on. By making an active reader with movable parts, it's hoped that the legacy can spore and grow.

'THE PROBLEM ARISES WHEN THE CONSTELLATION OF CRITIQUE, PUBLICITY AND DISCUSSION AROUND THE WORK IS AT LEAST AS CHARGED AS A PRIMARY EXPERIENCE OF THE WORK. DOES ONE HAVE AN OBLIGATION TO VIEW THE WORK FIRST-HAND? WHAT HAPPENS WHEN A MORE INTIMATE, THOUGHTFUL AND ENDURING UNDERSTANDING COMES FROM MEDIATED REPRESENTATIONS OF AN EXHIBITION, RATHER THAN FROM A DIRECT EXPERIENCE OF THE WORK? IS IT INCUMBENT UPON THE CONSUMER TO BEAR WITNESS, OR CAN ONE'S ART EXPERIENCE DERIVE FROM MAGAZINES, THE INTERNET, BOOKS AND CONVERSATION? THE GROUND FOR THESE QUESTIONS HAS BEEN CLEARED BY TWO CULTURAL TENDENCIES THAT ARE MORE OR LESS DIAMETRICALLY OPPOSED: ON THE ONE HAND, CONCEPTUALISM'S HISTORICAL DEPENDENCE ON DOCUMENTS AND RECORDS; ON THE OTHER HAND, THE POPULAR ARCHIVE'S EVER SHARPENING KNACK FOR GENERATING PUBLIC DISCUSSION THROUGH SECONDARY MEDIA. THIS DOES NOT SIMPLY MEAN THE COMMERCIAL CULTURAL WORLD, BUT A GLOBAL MEDIA SPHERE WHICH IS, AT LEAST FOR NOW, OPEN TO THE INTERVENTIONS OF NON-COMMERCIAL, NON-GOVERNMENTAL ACTORS WORKING SOLELY WITHIN CHANNELS OF DISTRIBUTED MEDIA.'

Seth Price, *Distribution*, 2002²

ELIZABETH NEILSON FOR A PARTNERSHIP SOCIETY IN FIVE (EASY) PIECES³

*'Life is small pools of order in a universe of disorder. Life has an inside and an outside. And what a bacterium must do – and what we must do – is preserve internal order against an outside disorder ... by ingesting and excreting.'*¹⁴

Listening to the radio one morning, I was halted by this statement. Its description of collapsing the hierarchies of life forms – in this case, human, animal, bacteria – and the simplification and concentration on the essentials of life as a system of balance and equilibrium are perfectly encapsulated in Mirza's work. For him creativity is give and take, making is communal, and the 0s and 1s of digital code are no different to the atoms that form all life. The on/off of a circuit has an amplified equivalent in life and death.

Examined briefly in this text are issues that have been brought to the fore in the development, execution and duration of the exhibition. Partnership, Language, Music, Architecture – these four major themes are not separate concerns for hrm199 or Mirza. All interweave and recur throughout Mirza's work and are particularly relevant in this project. Also explored are the basics of studio hrm199 and Mirza's current mode of practice, with a focus on the compositional elements of the exhibited works, describing them in some detail.

PARTNERSHIP

The exhibition's title comes from a theory proposed in the 1980s by American scholar and activist Riane Eisler. Her ideas were later taken up by Terence

McKenna in his exploration of human evolution and our relationship to psychoactive plants. Eisler theorised that the development of human societies can be understood via two distinct and opposing social models, partnership and dominator:

*'Eisler believes that the tension between partnership and dominator organisations and the overexpression of the dominator model are responsible for our alienation from nature, from ourselves and from each other.'*¹⁵

This notion of partnership is clearly an idealistic model for any society. All the writers and academics whose work has been extracted within this reader saw clear indications for the existence of pre-monotheistic religions and pre-industrial societies based on consensual partnership rather than hierarchies. This premise does not deny the individual; rather, it celebrates them and allows them the freedom to develop their own individual expression. hrm199, the studio platform that Mirza established in 2004, is listed as the author of this exhibition. The name is deliberately mechanised: it refers to the numbering of citizens for easy processing.⁶ It is also an attempt by Mirza to put forward a non-authorial position. Whether this is an act of generosity or a branding exercise can only be judged by its enactment.

Previous hrm199 exhibitions – such as that at Museum Tinguely, Basel, in 2015 or /\\/\ /\\/\, at LiFE, Saint-Nazaire, in 2017 – have purposely foregrounded inclusive collaboration. Here in his Zabłudowicz Collection exhibition, however, a new mode is explored and enabled: that of taking existing artworks as ready-mades and enabling them as a creative and performative space for other practitioners. Acting as facilitator, curator and author, Mirza created an exhibition as an active ecosystem, one that avoids clear definitions. The installations occupy the available space and create an entirely new type of environment: one where the artworks themselves are the material, inspiration or source code for new production by others.

Throughout the twelve weeks of the exhibition's run a multitude of ground-breaking creative practitioners engaged with the exhibition to produce six new performance events. In this way hrm199's installations become disrupted, adapted and altered to allow the invited choreographers, visual artists and musicians – all of whom work closely with the physicality of sound and spatial resonance – to produce unique, one-off performances. The resulting events may well live on in other forms and future partnerships; their success grew from an inherent mutual respect and compromise as well as agreement. This premise is a guiding principle in Mirza's practice – that of freedom combined with respect, on all sides of the encounter.

LANGUAGE

Language is an abstract system of representation, a metaphor for the world produced from symbols. It is never the thing itself, but always a representation and composition, a tool or lens for understanding. It is a powerful sculptor of the human mind, the first abstract system we teach our children, and one we use to divide ourselves from nature. Language is inherently disconnected from the actual world. The things described are not the words, and language is based on an implausible notion that we can condense the world into a representative mark and a sound. A tree is both the molecules of the plant in an environment, and a noun that conjures up the knowledge of these things, yet the image it projects is socially and culturally prescribed, different in each individual's mind. The works in the exhibition fundamentally question the abstract notions of truth and belief, which one could extend to question the very capacity of language to represent the things it describes, and to make meaning.

Mirza consistently plays with language and the symbols that make up scientific and coding languages – the titles of his works allude to the slippages and crossovers of meaning and power. *The System* is at once the RGB additive colour system, but also a sound system, or a system of exclusion or inclusion. Adam and Eve are branded speakers but also the original couple expelled from the Garden of Eden. In the installation they are 'Slave' to the UFO 'Master'.⁷ Language removes natural connections between elements and inserts constructed ones that can be controlled and manipulated. Each of the works deals with language in some manner: the most obvious is the didactic use of speech in all three installations – Björk tells us how a TV works (*The System*), a gravitational disbeliever argues for electromagnetic retardation instead of relativity (*Fear of the Unknown*), a computerised voice develops a treatise on knowledge, and a germ tries to sell us – then kill us with a germ-killing spray (*Pathological Theology*). The selection of works is deliberately diverse, allowing them to create additional layers of meaning and therefore creating installations that are far more complex than each of their constituent parts. In other words, the content of each work is expanded upon by its conversational partners.

Following on from this, although perhaps less obvious, is Mirza's referencing of the construction and syntax of languages – and, as an extension, culture, belief and difference. On a surface level each of his works exposes its construction. Cables often trail sculpturally through the venue but are easily trackable from source to output, like an electrical circuit writ large over the space. Often this creates a network of lines over the walls and surfaces – as in *The System*. This is evident in the relationship between light and sound. In the majority of Mirza's installations light creates sound, and together these create form. Despite its abstraction, language situates us in the world; language is responsible for the passing on of moral codes. The Bible, Koran or Torah are educational texts and the dominator model is fixed into their existence. Eisler, talking about the Bible, asserts:

'So stunted is the morality of this sacred text ostensibly setting forth divine law that here we may read that one half of humanity could legally be handed over by their fathers and husbands to be raped, beaten, tortured or killed without any fear of punishment – or even moral disapproval. ... Clearly the morality enforcing women's sexual slavery to men was imposed to meet

*the economic requirements of a rigidly male-dominant system, that property be transmitted from father to son and that the benefits from women's and children's labour accrue to the male. It was also imposed to meet the political and ideological requirement that the social realities of the old order in which women were sexually, economically and politically free agents, and in which the goddess was the supreme deity, be fundamentally reversed. For only through such a reversal could a power structure based on rigid rankings be maintained.*¹⁸

MUSIC

Music is meant to be a communal experience: it is shared, yet individual. It has the ability to make us move almost involuntarily and creates a connection to and beyond belief. Some religions practise musical prohibition; others believe music and movement are transcendental. Christianity worships via collective song and Buddhism finds its focus in chanting. Music is a powerful force on the human body and psyche – children's songs are even used as torture devices and we all know the pervasive annoyance of an 'earworm'.

Mirza was born in the late 1970s and experienced the tail end of the Rave Generation. His sonic and physical compositions reference cross-genre musical forms, from experimental classical music to techno and rave. The ritual of coming together via mind-altering beats in the dark or semi-lit spaces of clubs, marquees, warehouses and fields was a formative experience, both physically and mentally. The act of taking oneself out of the norm induces an altered state of some kind. But the collective experience of a live act behaves differently to a recorded artist; a live performance is constantly at risk of being undermined – or elevated – by unexpected actions by the artist, their instruments or the audience. Mirza's sonic compositions shape both the form and the spatial arrangement of each piece. Again language exposes the crossovers in forms here: the compositional arrangement is not left to chance but is responsive to site and context. In *The System*, the sonic elements that had previously been separated by physical spaces (it was made for three rooms) were installed in one space and their composition was then experienced as a 15-minute lighting sequence that made a definite piece of music, created simply by the amplification of the electrical current that powered the LED lights. The different frequencies of electricity required changes in pitch, and the duration of each light's illumination gave varying rhythms. This flattening

of content – or inputs – also exposes the aim of Mirza's practice that challenges the notion of truth as opposed to belief, a question indicative of the rational underpinning of science and its obsession with observation over explanation.

'WE SHOULD RECOGNISE THAT COLLECTIVE EXPERIENCE IS NOW BASED ON SIMULTANEOUS PRIVATE EXPERIENCES, DISTRIBUTED ACROSS THE FIELD OF MEDIA CULTURE, KNIT TOGETHER BY ONGOING DEBATE, PUBLICITY, PROMOTION AND DISCUSSION. PUBLICNESS TODAY HAS AS MUCH TO DO WITH SITES OF PRODUCTION AND REPRODUCTION AS IT DOES WITH ANY SUPPOSED PHYSICAL COMMONS, SO A POPULAR ALBUM OR WEBSITE COULD BE REGARDED AS A MORE SUCCESSFUL INSTANCE OF PUBLIC ART THAN A MONUMENT TUCKED AWAY IN AN URBAN PLAZA. THE ALBUM IS AVAILABLE EVERYWHERE, SINCE IT EMPLOYS THE MECHANISMS OF DIGITAL FREE MARKET CAPITALISM, HISTORY'S MOST SOPHISTICATED DISTRIBUTION SYSTEM TO DATE. THE MONUMENTAL MODEL OF PUBLIC ART IS INVESTED IN AN ANACHRONISTIC NOTION OF COMMUNAL APPRECIATION TRANSPOSED FROM THE CHURCH TO THE MUSEUM TO THE OUTDOORS, AND THIS NOTION IS RECEIVED SCEPTICALLY BY AN AUDIENCE NO LONGER SO INTERESTED IN DIRECT COMMUNAL EXPERIENCE. WHILE INSTANTIATED IN NOMINAL PUBLIC SPACE, MASS-MARKET ARTISTIC PRODUCTION IS USUALLY CONSUMED PRIVATELY, AS IN THE CASE OF BOOKS, CDs, VIDEOTAPES AND DIGITAL "CONTENT". CONTENT PRODUCERS ARE NOT INTERESTED IN COLLECTIVITY; THEY ARE INTERESTED IN GETTING AS CLOSE AS POSSIBLE TO INDIVIDUALS.'

Seth Price, *Distribution*, 2002⁹

ARCHITECTURE

The ritualistic installations Mirza creates are knowingly familiar. The low light levels and raised volumes are reminiscent of both nightclub and religious architecture. Elemental forms – triangles, squares, circles – proliferate in subtle manners, carpet is cut into rings and soundproofing foam – itself both triangle and square – is installed in square compositions. Within the classical chapel space of 176 Prince of Wales Road architectural features have been amplified, transposing the energy of one kind of space to the other: red circles of LEDs trace the nineteenth-century ceiling mouldings, green LEDs line the handrail on the mezzanine, and blue LED accents are added to the posters on the walls on the ground floor.

Architecture is a container for sound and Mirza's consistent use of soundproofing materials not only seeks to control this aspect of experience, but also visually references the design of anechoic spaces. Anechoic chambers, acoustically perfect rooms that are fully insulated from sound and vibration and lined to produce no internal echo, are generally suspended within concrete buildings. Here, on the first floor of a nineteenth-century former Methodist chapel, a chamber has been produced and tested to be sonically acceptable as anechoic. *Chamber for Endogenous DMT (Collapsing the Wave Function)* occupies an almost perfect 360cm × 360cm cube and is lined with dark foam, its sharp edges invisible in the dark. This threatening motif is evidently pleasing to Mirza, featuring as it does in the majority of his exhibitions. It is interesting to note that the dark, enclosed space has been felt to be approachable, rather than threatening, to most visitors: an example of set and setting – or how context shapes experience.

This relationship between design and function and the creation of architecturally responsive installations is consistent in Mirza's common-sense approach to making – the acceptance of all material, from site to speaker, as equivalent inputs means that the entire space resonates with subtle references within the installations.

Mirza's interest in the aesthetics and use of architecture extends beyond his approach to installing works in response to a given space. The inclusion of materials relating to architect and designer Eileen Gray, a seminal figure in modernist design, known by most as the woman whose E1027 villa building was vandalised by Le

Corbusier, is circumstantial but not unintentional. Partnerships develop across generations and are often one-sided; influence should not be discounted as a potential collaboration.

THE EXHIBITED WORKS

Two works from the Zabłudowicz Collection form the basis of the exhibition but were rendered entirely new in this instance: *The System*, 2014, has been re-imagined to take over one space, rather than being three singular coloured environments, and *Adam, Eve, others and a UFO*, 2013, is included in a new work, *Pathological Theology*, containing five extant works as its material, becoming at once an exhibition within an exhibition and a singular work in its own right. A founding principle in the construction of all the installations is that light and sound are not just related but the same – the electrical signal that makes light illuminate is also amplified by speakers and creates sound.

The System, 2014

Originally a three-room installation, here the work takes over one space and divides it horizontally – red on the ceiling, green on the mezzanine and blue on the ground floor. The coloured LEDs make up the additive colour system: the combination of all three makes white light, the foundation for the function of LED screens, projectors and televisions. The installation includes different types of ready-mades and found footage. In a YouTube video the Icelandic singer Björk outlines her personal understanding of how a cathode ray tube television works. Alongside are presented edited existing interpretation videos and wall texts relating to Eileen Gray, incorporated by Mirza from the exhibition that preceded his at the Irish Museum of Modern Art (IMMA) in 2014, for which this work was made. *The System* is a four-dimensional collage, an experience of overlapping sound and image in time and space that creates something new. Red, green and blue combined make white light; museum interpretation makes meaning. The three female protagonists of the films – Björk, Eileen Gray and curator Cloé Pitiot – are part of but also disrupt a larger (patriarchal and dominator) system. The overlay of the sonic composition for six channels of LED light, red, green and blue, is also a reference to the cathode ray tubes within the TV that Björk describes linguistically. The LEDs are visibly connected via colour-coded cable to individual speakers. The composition is triggered by a code within the digital file of the film featuring Björk and is intentionally weak, allowing some chance

of error in the run of the sequence. This means that although there is a recognisable rhythmical sequence, it occasionally falters and is not synchronised with the sonic glitches on the curator video. Yet it periodically interacts with the Eileen Gray projection, causing the image to also glitch.

The title – *The System* – is an open reference, and for this exhibition artists, musicians, dancers and choreographers were invited to take up residence within the installation to produce new performances. Each one interacted with and altered *The System* as necessary in order to develop their partnership with the work, the artist, the institution and the audience.



9/11–11/9 Fear of the Unknown, 2017

Arguably the most complete in terms of the consolidation of image and sound composition, this installation is also the most clearly 'musical' that Mirza has produced to date. The piece is made with closely edited moving image clips that are combined for their diegetic qualities. Recurring throughout the work are ayahuasca icaros, incantations that are recited or sung by the leader during such ceremonies. In this instance Mirza has included a YouTube clip of Maestra Olivia singing. Mirza achieves a symbiotic balance of audio and visual inputs, allowing each image clip to play through once in full before cutting the clip to emphasise its sonic properties. The repeating sonic elements and their residual visual content crescendo to a frenetic techno sequence.

A planter in the corner of the room contains a plant native to the UK that has a high concentration of the naturally occurring psychedelic substance, N,N-Dimethyltryptamine (DMT).

Initially developed while on a residency in Brazil, this work features four channels of moving images

and eight channels of LED composition. It directly addresses the current global political climate and the seismic events that have occurred internationally over the course of the past fifteen years – from the terrorist attack on 11 September, 2001 in New York, to the US presidential election on 9 November 2016. Mirza references this in the uncanny typographic symmetry of these dates: 9/11–11/9. The included footage is a mixture of that found online and that shot by the artist on his iPhone. It traces the events of this period, which is marked by heated global debate and a rise in populism and extremist activity around the world.

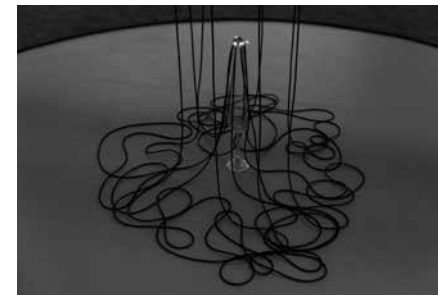
Pathological Theology, 2017

Mirza curated the work of other artists into a new installation incorporating five existing artworks from the Zabłudowicz Collection. Videos by Steven Claydon, Rachel Maclean, Sonny Sanjay Vadgama and Stan VanDerBeek were combined with his own work, *Adam, Eve, others and a UFO*, 2013. Effectively creating an exhibition within an exhibition, Mirza's installation explores the balance of empirical versus epistemological knowledge and the relationship between the concepts of belief and truth.

Each of the works is synchronised in a specially designed installation that extends the 'Sound Spill' curatorial concept that Mirza has previously engaged with. Sound Spill refers to the curatorial issue of sonic bleed between works in exhibitions. For over a decade Mirza, with other collaborators, has explored this phenomenon in various ways, including curating exhibitions especially for their sonic qualities. *Pathological Theology* develops the content and concept of a singular work into a semi-performative environment – somewhere between a play and a lecture – where the overlapping of sound and image requires the relationship between the audience, the artists and works on display to be rethought. Each constituent work is both compromised and enhanced by its inclusion in the whole.

The text content of this installation, including an LED score for the PIC electronic device that plays via the eight speakers, is included in the later pages of this publication. Its removal from the 'visual realm' is an attempt to explore the meaning and relationships within the materials. Each work has been gleaned from many sources: news reports, advertising, poetry and personal research. The veracity of the overall installation is therefore suspicious, with its emphasis on the experiential moment and the power of didactic communication embodied by the grouping of image, sound and text.

The constituent works are:
Haroon Mirza, *Adam, Eve, others and a UFO*, 2013
A UFO is a circuit board with eight LEDs around a programmable microchip, which is placed in the centre of the room. From there cables run up to the ceiling and into the ceiling rose, then re-emerge as a mass of black cables, connected to eight circularly arranged, yet non-identical, speakers. The title refers to these pieces of kit: there is an 'ADAM' brand opposite an 'EVE' brand, while the remaining six are OTHER makes of speaker. The electrical current that causes the flashing, brightening or dimming of the LEDs creates different sounds, which are amplified and made audible through speakers that are controlled by the UFO. Although the title refers in a straightforward fashion to the name of electronic equipment, the imagined background of how and why the equipment was named and the combination of these names creates a potentially controversial clash between belief systems. The sonic composition of *Adam, Eve, others and a UFO* was reworked to create a soundtrack for the moving image works by the other artists.



Rachel Maclean, *Germs*, 2013

Producing all the costumes, make-up and sets, and playing all the characters herself, Maclean creates disturbing yet hilarious narratives that appropriate contemporary pop cultural material. In *Germs*, female stereotypes, pseudoscience and promised happiness clash, with violent consequences. This three-minute film produced by Random Acts Channel 4 has been edited into short sections, appearing as an 'advert break' every time *Pathological Theology* loops. hrm199 added sound and animation over *Germs* when it is paused between loops. This includes the title of the exhibition in Morse code, Garrett Lissi's

E8 Model and footage produced using Google's 'Deep Dream Generator'.

Sonny Sanjay Vadgama, *Eye for An Eye*, 2009
An animation of the 2002 controlled demolition of the Beirut Hilton Hotel is overlaid with news reporting from the 1970s describing the conflict in the Lebanon. It alludes to the cyclical nature of violence and the contradiction inherent in religious involvement in conflicts. The unused and distressed Hilton Hotel became a symbol for the Lebanese civil war after standing for over 30 years; its demolition can be understood as a moment of renewal for Beirut.

Stan VanDerBeek, *Poemfield No. 3*, 1967

VanDerBeek (1927–1984) was a pioneer of early computer art. In this film geometric groupings of monochrome patterns and words are created with the movie program BELFLIX, which was developed in the 1960s by Bell Telephone Laboratories programmer Kenneth Knowlton. The films were created via a complex process: an IBM 7094 was fed instructions for BELFLIX to translate into a programming language. The code was transferred onto punch cards to be read by a computer that assembled a picture and recorded it to tape. Although this film is one of the first known artworks ever made using a computer, it was initially filmed on 16mm and hand-coloured by VanDerBeek. While this *Poemfield* is silent, others have soundtracks produced in collaboration with musicians such as John Cage and Paul Motian. It plays concurrently with a piece by Steven Claydon.

Steven Claydon, *The Fictional Pixel*, 2008

Made with found footage treated with a Fairlight Video Synthesiser and text-to-voice technology, this work – narrated by a pair of mechanised voices – explores how pre-Socratic thinkers looked for a reasoning founded in nature, which later developed into science, in contrast to the ancient Greek theologians of the same period, who were concerned with reasoning derived through divine explanation.

An Act of Meditation, 2017

This three-minute film depicts Mr Zabłudowicz, one of the co-founders of the Zabłudowicz Collection, on holiday in his native Finland. Mirza's aim was to bring some transparency to the organisation and its owners. At the start of the film, one can hear the artist giving instructions – the sitter is told to open his eyes and say the word 'belief' in three languages, English, Hebrew and Arabic, each one subtitled with one of the other

languages. The soundtrack for the work features two very specific frequencies of sound: 42.7 Hz, a triangular wave, and 936 Hz, a sine wave. There is manipulation and the two waves are interfering with one another at 144 Hz (a Fibonacci number). These frequencies are said to stimulate the pineal gland, where melatonin is produced – these are also known as binaural beats and are used in meditation. The animations and subtitles recur from *Pathological Theology*, and this work is an introductory work for the other singular new commission, the *Chamber*.



Chamber for Endogenous DMT (Collapsing the Wave Function), 2017

A third new work produced specially for the exhibition was designed for individual visitors to experience. This light-locked anechoic chamber investigates the human potential for hallucination. The work attempts to examine two ideas: that consciousness can control matter, and that matter can control consciousness. To test the first, Mirza installed a laser projecting through a slotted lens onto a small screen. Simulating a double-slit experiment, it asks if we can, through observation, consciously influence the behaviour of light, which can act as both a wave and a particle. The laser beam has the potential to appear on the screen as an interference pattern (wave form) or straight lines (photons). We know

that matter can affect consciousness, as mind-altering substances have been used throughout human history. One such substance – N,N-Dimethyltryptamine (DMT) – occurs naturally in plants and mammals, and has also been observed in the human body, but its source has never been identified. Theories of its release from the lungs or the brain during near-death experiences are, here, put to the test. The work aims to test the possibility that complete sensory deprivation can mimic such an experience and potentially trigger hallucinations in the user.

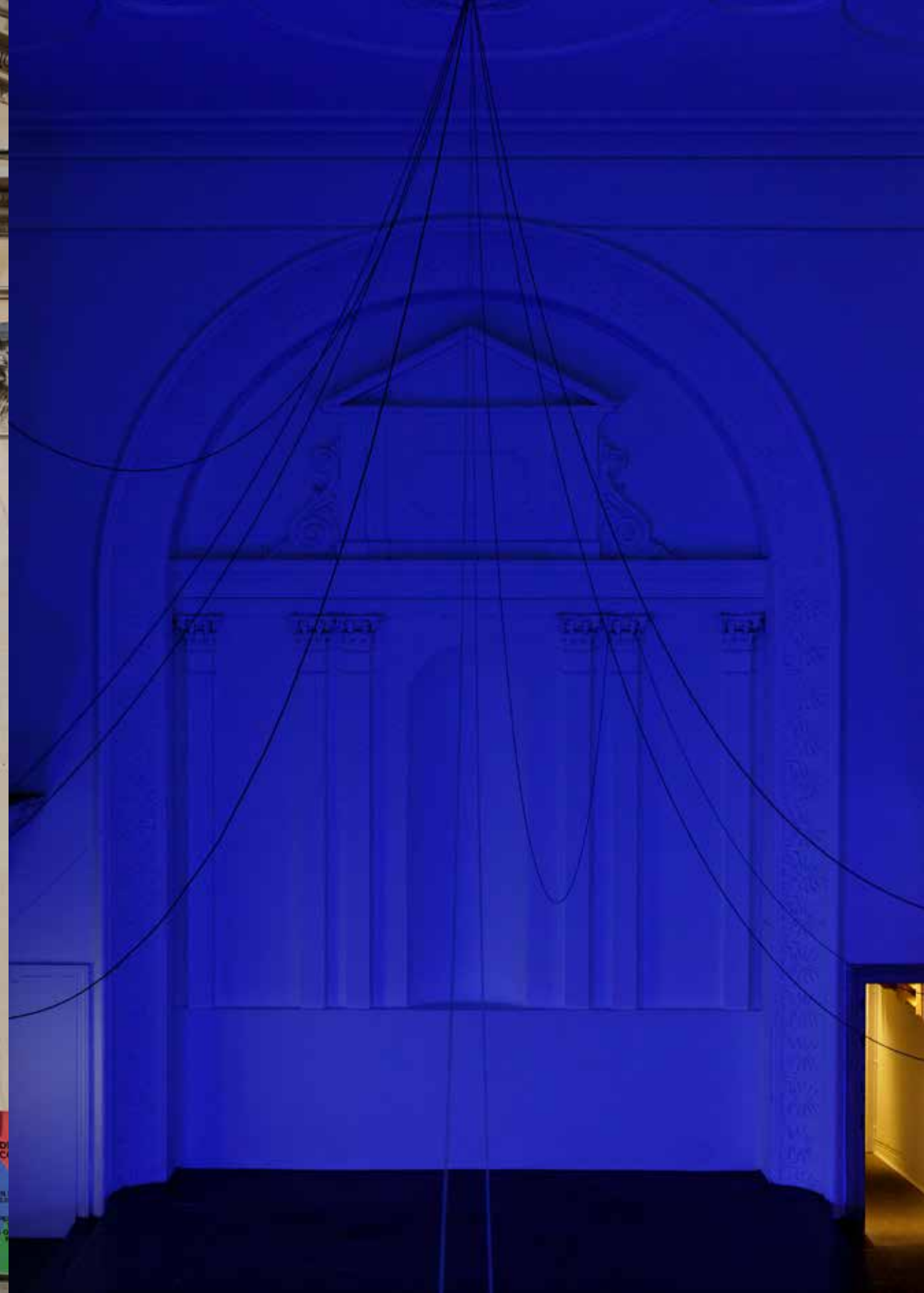
The artist, in partnership with researchers David Luke, Christopher Timmermann and Mendel Kaelen, invited visitors to participate in a unique study. Forty-nine participants took part, each spending over sixty minutes in the chamber. Their experiences have been recorded and the data collated by researchers from the psychology department at Greenwich University to examine individual difference predictors of altered state experiences in an anechoic darkroom. The results of this successful pilot study can be found on page 144. It appears that there are similarities between people's experience within the chamber and those recorded while on psychedelics.

REFERENCES

1. The design for the limited-edition T-shirts incorporates a drawing by Fugazza (see Foreword) hand-screen-printed onto a T-shirt dyed with Mimosa hostilis, a Latin American tree root bark with high concentrations of N,N-Dimethyltryptamine (DMT). This is a powerful psychedelic and has historically been prepared by various cultures for ritual and healing purposes, as well as being a natural dye used in leather tanning. The preparation of DMT, or ayahuasca, requires filtration of the raw root. This leaves an uneven dye mark which was the inspiration for the T-shirts. They feature *Long Time Friends*, 2017, a hand-drawn image of an androgynous human walking away arm in arm with a giant octopus. Octopuses are perhaps the most intelligent creatures we know, with multiple brains and hearts. If there is a higher being on earth, one cannot help but think that it might be the octopus.
2. <http://sethpriceimages.com/post/42277603863/dispersion-2002-seth-price-download-pdf>
<http://www.distributedhistory.com/Dispersion2016.pdf>. Accessed January 2018.

3. Partnership, Language, Music, Architecture and the works: together these are five easy pieces, a nod to Richard Feynman's book of essays/lectures, *Six Easy Pieces: The Fundamentals of Physics Explained*, an essential introduction to physics by one of its greatest teachers and a publication which examines several of the basic principles that hrm199 dips into via this exhibition, most obviously the double-slit experiment that is installed within the *Chamber for Endogenous DMT (Collapsing the Wave Function)*, 2017.
4. 'In Our Time' on BBC Radio 4, 9 June. Melvyn Bragg in reference to Erwin Schrödinger, *What is Life?*, 1944.
5. Terence McKenna, *Food of the Gods*, Introduction, p. 13, 1992.
6. HRM are the initials of the artist, 199 is the number he was assigned when a student.
7. In technological parlance the master/slave model of communication is where one device or process has unidirectional control over one or more other devices.
8. Riane Eisler, p. 100, *The Chalice and the Blade*, 1988.
9. <http://sethpriceimages.com/post/42277603863/dispersion-2002-seth-price-download-pdf>
<http://www.distributedhistory.com/Dispersion2016.pdf>. Accessed January 2018.

EXHIBITION













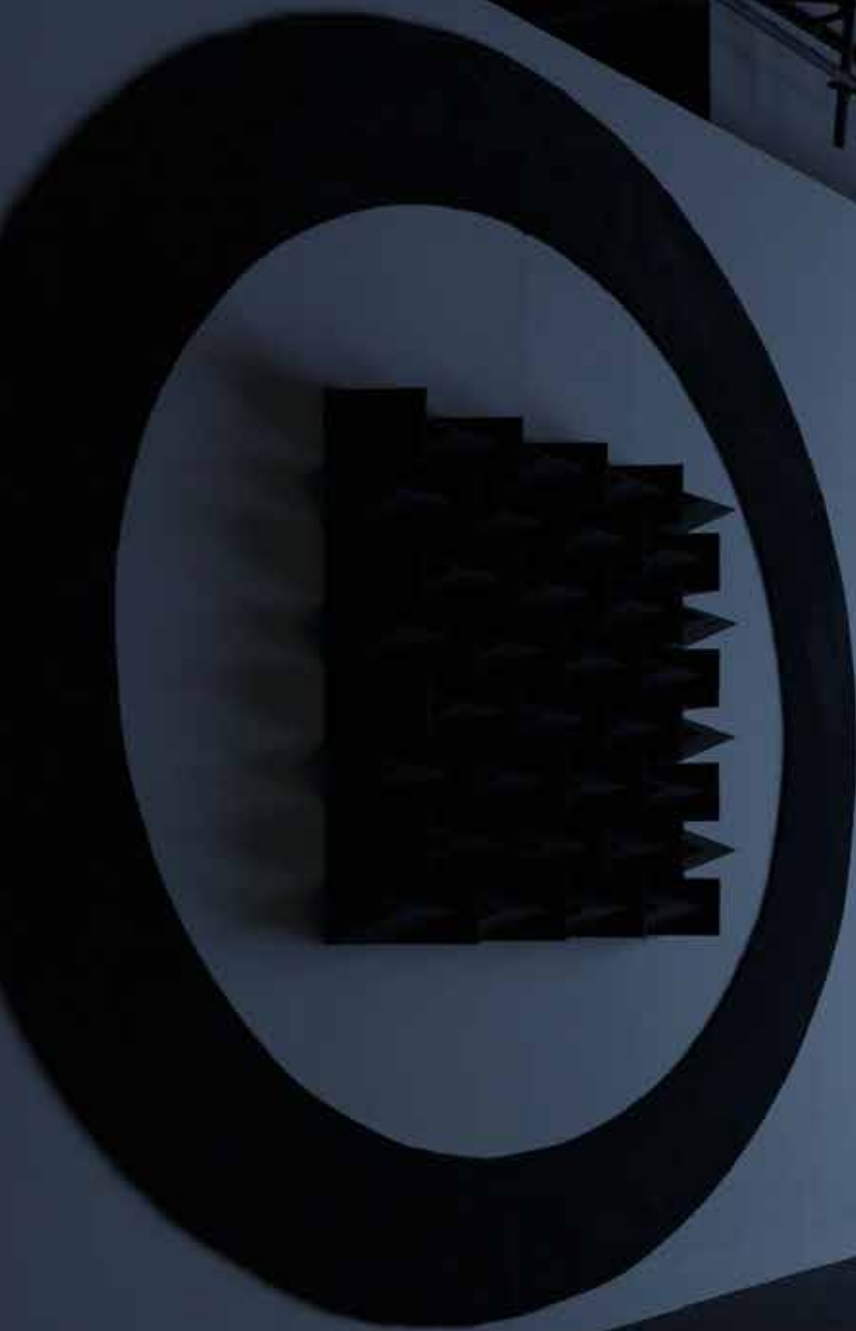


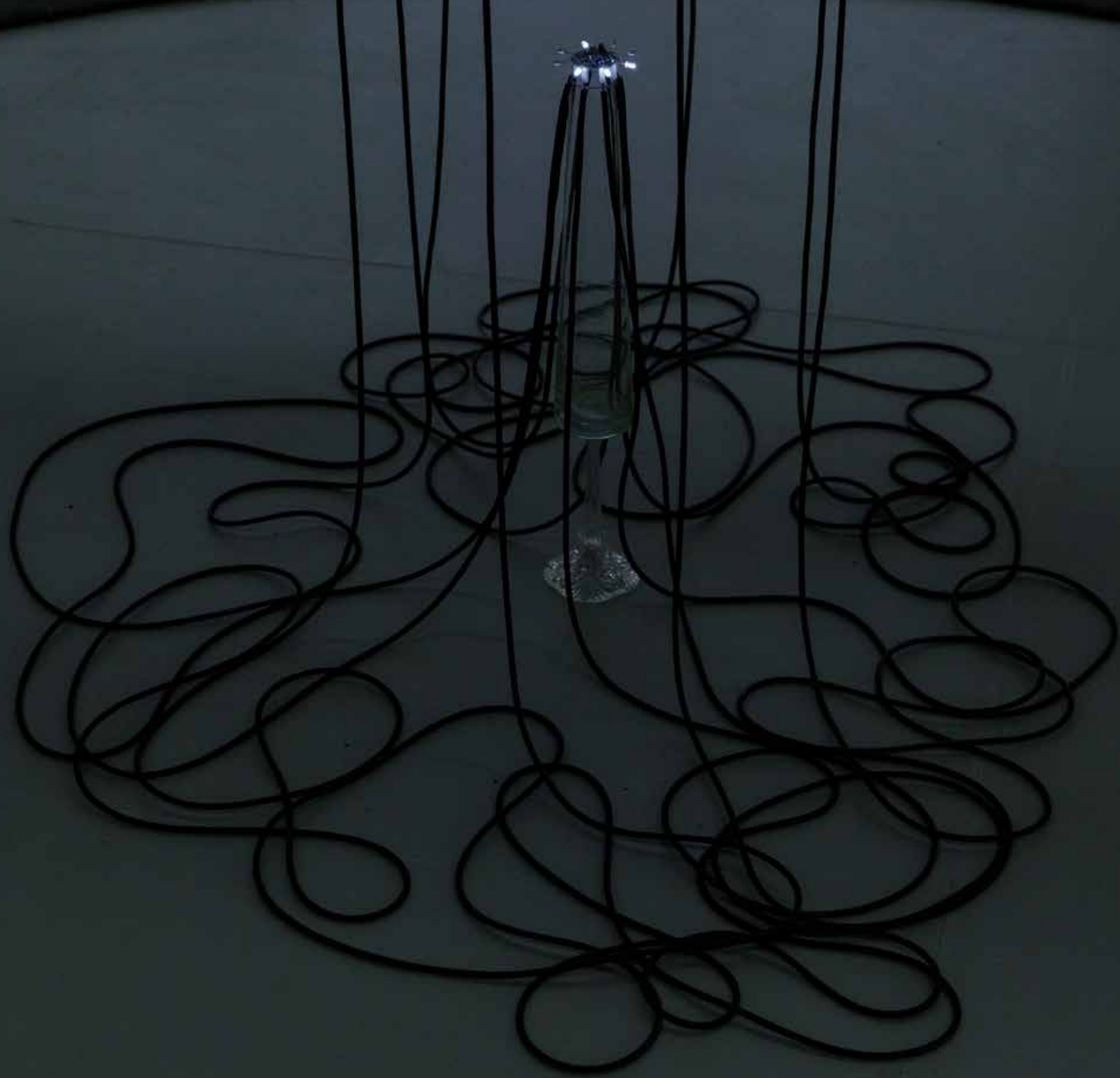




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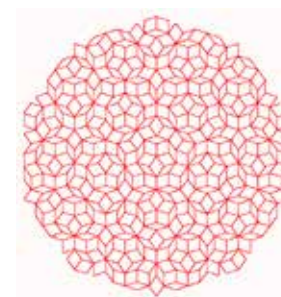
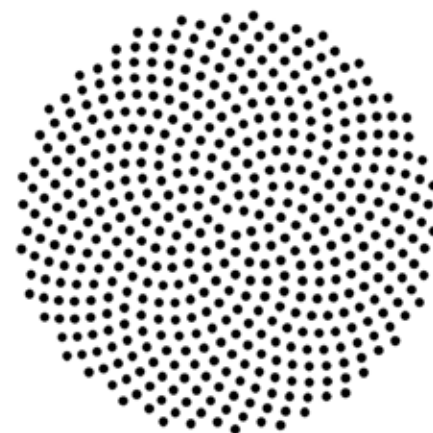
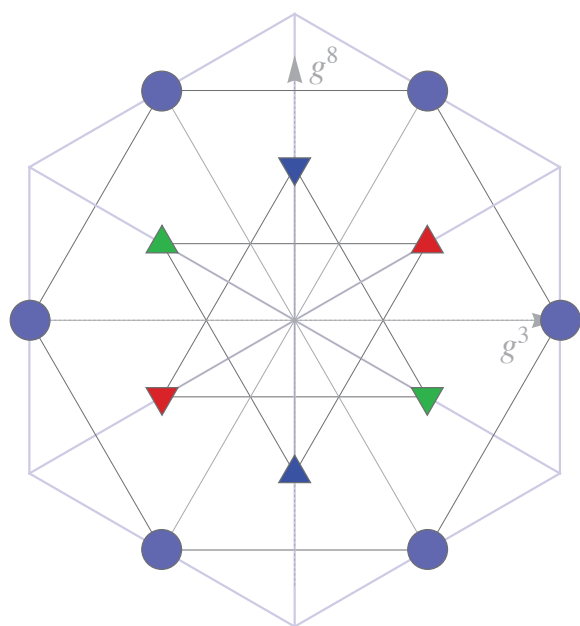


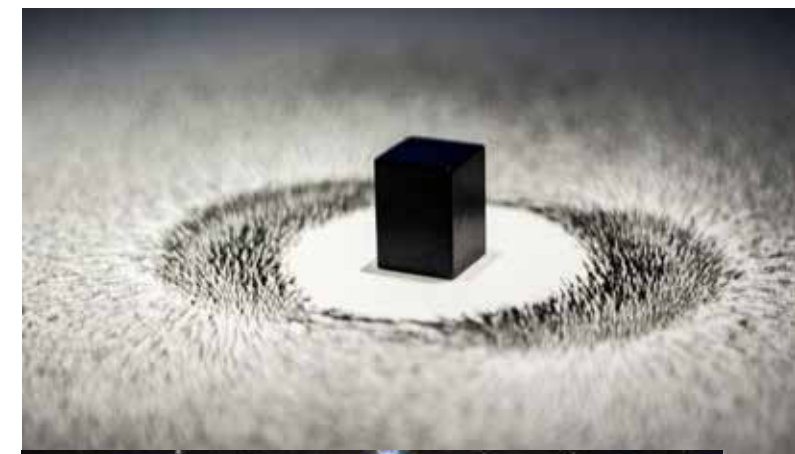
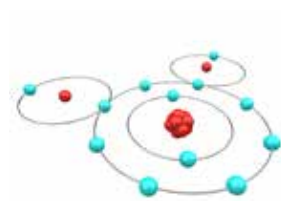
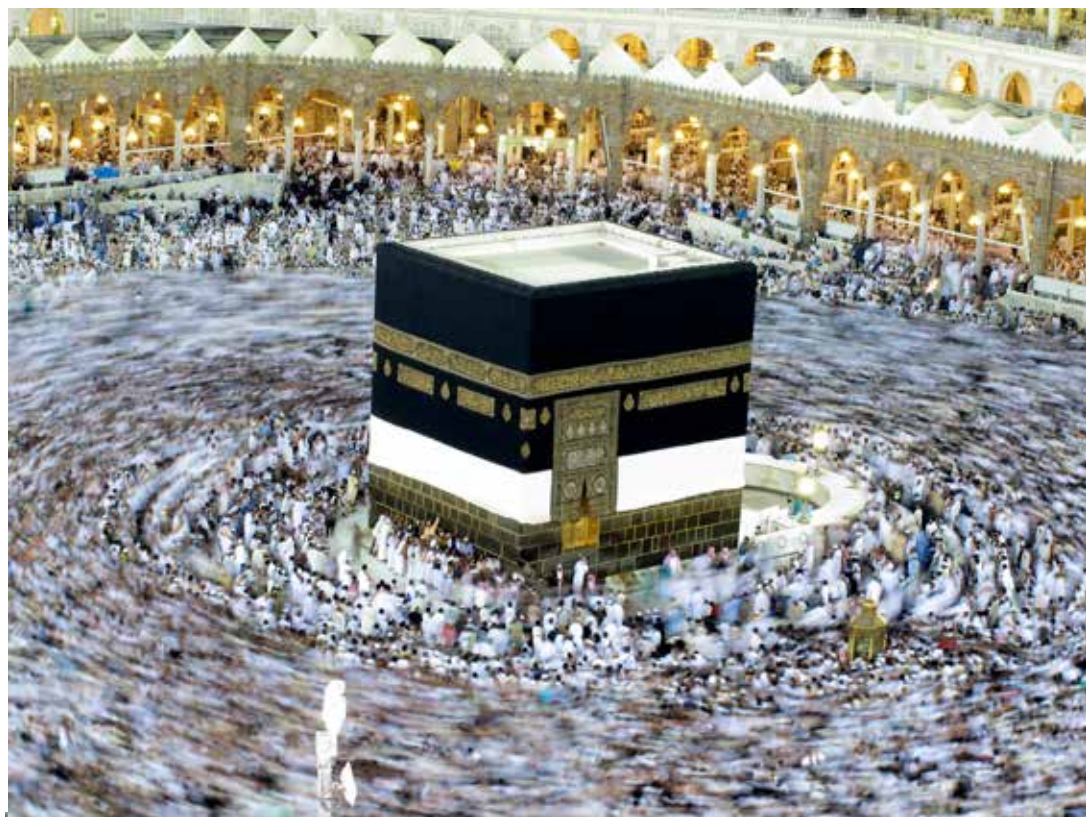


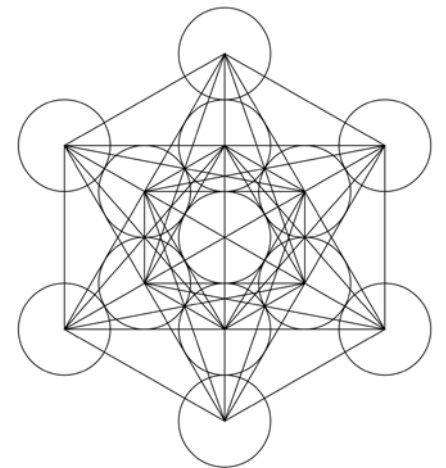
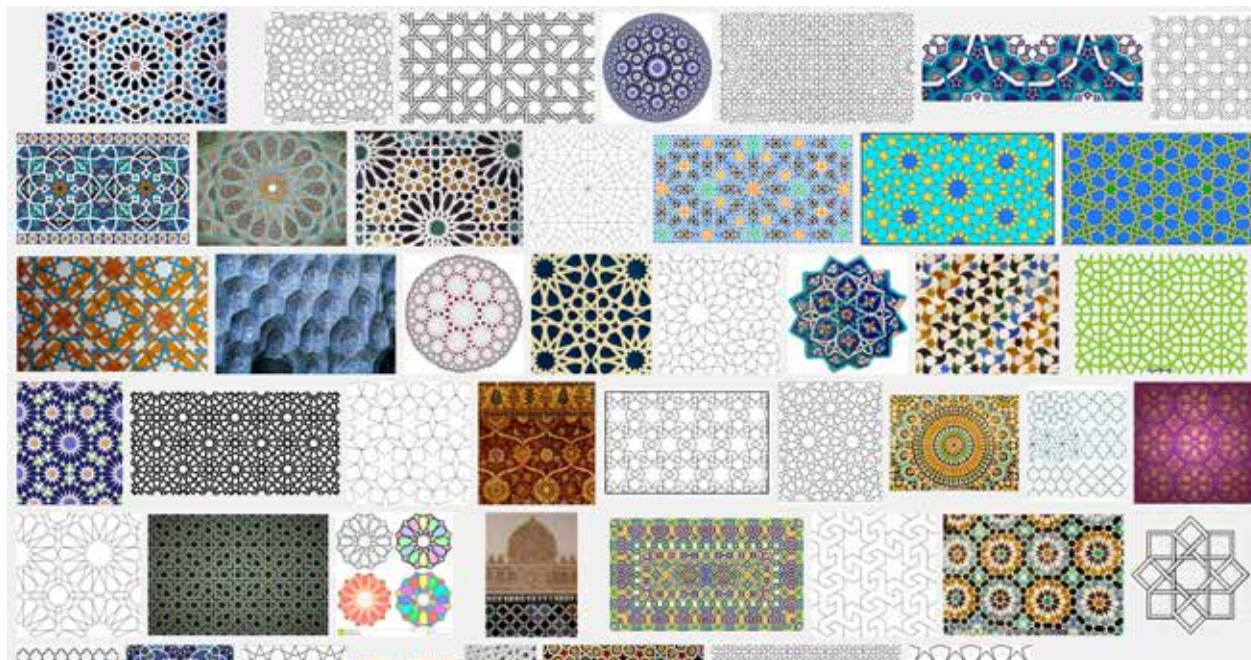
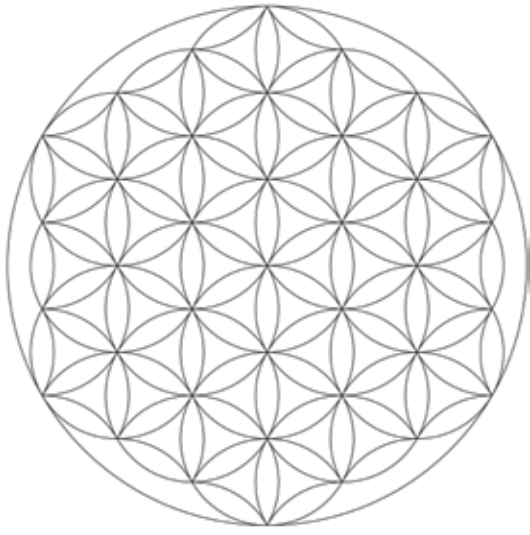




**VISUAL ESSAY:
HAROON MIRZA/
CURA**

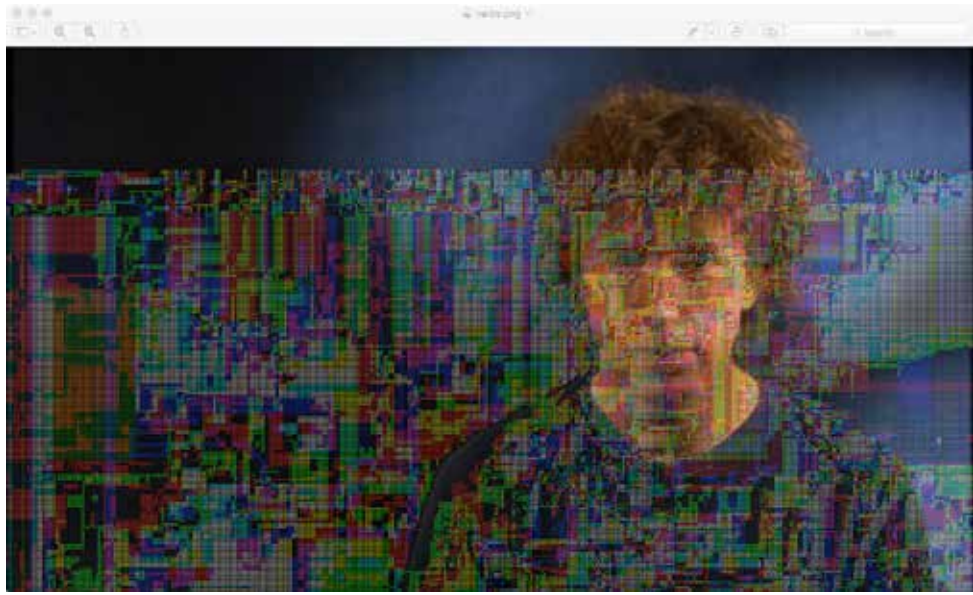


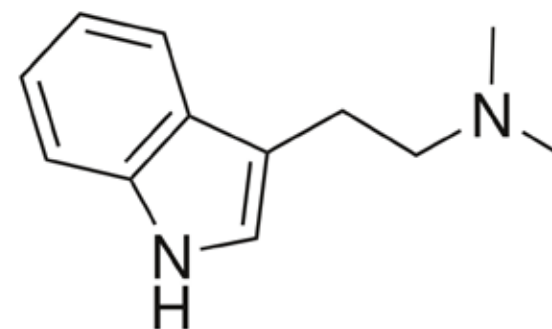
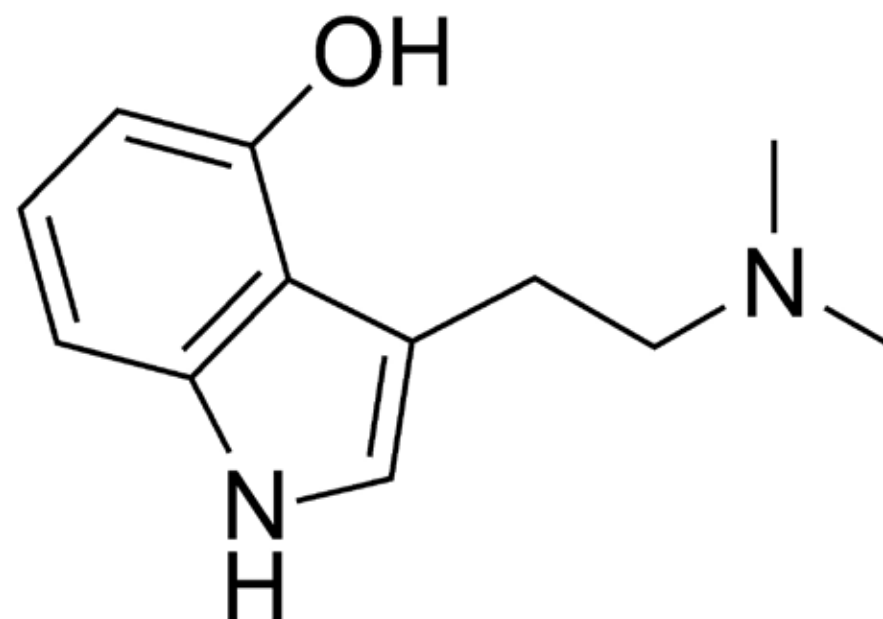
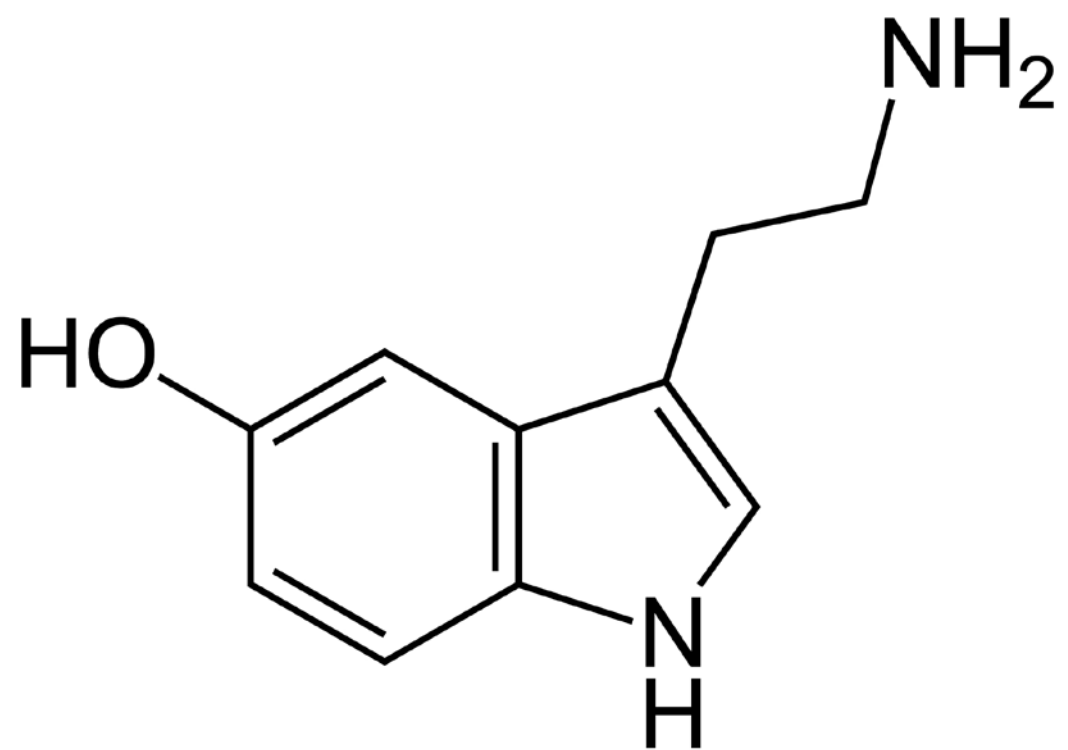












THE SYSTEM: RESIDENCIES AND PERFORMANCES

IN RESIDENCE:
**STUDIO WAYNE
MCGREGOR**

03.10.17—05.10.17
PERFORMANCE: 05.10.17

AS THE FIRST IN A SERIES OF FOUR ON-SITE PUBLIC RESIDENCIES, CATARINA CARVALHO AND NEIL FLEMING BROWN, DANCE ARTISTS FROM STUDIO WAYNE MCGREGOR, SPENT THREE DAYS IN *THE SYSTEM*, WORKING WITH CHOREOGRAPHIC INSTRUCTIONS FROM WAYNE MCGREGOR. DURING THIS TIME, THEY USED THE SPACE AS A STUDIO AND THE WORK AS A PARTNER, EXPLORING THE CROSSOVER INTEREST OF LONG-TERM COLLABORATORS HAROON MIRZA AND MCGREGOR. THE NEW INTERACTION PRODUCED IN RESPONSE TO THE INSTALLATION

09

WAS PRESENTED WITHIN, AND AS PART OF, *FOR A PARTNERSHIP SOCIETY*.

STUDIO WAYNE MCGREGOR IS THE CREATIVE ENGINE FOR CHOREOGRAPHER AND DIRECTOR WAYNE MCGREGOR, AND THE HOME OF HIS LIFELONG CHOREOGRAPHIC ENQUIRY INTO THINKING THROUGH AND WITH THE BODY. IT DESCRIBES THE DYNAMIC TEAM OF INDIVIDUALS AND RESOURCES THAT SUPPORTS MCGREGOR'S VISION, AND COMPRISES DANCE ARTISTS, WRITERS, COMPOSERS, FILM MAKERS, VISUAL ARTISTS, SCIENTISTS, DESIGNERS, ARCHITECTS, STAGE TECHNICIANS, SOFTWARE ENGINEERS, ADMINISTRATORS AND PRODUCERS.

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PERFORMANCE:
LAURA BUCKLEY
AND FRANZISKA
LANTZ: SCULPTURAL
SOUNDS

19.10.17

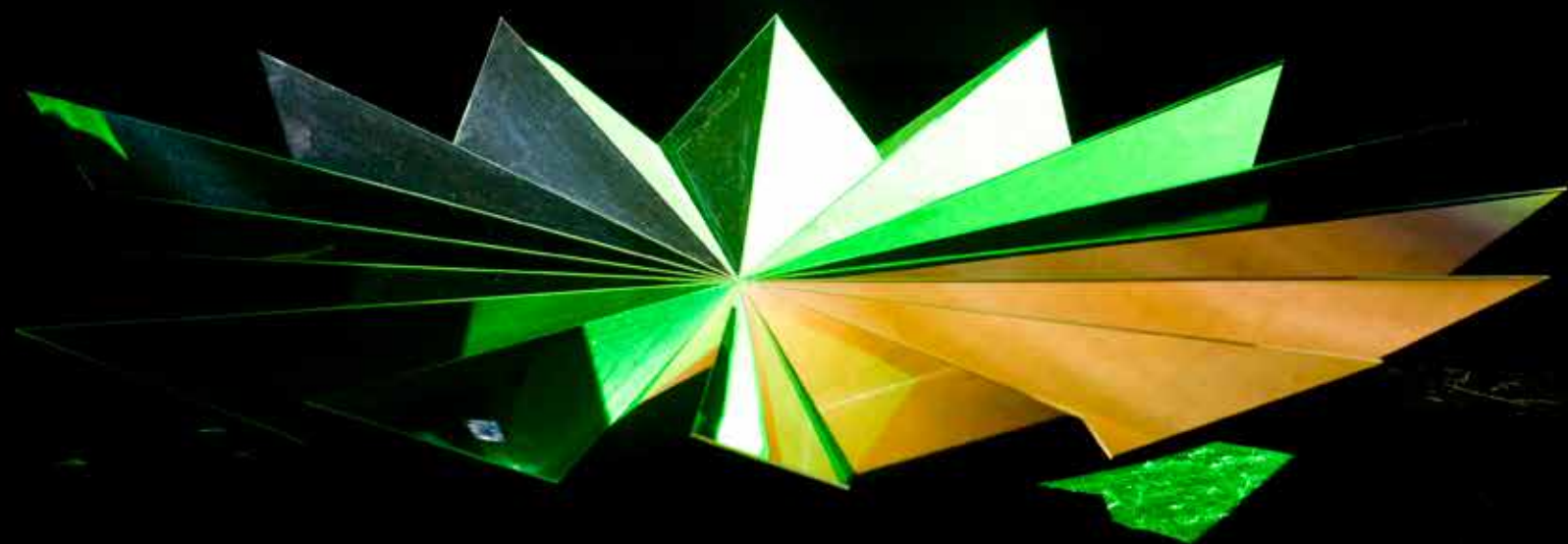
LAURA BUCKLEY AND FRANZISKA LANTZ CAME TOGETHER FOR A UNIQUE IMMERSIVE EVENING PRESENTING NEW WORKS EXPLORING AURAL AND VISUAL TEXTURES THROUGH THE USE OF LIGHT AND SOUND.

FUSING TOGETHER SCULPTURAL INSTALLATION AND MOVING IMAGE, LAURA BUCKLEY INVESTIGATES THE POTENTIAL OF LIGHT, SOUND AND SURFACE, PROJECTING CLOSELY EDITED FILMS ONTO MOVING REFLECTIVE MATERIALS AND SCULPTURAL OBJECTS TO BATHE THE VIEWER IN LIGHT.

FOR THIS EVENT, BUCKLEY INVITED THREE COLLABORATORS – DJANGO DJANGO, PLAID AND ROD MORRIS – TO WORK WITH HER ORIGINAL SOUNDTRACK, CREATING A NEW AND UNIQUE SOUNDSCAPE AND INSTALLATION: *REPELDARKER*, 2017.

IN HER EXPERIMENTAL PERFORMANCES, FRANZISKA LANTZ EMPLOYS FOUND OBJECTS AND UNUSUAL INSTRUMENTS TO CREATE TEXTURED SOUNDSCAPES, MAKING CLEAR THE SCULPTURAL QUALITY OF NOISE. RESPONDING TO THE CONTEXT OF *FOR A PARTNERSHIP SOCIETY*, SHE CREATED A NEW SONIC WORK LIVE IN THE GALLERY.







IN RESIDENCE:
OKKYUNG LEE

25.10.17—28.10.17

PERFORMANCE: 28.10.17

**AND PROJECTED ONTO THE GALLERY
ARCHITECTURE, ACCOMPANIED BY
A SERIES OF LIVE AND PRE-RECORDED
SONIC INTERVENTIONS.**

**LEE LED THE VISITORS ON AN
EXPERIENTIAL, RESPONSIVE
JOURNEY THROUGH THE EVENING
AND INSTALLATION, EXPLORING
THE MEANING OF PARTNERSHIP
AND COLLABORATION VIA WRITING,
MOVEMENT, NOISE AND MUSIC.**

**AFTER THREE DAYS IN THE EXHIBITION,
THE CELLIST, IMPROVISER AND
COMPOSER OKKYUNG LEE PRESENTED
A SITE-SPECIFIC PERFORMANCE
OF HER GENRE-BLURRING WORK.
HER MULTI-LAYERED AND OPEN-
ENDED PERFORMANCE ASKED THE
AUDIENCE TO RESPOND TO A SERIES
OF WIDE-RANGING QUESTIONS, AT
ONCE PRODUCING A SELF-PORTRAIT
OF THOSE IN ATTENDANCE AND
EXTENDING THE MAKING OF THE
PERFORMANCE ITSELF TO THE
AUDIENCE. THE QUESTIONS AND
ANSWERS WERE TYPED BY LEE**

**WHICH COLOUR DO YOU LIKE
MORE OUT OF GREEN, BLUE OR
RED?**

**DO YOU THINK YOU CAN DANCE
TO WHAT YOU ARE HEARING IN
THIS ROOM?**

**IS THE WORLD WE LIVE IN
TOTALLY SHIT?**

**WHAT WAS THE LAST DIFFICULT
DECISION YOU HAD TO MAKE?**

**HAVE YOU EVER BEEN
DISCRIMINATED AGAINST SIMPLY
BASED ON YOUR EXTERIOR?**

**WHAT MAKES YOU GET OUT OF
BED IN THE MORNING WHEN YOU
FEEL LIKE SHIT?**

**WHEN WAS THE LAST TIME
YOU PRAYED TO SOMEONE
OR SOMETHING?**

**DID YOU LOVE GEORGE
MICHAEL?**

**WHY DO YOU THINK ABSTRACT
VISUAL ART IS LESS
INTIMIDATING THAN ABSTRACT
MUSIC?**

**DEEP DOWN IN YOUR HEART,
DO YOU THINK ART REALLY
MATTERS?**

WHY ARE YOU HERE?

**WHEN WAS THE LAST TIME YOU
TOLD SOMEONE TO FUCK OFF
TOHIS/HER/THEIR FACE(S)?**

**DO YOU THINK COMING TO THIS
TYPE OF PERFORMANCE MAKES
YOU COOLER THAN SOME OF
YOUR FRIENDS?**

**WHERE IS THE FARTHEST
(EITHER PHYSICALLY OR
METAPHORICALLY) PLACE
YOU'VE BEEN TO?**

**HAVE YOU EVER FELT THAT YOU
BELONGED TO THE MAJORITY
AND FELT SLIGHTLY ASHAMED
ABOUT IT?**

IS HAPPINESS OVERRATED?

**DO YOU THINK THE USA
IS PROBLEMATIC?**

**WHAT IS THE MOST BEAUTIFUL
NOISE YOU'VE EVER HEARD?**

**WHEN WAS THE LAST TIME YOU
WERE TRULY SCARED?**

**IS LOVE REALLY STRONGER
THAN HATRED?**

DOES BEAUTY MATTER?

**HAVE YOU EVER EITHER LOVED
OR LOATHED SOMEONE/
SOMETHING WITH A PASSION
WHILE ALL OF YOUR FRIENDS
HAD THE OPPOSITE RESPONSE?**

**WHAT WOULD MAKE YOU FEEL
WORSE, YOUR CHILD BEATING
SOMEONE UP OR GETTING
BEATEN UP?**

**HAVE YOU WALKED OUT OF
A PERFORMANCE THAT WAS
HAPPENING IN A SMALL SPACE
WHERE OTHERS COULD SEE
YOU?**

IS BRITAIN FUCKED?

**WHAT DO YOU THINK OF WHEN
YOU READ 'ORIENTAL BUFFET'?**

**DO YOU THINK VIOLENCE IS A
BIG PART OF HUMAN NATURE/
PSYCHE?**

**DO YOU THINK YOU NEED TO
BREAK OUT OF YOUR OWN
BUBBLE/ECHO CHAMBER?**

**ARE YOU GOOD AT SAYING
SORRY?**

**WHAT WAS THE LONGEST
GRUDGE YOU HAVE EVER
HELD?**

**WHERE CAN I GET THE BEST FISH
AND CHIPS AROUND HERE?**

**HAVE YOU HAD A REAL
CONVERSATION WITH SOMEONE
WHO HAS THE EXACT OPPOSITE
OPINION FROM YOU WITHOUT
GETTING INTO A FIGHT?**

**DO YOU THINK SOMETIMES YOU
ARE A RACIST?**

HELEN MIRREN OR JUDI DENCH?

**WOULD YOU LIKE TO VISIT
NORTH KOREA?**

**WHAT MAKES ART GOOD OR
BAD?**

**DO YOU THINK PEACE TALKS
ARE EFFECTIVE?**

**DO YOU THINK THIS BRITISH
STIFF UPPER LIP THING IS STILL
REAL?**

**WHEN WAS THE LAST TIME YOU
WERE SO CONFLICTED YOU
STAYED UP ALL NIGHT?**

**IS CAPITALISM FIXABLE OR
SHOULD WE DITCH IT AND COME
UP WITH AN ALTERNATIVE IF
POSSIBLE?**

**IS IT POSSIBLE TRULY NOT TO
BE JUDGEMENTAL?**

**WAS THERE A MOMENT YOU FELT
RELIEVED IN SECRET TO SEE
SOMEONE YOU ARE CLOSE TO
FAIL?**

**HAVE YOU BEEN TROLLED
ONLINE?**

**DO YOU THINK YOU CAN
TELL SOMEONE'S POLITICAL
STANDPOINT BASED ON HIS/
HER/THEIR TASTE IN ART?**



Q: do you think violence is a
big part of human
nature/psyche...?
A: YES. VIOLENT NATURE
BONDAGE, VIOLENT SEX,
EARTHQUAKE, VIOLENT
WOLVES, BROTHERHOOD,
VIOLENT



PERFORMANCE:
**TOMAGA &
ROSANA ANTOLÍ:
WHALE HARMONIES**
17.11.17

A PERFORMANCE IN THREE PARTS, *WHALE HARMONIES* MOVED FROM COSMIC ORDER TO CHAOS, INFLUENCED BY HOW THE VAST HARMONIES OF THE SOLAR SYSTEM'S PLANETARY CHOREOGRAPHY ARE ENTWINED WITH THE REPEATED MINIMAL MOVEMENTS THAT COMPRISE OUR DAILY HABITS AND RITUALS. TAKING THE FILM *WERCKMEISTER HARMONIES* BY DIRECTOR BÉLA TARR AS A KEY REFERENCE POINT, THE PERFORMANCE WAS AN EXPLORATION OF HOW WE FORGE TIME, CONSIDERING MUSIC'S ROLE

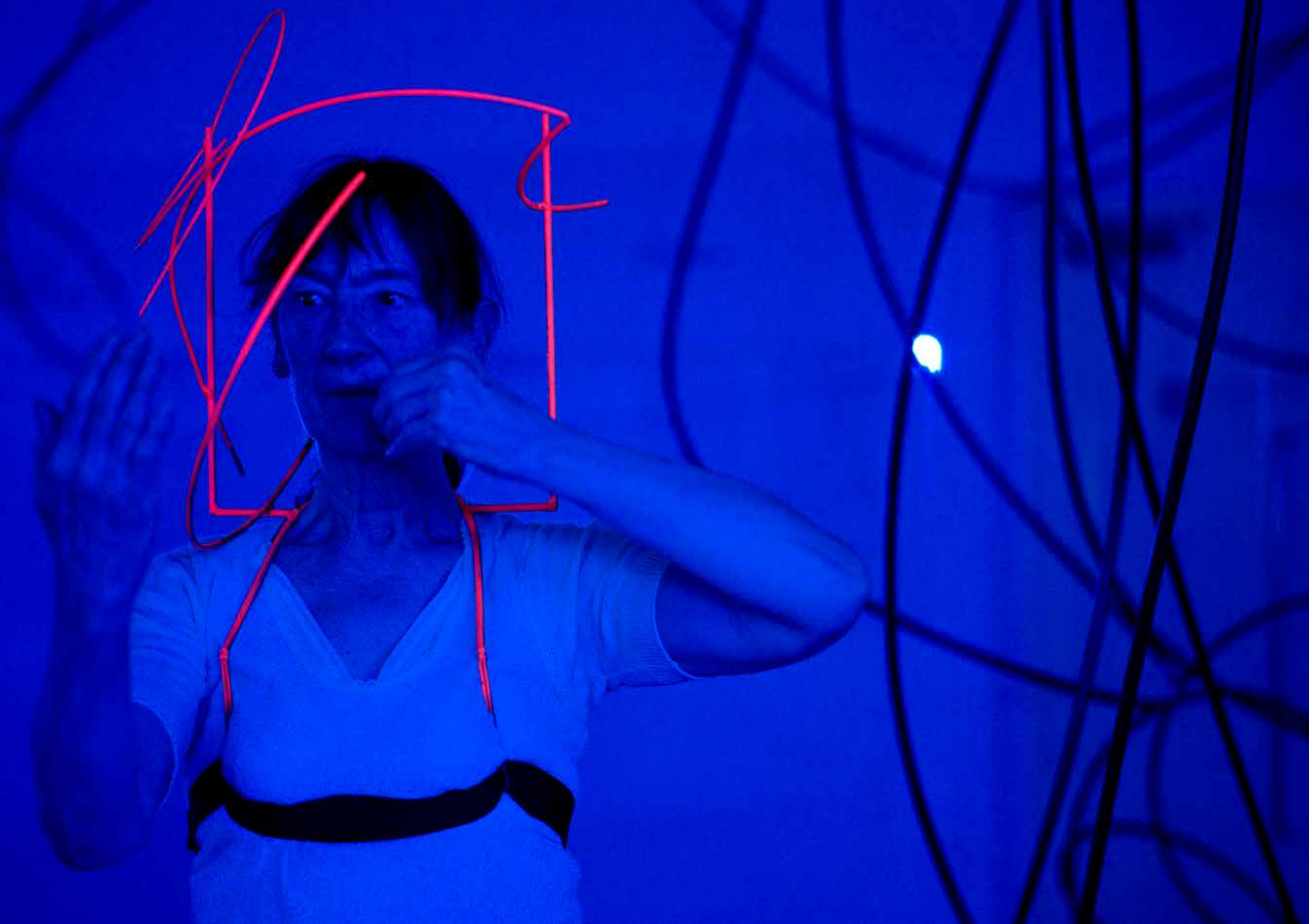
06

IN CONSTRUCTING THIS EPHEMERAL AND IMMORTAL ANCHOR.

TOMAGA, THE DUO ALSO KNOWN AS PERCUSSIONIST VALENTINA MAGALETTI AND BASS PLAYER/ELECTRONICIST TOM RELLEEN, AND VISUAL ARTIST ROSANA ANTOLÍ, COLLABORATED FOR THE FIRST TIME FOR THIS UNIQUE EVENT. PLAYING WITH FAMILIAR TROPES AND PUSHING AUDIENCE EXPECTATIONS OF SOUND, MOVEMENT AND DURATION, THIS NEW PERFORMANCE CREATED A HYPNOTIC AND IMMERSIVE EXPERIENCE. ANTOLÍ'S SPRAWLING SCULPTURAL INSTALLATION PROVIDED THE SET FOR A GROUP OF MIXED ABILITY, GENDER, AND AGED PERFORMERS, INCLUDING MELISSA SIROL, SARAH KENT, HEATHER MCCALDEN, CARLOS JIMÉNEZ, LENA KIMMING, ELISA VASSENA, KAREN CALLAGHAN AND THELMA SHARMA.

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IN RESIDENCE:
JULIE
CUNNINGHAM
& COMPANY

23.11.17—25.11.17

PERFORMANCE: 25.11.17

**CREATING A 30-MINUTE PERFORMANCE
THAT WORKED WITH AND AGAINST
THE INSTALLATIONS BY HRM199 AND
INCORPORATED MUSIC BY FEVER RAY.**

**DRAWING ON A PRACTICE INFLUENCED
BY FAR-RANGING REFERENCES SUCH
AS POP MUSIC AND SPOKEN WORD,
AS WELL AS TIME SPENT DANCING
FOR MERCE CUNNINGHAM AND
MICHAEL CLARK, CHOREOGRAPHER
JULIE CUNNINGHAM PRESENTED A
NEW PIECE, DEVISED IN SITU WITH
DANCER HANNAH BURFIELD FROM HER
COMPANY. WORKING IN RESPONSE
TO *FOR A PARTNERSHIP SOCIETY*
AND THE UNIQUE ARCHITECTURE OF
THE GALLERIES AND INSTALLATIONS,
CUNNINGHAM CONTINUED TO
CHALLENGE EXPECTED CONVENTIONS,**









IN RESIDENCE:
**SHIVA FESHAREKI
AND NIK VOID**

12.12.17—16.12.17
PERFORMANCE: 16.12.17

FOLLOWING OVERLAPPING RESIDENCIES WITHIN *THE SYSTEM*, NOISE MUSICIAN NIK VOID AND COMPOSER AND TURNTABLIST SHIVA FESHAREKI CONCLUDED THE RESIDENCY PROGRAMME WITH A PERFORMANCE DOUBLE BILL. HAVING COLLECTIVELY COLLABORATED WITH HAROON MIRZA PREVIOUSLY, THIS EVENT PROVIDED AN OPPORTUNITY FOR THEM TO EXPLORE NEW METHODS OF WORKING TOGETHER, REVEALING OVERLAPS AND INTERSECTIONS IN DISTINCT, YET CONNECTED, PIECES.

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USING A SERIES OF SPECIALLY PRODUCED SPEAKER ADAPTORS, FESHAREKI ADDED HER SONIC MANIPULATIONS AND INTERRUPTIONS TO *THE SYSTEM* USING TURNTABLES SCRATCHING, RECORDING AND LOOPING. TAKING HER TIMING FROM THE LED LIGHT COMPOSITION OF *THE SYSTEM* SHE CREATED AN ABSTRACT SOUNDSCAPE.

NIK VOID BROUGHT FIELD RECORDINGS FROM THE OTHER TWO INSTALLATIONS – *9/11–11/9 FEAR OF THE UNKNOWN* AND *PATHOLOGICAL THEOLOGY* – INTO THE SYSTEM, USING THEIR TEMPO AS THE BASIS FOR LIVE-PRODUCED ELECTRONIC MUSIC.

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**SOURCES:
9/11–11/9 FEAR OF
THE UNKNOWN
& PATHOLOGICAL
THEOLOGY**

(in order of appearance, with some repeated)

Hermeto Pascoal, Brazilian avant-garde musician – YouTube.

Solar tracker time-lapse – YouTube.

Structure of hydrogen atom, educational video – YouTube.

Composite image of Captain America in the Chihuahuan Desert (collage by Haroon Mirza) with text quoted from Stokely Carmichael (Mirza swapped the word 'yellow' for 'brown').

Ayahwasca Icaro (recited during ceremony) by Maestra Olivia – YouTube.

Original iPhone footage of Petrobras facility in Brazil.

NASA ISS footage of the Middle East from space – YouTube.

E8, a diagram of a model for a Unified Field Theory by Antony Garrett Lisi – graphic image superimposed on video.



Original iPhone footage, Lava Jato (car wash) at Alle gas station, Brazil.

Cleansing ritual prior to Ayahuasca ceremony – YouTube.

Theoria Apophasis, an outsider scientist's 'educational' video criticising the discovery of gravitational waves – YouTube.

Original iPhone footage of street lamp cover falling (this lamp fell in São Paulo during a freak storm the day after Michel Temer came into power as President of Brazil).



Clip of Michel Temer's wife, Marcela Tedeschi – YouTube.

Gravitational waves, educational videos – YouTube (manipulated audio, and video manipulated using Deep Dream, a Google-owned Artificial Intelligence (AI)).

'Imagining the Tenth Dimension' by Rob Bryanton (musician), and a fringe scientific 'educational' video – YouTube.

Original iPhone footage of drains in São Paulo. Voiceovers by friends.

Hermeto Pascoal and friends – YouTube.

Original iPhone footage of Gay Pride, São Paulo.

Original iPhone footage of street musicians in São Paulo.

News clips of Sérgio Moro, Brazilian federal judge – YouTube.

Press statement by Dilma Rousseff, 36th President of Brazil (2011–2016) – YouTube (manipulated by Mirza using Deep Dream AI).

NASA images of celestial objects – YouTube.

Various Icaros recitals – YouTube.

Original composite video of the top 50 words in the Bill of Rights in order of their frequency (Text to Speech audio).

Original animation made using Google Deep Dream AI, going from Captain America to Donald Trump, 45th President of the United States.

Gameplay video of *Grand Theft Auto 5*, where the player finds and ingests a Peyote cactus – YouTube.



Green ink in water – YouTube.

CGI simulation of United Airlines Flight 175 approaching the Twin Towers – YouTube.

Footage of conflict in Afghanistan – YouTube.

Contentious video about Muslims in Jerusalem – YouTube.

Footage of conflict in Iraq – YouTube.

Beyoncé singing at President Barak Obama's inauguration – YouTube.



Clip from *60 Minutes: The Case Against Lehman Bros* – YouTube.

News footage of the killing of Muammar Gaddafi, former Prime Minister of Libya – YouTube.

Satirical song about Brexit – YouTube.

Jackie Evancho singing at President Donald Trump's inauguration (Evancho previously appeared on *America's Got Talent*) – YouTube.

Petrobras advert – YouTube.

Original animation made using Google Deep Dream AI.

Footage of FedEx driver aggressively protecting the American flag – YouTube.

Gameplay footage of *Lemmings* – YouTube.

[illegible]

120

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Haroon Mirza, code from *Pathological Theology*, 2017. Courtesy hrm199.

*Germ*s

Transcription

He's looking

I don't know what he's looking for

Maybe it's a touch,

A laugh

A smell

Why tell him it's perfume when he thinks it's you?

Masque. The new fragrance.

--

Sophie's always had perfect skin. What's her secret?

Unlock the secret to flawless skin with our new deep pore cleaning miracle mask

Thanks to miracle masks unique masquien-dermetas technology it penetrates the surface of the skin...

...targeting the harmful effects of free radicals and removing dirt and grime that accumulates beneath the epidermis.

Our new deep pore cleansing miracle mask.

Unlock the secret to flawless skin.

--

Are you feeling ok?

Yeah, yeah I've just got a bit of a tummy ache.

Oh I used to get that all the time. Until I started buying these.

They're new Yogi-Mask Superpots. Here try one!

It's a thick, creamy and indulgent yogurt, which contains Masquieon Digestivas.

It's a live culture that helps the happy bacteria in your gut to reproduce and prosper.

122

It's clinically proven to improve your digestive health in under two weeks.

Yogi-mask Superpots. Now in pink berry flavour.

--

Tastes pretty good huh?

Your toilet may appear clean. But Germs could still be lurking in those out of reach places.

Have you been wasting your time with ordinary household cleaners?

Um, well I don't do...

Try Mr Mask's new multi-task germ destroyer

An unclean toilet is the perfect breeding ground for bad bacteria

But with Mr Mask, it takes just one squirt and germs are a thing of the past

And germs aren't all that it deals with...

It tackles what's built up, caked on, hardened in and even out and out dirty!

And now, with up to 8 days of Mr Masking fragrance...

...the multi-task germ destroyer is the only household cleaner for the job.

Nothing eliminates grime like Mr Mask's multi-task germ destroyer!

123

TRANSCRIPT: EYE FOR AN EYE

Muslim forces have captured the Hilton Hotel, the last major Christian stronghold in uptown Beirut, Sunday, and have launched another fierce offensive on the downtown area with tanks, artillery and hundreds of troops.

Li Beirut (sung in Arabic)*

April 13th 1975

We are acting with restraint replying to shooting rather than starting it.

The Christian forces continue their drive against the Palestinian camp at Tel al-Zaatar...

One bulldozer is filled with bodies

at the end where I'm standing

and the Left has retaliated by opening an attack

The bulldozer is now dumping

from the Christian town of Chekka north of Beirut

about 7 or 8 bodies of men from the Tel al-Zaatar camp into the grave.

124

A greeting from my heart to Beirut
Kisses to the sea
And to the houses
To a rock
which is like a sailor's face
She is made from the people's soul...
From wine
She is from his sweat...
Bread and Jasmine
So how does her taste become?
A taste of fire and smoke?
Beirut has a glory of ashes
My city has turned out her lamp
By a child's blood, who was over her hand
She's shut her door, and became alone in the sky
Alone with the night
You are mine
You are mine
Ah
Hug me
You are mine
You are my flag,
Tomorrow stone
And a travel's waves
My people's wounds have flourished
And mothers tear
You are mine,
You are mine.
Ah,
Hug me.

521

[illegible][illegible]

Film, *The Ancient Set*, 7mins

Serpentine Gallery Park Nights
8 August 2008 8pm
Serpentine Gallery Pavilion designed by Frank Gehry

[illegible]

Alex and Vicki - And she whom they call Iris, this too is by nature cloud, / purple red, and greeny yellow to behold.

Alex - A picture element is the smallest piece of information in an image. Pixels are arranged in a two-dimensional grid represented by dots or squares; Allowing for the unconcealedness of the digital kernels. Each pixel is a sample, of an original image. A pixel is generally thought of as the smallest single component of an image. The more pixels used to represent an image the closer the result can resemble the original apparition. We can also speak of pixels in the abstract as a unit of measure.

The word pixel is a compound, composed of two fragments, the first based on a contraction of pix, for picture, and the second, el, for element. The origin of the word is obscure. dwelling in the blue, and gloomy penumbra of sylvan Arcadia. but was first published in relation to picture elements in video images transmitted from the moon and mars.

The Atom is the smallest particle that constitutes a chemical element. Seed-like, tiny. An atom consists of an electron cloud composed of negatively charged electrons that surround a dense nucleus. This circle is a virtuous circle not a vicious circle. Atoms form about 4% of the total mass density of the observable universe, the remainder of the mass is an unknowable dark matter. The first atoms were theoretically created during an eepoc, known as the recombination.

Most of the atoms that make up the Earth and its inhabitants were present in their current form in the nebula that collapsed out of a molecular cloud to form the solar system. The rest are the result of molecular decay and barefaced invention.

Vicki - The concept of the Atom as an in-divisible component of matter was first proposed in the 6th century BC, way before Herr-odditus. Who's eye was in his ass-hole. His spurious combination creatures inhabited an altogether more polygot spectrum.

Alex - In the 17th and 18th centuries, natural philosophers provided a physical basis for this idea by showing that certain substances could not be further broken down conceptually or by chemical methods. Later it was revealed that the village was divided, as physicists discovered sub atomic components and structure inside the atom, thereby demonstrating that the atom was not indivisible. The principles of quantum mechanics were used to successfully model the thinny character of the Atom.

As mentioned earlier, the idea that matter is composed of discrete units and cannot be divided into arbitrary tiny quantities has been around for millennia. These ideas were founded in abstract, philosophical reasoning. To understand a thing we must think the Being of beings. The nature of atoms in philosophy varied considerably over time and between cultures and schools of thought.

Sometimes possessing a spiritual element. A vacillation between secular and mythical, revealing and concealment, earth and world.

In approximately 450 BC, Democritus coined the term, *Atomos*, which translates as uncuttable or the smallest indivisible particle of matter. Something that cannot be divided. In 1661 one of those natural philosophers argued that matter was composed of various *corpuscles*, rather than the tanyonic classical elements of air, earth, fire and water, thereby resuscitating a 2000-year-old notion. The term *element* was later defined to mean a basic substance that could not be further broken down. The idea of the atom has been more recently adopted by scientists, because it elegantly explains new discoveries in the field of chemistry and holds open, the open of the world.

Vicki - There are two forms of knowing. One genuine, the other a bastard. To the bastard belong all these: Sight, hearing, smell, taste, and touch. The GENUINE, has been separated from these

Alex - Pre-Socratic philosophers rejected traditional mythological explanations for the phenomena they encountered, in favor of more rational explanations.

To explain the origin of things; they sought to discover or describe one primary, material substance as the base or elemental foundation of all natural objects. Much of their thought remains completely obscure, elusive and impenetrable, for instance, for the Pythagoreans, the one thing that formed the substrate of all the infinite things in the universe was; NUMBER.

The audacious atomists held that void, space without matter, exists, and that this void contains an infinite number of in-divisible units, which are undifferentiated in material. By random movements they form vortexes, in which atoms come together and form the sensible, terrible world. The shapes of the atoms and their arrangement with respect to one another give physical objects their apparent characteristics. The earth tends to draw the world into itself and keep it there. This is its nature as concealing.

Vicki - There are fragments that proclaim the unity or identity of opposites. Moving blocks. BARBARIAN MATTER.

Nature in the cosmos was fitted together out of unlimiteds and limiters. The unlimiteds are unstructured stuffs and continua. The limiters impose structure on the unlimiteds. Things become knowable because they are structured in this way.

Stutter, stutter, stutter. Mouth the words. Repeat after me;

What seem to be generated objects are instead temporary mixtures of ingredients. The original state was one of universal mixture. All things were together, unlimited both in amount and smallness, for the small too was unlimited. And because all things were together nothing was evident. This is the intimate struggle between world and earth.

As a rotation spreads out through the unlimited mass of indistinguishably intermingled ingredients, the rotation causes a winnowing or separating

effect, and the cosmos-as we know it emerges from the mixture. Moreover, not only were all things together, they are even now together, in a different way, despite the differentiations now achieved. Everything is everything in some proportions, however small or great. This is a move to prevent even the appearance of; coming-to-be, from, what-is-not.

Appearances are a sight of the unseen

Alex and Vicki - A fictional group; small, sky blue; somewhere in the woods.

Vicki - The cast has a simple structure: all characteristics essentially alike, Very short ("just three apples tall") Blue skin, white trousers with a hole, white hat in the style of a Phrygian cap.

Alex - Like alchemists they configured the notion of original matter and enduring underlying stuff. "Does the original stuff persist through the changes that it undergoes in the generating process?" They conclude that it does. Material monists, committed to the reality of a single material stuff that undergoes many alterations but persists through the changes. Original matter from which the world is formed. Seminal transforming material pips that endure as a singular substratum. An irreducible pluralism of stuffs passing on their qualities to items constructed from them. The atomists consider all phenomenal objects and characteristics as emerging from their background mixture.

Every thing, constructed of; spiralling elements, corpussles, atoma and VOID.

Vicki - To create is to cause something to emerge.

Alex - What is real is an infinite number of solid, uncuttable units of matter, uniform, differing only in position, arrangement, followed by their numerous monotonous peers who look exactly alike. Agents of nothingness enthusiastically endorsing the reality of the empty.

Vicki - By convention sweet and by convention bitter, by convention hot and by
Alex and Vicki - convention cold, by convention colour: in reality, atoms and VOID.

All phenomena are clouds, coloured, moving, incandescent.

[illegible]

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Admission free

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Recorded information 020 7298 1515
www.serpentinegallery.org

PoemField #3

PO
POE
POEM
FIE
FIELD
POEMMM
FIELD NO. 3
POEMFIELD NO. 3
NO. 3
A MAP OF IDEAS
A
VOICE
WRONG
A WHEEL
WRONG
A WHEEL
BUT NOT REALLY
A HAND
REALLY
MEMORY IS A TIGHT ROPE
A FIRE
AIEEEEE
CRYING IS AN EDGE
NOT OVER
LOOKING
BUT A CUTTING EDGE
REALLY
THE DARK IS A QUESTION
I BELIEVE YOU

NAKED
IS LIKE
TOMORROW
NAKED IS
LIKE TOMORROW
YOU ASK
YOURSELF
ABOUT IT
A LAUGH
IS PROGRESS
REALLY
SI
LENCE
SILENCE
AN
ATTEMPT

ALEX O'BRYAN-TEAR, DAVID LUKE & HAROON MIRZA, CHAIRED BY KERRY ROWBERRY

PSYCHEDELICS

07.12.17



From left: Alex O'Bryan-Tear, Kerry Rowberry, Haroon Mirza and David Luke

Edited transcript of roundtable discussion,
7 December 2017

Antonia Blocker: Welcome to tonight's panel discussion on psychedelics. We programmed the talk tonight in response to our current exhibition Haroon Mirza/hrm199: For a Partnership Society. Underpinning this exhibition is Haroon's interest in how we understand the relationship between matter and perception. From the DMT-containing plants in 9/11–11/9 Fear of the Unknown to Chamber for Endogenous DMT (Collapsing the Wave Function), the concept of altered states of consciousness runs throughout the show. He has even been working with scientists from Imperial College's Psychedelic Research Group to use the anechoic chamber to study whether sensory deprivation can prompt psychedelic experiences.

As this academic research and an interest in psychedelic substances is so important to Haroon's thinking, we thought this was a great opportunity to host a discussion tonight to explore the seeming resurgent use of psychedelics both scientifically and culturally. Tonight, Haroon will be joined by Dr David Luke, who is one of the scientists he has been collaborating with on the project. David is a senior lecturer in psychology at the University of Greenwich; he was president of the Parapsychological Association between 2009 and 2011, and he has published more than 100 academic papers on the intersection of transpersonal experiences, anomalous phenomena and altered states of consciousness. He has published seven books on psychedelics and paranormal experience, he directs the Ecology, Cosmos and Consciousness salon at the Institute of Ecotechnics, and he co-founded the Breaking Convention conference.

We also have Dr Alex O'Bryan-Tear. Alex is one of the Beckley Foundation's science advisors, overseeing the Foundation's scientific developments. Prior to this position he completed his PhD at the University of Cambridge, studying how the brain's ingenious data-processing mechanisms lead, under the influence of certain drugs and in everyday life, to delusions and hallucinations of the types seen in psychosis. And, finally, Kerry Rowberry will chair our panel. Kerry's interest in psychedelics was prompted by her journey to ayahuasca from depression, which she suffered following a redundancy in 2011. She embarked on a PhD with the University of Cumbria which aims to provide an ethnographic perspective on Amazonian shamanism in Britain.

She also founded the Psychedelic Society of Birmingham in February 2015. I think you'll agree we have a panel of people who are more than qualified to talk on the subject: they'll have a conversation between themselves and then we'll open up to questions. Please join me in welcoming our panel.

Kerry: Each panel member will discuss a different subject. David will begin with the academic and scientific application of psychedelics, Alex will look at history and policy, and Haroon will discuss the wider cultural use and understanding of psychedelics.

David: I'm a psychologist and I got into psychology through my interest in psychedelics; it wasn't the other way round. My main area of research is in all altered states and what we call 'anomalous experiences' – things like telepathy, clairvoyance, out-of-body or near-death experiences, rather than anomalous 'pathological' experiences, which don't get taught on a psychology degree. I explore these experiences – which are somewhat unusual, rare and/or extreme, but which aren't necessarily associated with pathological states – and how they arise due to altered states of consciousness, through meditation or hypnosis or indeed via anechoic darkroom spaces, like we have here, or through the use of psychedelics.

Historically we've not known about psychedelics for a very long time. The West and the Academy have only known about these things for about 100 years, but from archaeological evidence we suspect the use of peyote traditionally goes back at least 5,500 years. When they were first discovered by the Academy – mescaline about 100 years ago and LSD about 70 years ago – they were explored for their perceptual anomalies, how they changed your perceptions and induced hallucinations.

At about the same time, it was discovered that LSD's structure was very similar to serotonin, the first discovered neurochemical in the brain, and theories were put forward that neurochemistry and neurochemical imbalances in the brain affect psychological make-up and possibly had an influence on psychopathology. The idea then was that LSD was involved in mimicking psychosis, meaning we could look at it as a 'model psychosis', and these substances were labelled psychotomimetic, in that they mimic psychotic states, and were subsequently explored for their application in psychiatry.

It very quickly became apparent that the states induced aren't identical to psychotic states and that the outcome is dependent on the setting and the psychological framework at the time of taking.

They found that if you gave someone LSD, handcuffed them and locked them in a room they'd probably have a very bad experience, and there you have a nice model for psychosis. But if you give them LSD in an airy room with good lighting, nice music and a therapist saying encouraging things, they'll probably have a good experience. There was a lot of research in the 1950s and 60s exploring these substances as potential treatments for various psychiatric conditions and psychological disorders: things like depression, anxiety and trauma, but also addiction. There were positive outcomes with that research and then of course the 60s happened: cue media hysteria and the association of psychedelics with the counterculture, and they very quickly became prohibited.

Now, we've had 50 years of the 'war on drugs' and it hasn't stopped people taking them: in fact, the number of people taking psychedelics has steadily increased – as with all drugs – as has the purity, availability and the number of drugs as well. But what it did stop was scientific research with humans using psychedelics. Until quite recently that's been languishing in the obscure backwaters of the Academy. We're now having this 'psychedelic renaissance' where researchers are again asking questions about the uses of psychedelics, and primarily that research has been focused on clinical applications – but using better science and even using neuroscientific techniques and brain imaging. They've been looking at these substances for their potential in treating psychogenic disorders like depression, anxiety and addictions, but also looking at the neuroimaging behind that and trying to understand the underlying mechanisms in the brain. Essentially, that research is reasserting findings from the 1950s and 60s that these substances have a massive potential in the treatment of very challenging psychiatric conditions. That is where we're at currently: the uses of psychedelics within science transcend many different arenas of research and are very much a multidisciplinary endeavour. The applications seem to be limited only by people's imagination, but most of the research has been focused on their clinical applications. As opposed to the hysteria we had in the 60s, we're now finding gentle acceptance and indeed a lot of enthusiasm within the Academy for exploring these substances for their potential uses.

Kerry: Thank you very much. Now we'll move on to Alex. Could you tell us a little bit about your work at the Beckley Foundation and start us off on the discussion of history and policy?

Alex: The Beckley Foundation is a central hub organisation, founded in 1998 by Amanda Feilding, which exists to promote and encourage research into psychedelics and to slowly get the wheels turning on research to counteract anti-psychedelic legislation.

The early life of the Foundation was lobbying the UK government and raising awareness of the importance of psychedelic research. Eventually the doors opened again and since then the Foundation has been able to collaborate with several universities around the UK to perform a number of ground-breaking studies into psychedelics. These include the first MRI study of psilocybin and then LSD, which examined what takes place in the brain under the influence of these drugs. We're still trying to filter through the ramifications of that research but, fundamentally, we're trying to establish the basics of what psychedelics do to the brain. One of our main discoveries has been a disruption to what we call the 'default mode network' that's involved in rumination, stream of consciousness, thinking and daydreaming. It's related to planning for the future, to reminiscing about the past and to supporting, in quite a core way, who you are as a person.

This network is disrupted by any psychedelic, and becomes less effective. This correlates with the subjective effects of psychedelics that we've known about for a long time: namely, enjoying the sensory experience of the present moment. This has lots of ramifications for therapy and the main application of our research is to try and promote psychedelic therapy, which again between the 1940s and 60s was widely used. It was seen as sort of the central device that psychoanalysts had for effecting change in their patients.

We're finally beginning to look at how this therapy is effective. If we can disrupt habitual modes of thinking, then it opens up a sort of therapeutic window for us to effect long-term change. One of the major problems people with depression, or with anxiety, or with addiction, face in a raw sense is repetitive behaviours that are very hard to shift. The psychedelic experience allows them to shift and to change their behaviours to something more positive and we're still hoping that, with more research in this area and more lobbying,

we can eventually see psychedelic therapy return to widespread usage.

In terms of policy, we promote psychedelics for general recreational use as well. We see that there's no strong motivation for the prohibitionist policies that have been implemented in psychedelics, and in fact in all drugs. It's worth bearing in mind that if you look at the rhetoric that the government uses for why psychedelics and other drugs are prohibited, it's often couched in terms of harm reduction, but that attempt at harm reduction has been a crashing failure in every way.

David: Part of the problem with the rhetoric, even around the notion of harm reduction, is that it's aimed at problem drug use, which only amounts to a very small percentage of drug users anyway. Most drug users aren't problem drug users. Psychedelics are largely, by definition, non-addictive, fairly psychologically safe, and it's the psychological effects that tend to give rise to problems, if any. Most recreational drug users don't have many problems. But the other thing is that it negates the idea of benefit maximisation as well. Just focusing on harm reduction, and prohibiting these substances, doesn't allow for drug use which is of a positive nature.

Kerry: Haroon, do you want to say a little about the wider cultural use and understanding of psychedelics?

Haroon: There's a lot of postulation about the use of psychedelics, or at least altered states of consciousness, being at the root of humans becoming self-conscious. As discussed earlier, we are looking at over 5,000 years of cultural usage and if you look at cave art this scenario becomes quite interesting. This is what the *Chamber* represents: the notion that sensory deprivation for an extended period of time can lead to altered states of consciousness. It is widely understood now that many of the paintings found in caves or on rocks are depictions of altered states. Whether these states were achieved through the consumption of psychoactive plants or whether they were through natural means – sensory deprivation, dancing or drumming – is unknown. Could it have been these that gave rise to religion, language, art – to culture itself? The implications are quite fascinating.

Then we can fast-forward to now, where the same things occur in cultures, albeit in a somewhat

diversified form, that occurred thousands of years ago. Whether it's the San people of South Africa or Mesoamericans or modern-day club culture, the model of dance, music and altered states has gone hand in hand throughout our recorded and unrecorded history. It still happens now and is something that is under threat with the closure of nightclubs: people going out and taking mind-altering drugs and dancing.

My interest in psychedelics began a couple of years ago when I got interested in the theological implications of it. I got interested in *Amanita muscaria* and the theological implications of the use of that mushroom, which led to all kinds of other interesting things such as the use of ayahuasca and peyote and the ritualistic side of those plants. DMT was the thing that really got me, because we have this compound which is endogenous to human beings and to all mammals and all plants. It creates and causes one of the most psychedelic effects known to humankind and as it's released endogenously, it can spontaneously occur, which could account for mystical and spiritual experiences. The idea that all the religions and all culture could be based on this experience is a fascinating one. It comes back to what Alex said about how the prohibition of these substances is crazy because we've got cultures that operate and function very well, which have used these substances for many years, and only now as a society we're taking our second attempt to see if we can adopt them and if they can help us medically. To me it's obvious that they can, so the prohibition conversation is an interesting one.

Alex: You mentioned cave art, which is a fascinating area. It is 20,000 or 30,000 years of history to explore and we may never have real evidence that a lot of cave art could have been inspired by the use of psychedelics, most likely magic mushrooms. What you see worldwide is the recurrence of certain symbols, the most classic ones are spirals and dots, in cave art made by communities that clearly had no contact with each other. It's an enduring mystery to archaeologists why these certain symbols keep recurring. One explanation is simply, well, these are just sort of obvious patterns to make, but another interesting explanation is that they're entoptic images, which are certain systematic hallucinations that emerge when you take psychedelics. The reason why entoptic images would be universal is because our visual system is disrupted in certain predictable ways. Another recurring motif is pictures of mushrooms, which

are a rather more convincing piece of evidence for their involvement in cave art. A third category of image that occurs a lot in early cave art is simply just very ‘trippy’ stuff: a man with a bee for a head or a bull with a man’s head. Why did early humans decide that these would be the first things they would draw?

Some of you may have heard of the stoned ape, hypothesis, which was Terence McKenna’s idea that what actually led to the evolution of *Homo sapiens* was the consumption of magic mushrooms over a timescale of many millions of years, from about 2 million years ago to about 20,000 years ago, when we have the emergence of modern humans.

Haroon: It’s interesting, the whole idea that *sapiens* for 150,000 years did nothing other than hunt and gather. There’s no language, no rituals, no art, no real culture – almost exactly like apes, yet anatomically evolved towards humans, but they’re not doing anything – then suddenly, around 50,000 years ago something changes. The hypothesis that this was caused by the ingestion of psychedelics contains a question: is it these altered states that create culture and self-awareness by a change in our chemical awareness? Did that create a completely new level of self-awareness?

Alex: Magic mushrooms have been credited with a lot of things – with progressing human evolution at several key points. One of them, as you mentioned, was the great leap forward: how anatomically modern humans progressed from wandering around and not doing very much interesting, to suddenly developing culture and language and art and all the rest of it. Maybe magic mushrooms helped there, but this often gets confused with the ‘stoned ape’ hypothesis, which is an earlier idea that humans were using magic mushrooms much earlier and accelerating their evolution over a timescale of millions of years. These are two very distinct ideas that do get confused a lot, but they’re separate and both interesting in their own right.

David: It’s not just art and culture. We’ve got people like Kary Mullis, who won the Nobel Prize for biochemistry for his discovery of the polymerase chain reaction – we wouldn’t be where we are in gene theory or genomic mapping without the PCR. After he got his Nobel Prize it was discovered that he’d taken LSD and was ‘able to fly alongside the stands of the DNA at the molecular level and see what was going on’.

Einstein’s theory of relativity came to him in a dream. Francis Crick is reported to have taken LSD, which he vigorously denied, by the way. It’s almost a cliché to say that art’s been inspired by altered states – but it seems that science has too.

I would not say categorically that psychedelics allow you to think more creatively. We can demonstrate somewhat experimentally that they increase what we call divergent thinking. That’s like thinking outside the cube or the hypercube – a four-dimensional cube – which features when you have experiences on LSD. LSD seems to allow divergent thinking: it gives you fresh associations and novel ideas probably because you have this hyper-connectivity between different brain regions which allows you to think about mathematics, say, in a very logical, linear way, but then you’re able to have a visual experience of maths which gives you fresh insight and new ideas. But LSD tends to reduce what we call convergent thinking, which is your everyday logical, linear thinking – getting on a bus, operating heavy machinery, psychedelics aren’t very good for those everyday activities. In fact, in some tests I have carried out, top-level scientists couldn’t operate their own laptops when we gave them LSD, but they did get huge insights about their theoretical ideas.

Audience member: Alex, you talked about psychedelics being used therapeutically: can you elaborate on that?

Alex: It was primarily LSD. Its psychedelic properties were discovered in 1943, and then by the 50s and 60s it had become a main stay of psychoanalysts in Europe and the USA. There are two schools of thought that opened up at this time. One was psychedelic therapy, that’s actually where we get the word ‘psychedelic’ from, which literally means ‘mind manifesting’. That was a very high dose by modern standards, around 600 micrograms, which was supposed to plunge you fully into the depths of your subconscious and let you travel through it in a way that you couldn’t possibly communicate or negotiate, and just emerge from the other end healed. It was very effective: it achieved a really powerful spiritual transcendent experience that would blast your old preconceptions away and let you develop in a new direction. Another school of therapy opened up in the 1970s – this was called psycholytic therapy, which was a low dose of LSD, around 150 micrograms, and was more common. This is similar to a ‘recreational’

dose, and in that context you’d carry on talking to your therapist. It was more a normal therapist-and-patient interaction, but it would be facilitated by the fact that the patient, and quite often the therapist, was on this relatively low dose of LSD. It was very much a psychoanalytic paradigm exploring your subconscious drives assisted by LSD.

Audience member 2: Are psychedelics able to induce a synaesthetic experience? What do we know about people experiencing synaesthesia on a daily basis: what’s going on in their brain? What is the similarity between those two experiences?

David: Synaesthesia is a blending of sensory experiences – you may see sounds or taste shapes, or visual phenomena, like letters and numbers, may have colours associated with them. It’s very easily induced with psychedelics. In a survey I conducted, nearly 60% of people taking LSD had the experience of synaesthesia compared to 2% of the population who have it congenitally. You can induce these things fairly reliably with psychedelics.

In terms of how we understand how that operates in the brain, there are various theories for how synaesthesia occurs congenitally. One theory is that adjacent brain regions that have different functions cross-communicate; the other theory is that it is the result of a more general overstimulation of interconnecting neurons in the brain. Now, that second theory best fits what happens under psychedelics, in that even though we have a reduction of the core default mode network in the brain – and there’s no increase in brain activity generally on psilocybin or LSD – what we find is what we call hyper-connectivity: different regions of the brain which don’t ordinarily talk to each other are now communicating, and suddenly your occipital lobe sparks up a conversation with your temporal lobe and you start seeing sounds. That’s how we understand it on a neurological level. That probably fits with some of the data in terms of what we understand about congenital synaesthesia as well.

Haroon: I’ve read quite a lot of anthropological data where people visiting certain parts of the world diagnose shamans as schizophrenic, epileptic or having serious psychotic mental health issues. Could it be that they’re engaging with these things so much that they come across like that, or it could be some other relationship?

David: Yes, there are a few things to unpack there. Schizophrenia and psychosis are urban diseases. You find them more in cities and you find them more in the developed world. You find them less in rural environments and the closer to the tropics you get. So it’s partly an urbanisation effect and probably partly also cultural, that people in more rural and less politically integrated developed countries have a different way of dealing with psychosis and schizophrenia, which could be also tied in with shamanic world views. In some cultures, people who present symptoms that look like psychosis will be treated differently. They may actually be trained to become a shaman, for instance, if they have a propensity for visionary experiences: it’s a massive cultural gulf.

Alex: So if it seems that psychosis and schizophrenia are cultural constructs and their interpretation is dependent on the culture, then that hugely affects the outcome and prognosis for sufferers as well. A great example is when people in certain cultures develop an episode of psychosis, it’s often interpreted as demonic possession, and you’ll get your local religious figure in to perform an exorcism of the demon. Research shows that exorcism is actually considerably more effective as a treatment than anti-psychotics are in Western cultures. In many ways the interpretation of psychosis in Western cultures, as a problem for the patient, as the patient’s fault, is actually a significant exacerbating factor. Whereas if you interpret it as possession by a demon, it’s not your fault any more and also it’s a finite issue that can be removed again permanently and then that helps people get better... Or it is actually a demon. I’m not ruling that out.

Audience member 3: I was just interested in what you think the overlap is between dreams and psychedelic experiences. It seems that in sleep, sort of endogenous hallucinations arise from sensory deprivation. I wondered if there is an overlap in psychopharmacology, and what dreams can tell us about psychedelics and vice versa.

Haroon: There’s the Rick Strassman idea that DMT is part of dreaming, which I find interesting. The association between dreaming, DMT and near-death experiences is also fascinating and in fact I don’t know why there’s never been any experiments where people have been given all the neurotransmitters released when someone dies, like adrenalin, melatonin, serotonin, DMT, etc. all in one go?

David: No, that's never been tried as far as I am aware, but it should be. Rick's theory is that your pineal gland makes DMT, but it's not been proven either way. Your pineal gland, we know, produces lots of serotonin in the day and that serotonin gets converted at night into various other chemicals, such as melatonin, which makes you sleepy, and pinoline, which is similar to what you find in ayahuasca, and it also possibly makes DMT. You've got this organ which responds to light: it makes one chemical in the day and different chemicals at night and we know it produces the chemicals that make you sleep. The theory is that it also produces a chemical that makes you dream – DMT. It's an interesting idea because DMT does give these hallucinatory qualities and dreams have hallucinatory qualities, but I don't think there's a one-to-one relationship.

Dave Nichols, one of the world's leading psychedelic pharmacologists, basically said, if we do make DMT in the pineal gland it's very unlikely that we produce enough to have a psychedelic experience naturally. Yet, we do know that DMT is found in the human body – it's probably made in the lungs, but it could be made in the pineal gland. However, Nichols based his idea that we don't make enough on evidence from rats kept in a lab in daylight. So, what happens at night-time in humans? We need to be testing Strassman and Jayce Callaway's theories. (In 1988, psychopharmacologist Jayce Callaway – a member of the Hoasca Project studying the use of ayahuasca by the União do Vegetal in Brazil – proposed that, at night, serotonin becomes converted into DMT by the pineal gland and plays a central role in activating dreams.) We need to say, well, let's see what happens in humans, what happens at night-time, when your pineal gland switches its production from serotonin to other chemicals. We don't know enough for Nichols or anyone to conclusively say that we don't have the ability to produce enough DMT to experience natural hallucinations. But the fact is, DMT does get produced somewhere, yet nobody knows its function. That is the important question – why is it there? Alright, it might not be at psychedelic levels, but it's there.

Alex: But there's another weird thing: our brains are capable of metabolising certain toxic chemicals within psilocybin mushrooms that other animals can't metabolise. When other animals take psilocybin, they get sick; they get toxic effects in their bodies. Humans have

worked out how to metabolise those chemicals but leave the psilocybin alone, which is also fascinating from the point of view of: why are our brains doing that specifically? What possible function could that serve, unless nature wants us to trip?

Audience member 4: David, I was interested in what you were saying about hyper-connectivity following on from the question about dreams: how those two states of very little connectivity and hyper-connectivity can allude to very similar things. It seems like you hallucinate from too little information or too much information, and consciousness exists in this little gap, where it's the right amount of information for us to be able to take on board. Do you think we could slowly move that gap and evolve to take on more information?

David: When we first discovered that actually there wasn't any increase in activity anywhere in the brain when you're under the influence of psilocybin, that was a big surprise. It harps back to Aldous Huxley's notions from *The Doors of Perception* (1953), where he was borrowing ideas from Henri Bergson, a French philosopher, who basically said the brain doesn't produce consciousness; the brain is a filter of consciousness. Huxley picked up these ideas, saying: the brain's job is to drip-feed you this reduced experience of reality so that you're not overwhelmed by the mystical awe of experiencing the entire universe simultaneously. So you are kept tuned in and aware of your immediate external environment in a way that is beneficial to your survival, but you're not tapped into this mystical reality outside space and time. But then psychedelics turn off this filter mechanism in the brain. Fast-forward to 2012 and they do these neuroimaging studies and find there's no increase in activity in the brain and in fact there's a reduction in this key hub region, which is directly related to the intensity of the psychedelic experience.

So the greater the reduction of activity in the default mode network, the more intense the experience is, and that was a massive surprise. I don't think that's the whole picture and I think this hyper-connectivity is also part of it. So it's not just about having a reduction of activity in the brain; it's also about different regions of your brain, which are otherwise strangers, talking to each other.

Haroon: Does that maybe suggest the brain is like an iPhone but we're just using it to play Snake?

David: That's your day-to-day. At least that's certainly part of it, in developing this map, but it was prescient of Huxley nevertheless to put forward this very rudimentary neuro model.

Alex: There's a really interesting global theory of the brain, called anthropic brain theory, to explain how consciousness shifts not only into the psychedelic state but also into any other state that you could want to talk about. It starts with the principle that the brain's overarching mission is to be as lazy and efficient as possible in the way it processes information.

We're presented with a wide array of information from all our senses and memory and we've basically got to filter out as much as possible, in order to store it in the most efficient way. We retain only the most significant and important information. This is obviously really useful for us most of the time: it allows us to do really amazing, complicated feats that we couldn't otherwise. But it does have a downside, in that we tend to filter out lots of the information we don't need in our day-to-day lives, which is why the brain becomes this reducing valve, only paying attention to the most important things.

Psychedelics explode that, and return the brain to a state where it's just processing all this information in a very non-discriminatory way. It's the same thing you see in children. Children don't yet have this reducing valve set up: as far as a child is concerned, everything is equally exciting, everything is equally surprising. They can't figure out the patterns in reality yet, and so they just process everything. Psychedelics return us to a more anthropic state; to a more childlike state; to a more dreamlike state, where everything is important. It's a more high-energy state, even though the brain overall isn't consuming more energy. Of course, it's not an efficient way to live your life, but it does give us access to certain useful abilities in the short term.



CHAMBER FOR ENDOGENOUS DMT (COLLAPSING THE WAVE FUNCTION)

*'...in experiments in which all outer sensation is withdrawn, the subject begins
a furious fill-in or completion of senses that is sheer hallucination.
So the hotting-up of one sense tends to effect hypnosis, and the cooling
of all senses tends to result in hallucination.'*

Marshall McLuhan, 'Media Hot and Cold', in *Understanding Media*, p. 35,
1964/2001. Routledge.

INTRODUCTION

A THIRD NEW WORK PRODUCED FOR THE EXHIBITION WAS A LIGHT-LOCKED ANECHOIC CHAMBER. INVESTIGATING THE HUMAN POTENTIAL FOR HALLUCINATION, THE WORK ATTEMPTS TO EXAMINE TWO IDEAS: THAT CONSCIOUSNESS CAN CONTROL MATTER, AND THAT MATTER CAN CONTROL CONSCIOUSNESS. THE CHAMBER WAS USED IN TWO MODES – EXHIBITION AND RESEARCH. DURING EXHIBITION HOURS VISITORS WERE INVITED TO SPEND TIME IN THE CHAMBER WITH THE DOUBLE-SLIT EXPERIMENT AND THE INFRARED

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CAMERA ON. THEY SPENT TIME IN THERE ALONE OR IN GROUPS, DEPENDING ON VISITOR TRAFFIC. THEY WERE ASKED TO RECORD THEIR EXPERIENCES IN A NARRATIVE FORM. THESE SESSIONS LASTED FROM 5–30 MINUTES AND THESE EXPERIENCES WERE NOT PASSED ON TO THE RESEARCHERS.

FOR THE RESEARCH, TWO-HOUR SLOTS WERE IDENTIFIED AS THE LENGTH THAT WOULD GIVE THE MOST POSSIBILITY OF SOME RESPONSE FROM PARTICIPANTS, BUT IN SOME CASES THIS WAS NOT POSSIBLE. ANY PARTICIPANT WILLING TO SPEND OVER AN HOUR IN THE CHAMBER WAS ASKED TO FILL IN THE PRE- AND POST-CHAMBER QUESTIONNAIRES AND THEIR RESPONSES WERE PASSED TO THE RESEARCHERS WHICH THEN INFORMED THE STUDY. DURING THE EXHIBITION A NUMBER OF VISITORS RESPONDED SPONTANEOUSLY TO THE CHAMBER AND ASKED TO WORK IN IT FOR THEIR OWN RESEARCH. THEIR ACTIONS AND EXPERIENCES ARE ALSO INCLUDED HERE.

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ACOUSTIC ANALYSIS

NOVA ACOUSTICS LTD WAS COMMISSIONED BY IKOUSTIC LTD TO PRODUCE A REPORT ON THE ACOUSTIC PERFORMANCE OF THE ANECHOIC CHAMBER CONSTRUCTED IN THE ZABLUDOWICZ COLLECTION BUILDING. DETAILS OF THESE TESTS AND THE DATA GATHERED CAN BE SEEN IN THE SECTIONS OF THE REPORT REPRODUCED HERE, WITH A SUMMARY PROVIDED BY SAMUEL TOONE, SOUNDPROOFING CONSULTANT AT IKOUSTIC LTD.

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Technical Summary

NOVA Acoustics Ltd has been commissioned by Ikoustic Ltd to assess the level of reverberation and background sound in the purpose built anechoic chamber at Zabłudowicz Collection, 176 Prince of Wales Road, Belsize Park, London, NW5 3PT. The data collected on site has allowed for a background sound analysis and reverberation time analysis. The anechoic chamber is part of an exhibition in order for the anechoic chamber to be considered truly anechoic the background sound levels and reverberation time need to be as low as possible across the whole frequency spectrum.

Table 1.0 shows the reverberation times measured in the anechoic chamber.

Anechoic Chamber Reverberation Times								
	63	125	250	500	1000	2000	4000	8000
	0.4	0.2	0.3	0.2	0.2	0.1	0.1	0.1
T _m	0.20 seconds							

Table 1.0

As can be seen in Table 1.0 the reverberation time is very low. Table 2.0 shows the measured background sound levels and figure 1.0 shows the background sound level against the closest NR curve.

Anechoic Chamber Background Sound (dB)								
	63	125	250	500	1000	2000	4000	8000
	28.7	24.9	8.5	0.3	0.0	0.0	2.0	4.6
L _{Aeq,t}	18.3 dB							

Table 2.0

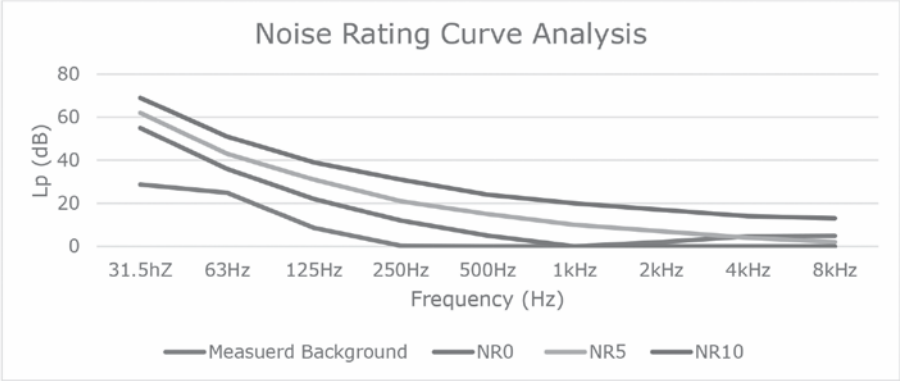


Figure 1.0

As can be seen in figure 1.0 the measured background sound level achieves a noise rating curve of NR10.

To summarise the findings, we must give some context to the specific structure and location. The building is a nineteenth-century former church, and its Grade II listed status means we had the challenge of ensuring we received the best results possible without altering any part of the existing structure. For example, we were not permitted to build a highly dense concrete shell. We would normally create a timber framework construction inside this, as the shell on which to apply a GenieClip System to suspend the chamber.

Despite this, the anechoic chamber gave fantastic results for both Reverberation Time and Background Sound. They were of key interest in the study of an environment with little to no reflections, giving a feeling of sensory deprivation in a completely dark space.

Reverberation Time was measured at 0.2 seconds (see Table 1.0), which is very low. To put this in context, the optimum level for speech intelligibility (understanding speech in, say, a classroom setting) is 0.4–0.6 seconds. Background Sound was also very low at 18.3

dB (see Table 2.0). Again, to give some context to this measurement, average household background noise levels are 38–45 dB (depending, of course, on whether the house is in an urban or rural area).

The level of Background Sound in the chamber was thus 20 dB lower than the lowest level of Background Sound in the average home (see Table 2.0). This is substantial, as a 10 dB decrease in sound results in a 50% reduction in the perceived loudness of sound, because sound is measured on a logarithmic scale.

Testing the anechoic chamber's Background Sound gave a result of 0–10 Noise Rating (NR). In the Noise Rating Curve Analysis in Figure 1.0, the lower the number is, the better. Comparable acoustic environments, which are often used as broadcasting stations, recording studios and testing facilities, are typically around 25 NR.

We were unable to source an acoustic door due to the time restraints, since most require a bespoke build. Instead we installed a 44 dB fire and acoustic door. The door panel and framework are the weakest points in terms of acoustic leakage,

and this was confirmed in the testing. However, despite loud sound playing throughout the gallery building in the rest of the exhibition, with the door shut only the faintest sounds could be heard within the chamber.

As Table 1 in the Executive Summary shows, the performance of the fire door indicates results at 44 dB through partitions 1 and 2. Partition 3 yielded a higher result (52 dB), as sound was measured from the opposite side of the chamber, indicating that an even better result would have been achieved with a higher-specification acoustic door.

1. Executive Summary

NOVA Acoustics Ltd has been commissioned to carry out testing of the sound insulation properties of the separating partitions, and assess whether or not the acoustical performance of the internal building elements is acceptable. The development's sound insulation tests are to be carried out and rated in accordance with the following standards:

The measurement procedure and guidance within Annex B of the Building Regulations Approved Document E 2003 'Resistance to the Passage of Sound' was followed. The results are then assessed in accordance with it in order to indicate compliance.

The test and subsequent calculations and assessment have indicated that the separating partitions have performed as follows:

The results of the airborne tests are summarised below:

Type of partition	Source Room	Volume (m3)	Receiving Room	Volume (m3)	Partition Area (m²)	Test No.	DnT,w +Ctr dB
Wall	Anechoic Chamber	35	Hallway (No curtain)	12	10	1812IK A	44
Wall	Anechoic Chamber	35	Hallway (With curtain)	12	10	1812IK B	44
Wall	Hallway (With curtain)	12	Anechoic Chamber	35	10	1812IK C	52

Table 1

DAVID LUKE, CHRISTOPHER TIMMERMANN, MENDEL KAELEN & BETH BELL-LANGFORD THE ANECHOIC DARKROOM AS A PSYCHEDELIC STATE

BACKGROUND NOISE

Darkroom retreats are an ancient esoteric practice among many different cultural lineages, such as various sects of Tibetan Buddhists and the Kogi tribe of Columbia. In the Nyingmapa and the Bönpo Buddhist traditions such practices, in which people may remain in darkness for 49 days or more, are usually reserved for advanced practitioners and are considered a preparation for death (e.g. Achard, 2008).

Alternatively the Kogi identify selected children from their communities, those divined at birth to become shamans, and raise them for either the first 9 or 18 years of their life entirely in the dark environment of a cave. With nothing but enough background ambient light so that their eyes develop normally, they never see the outside world in daylight in all that time. They are nurtured and the world outside is described to them in vivid detail to enhance the power of their active imagination to see the world. When they emerge, some of them as adults, the world they see for the first time is as they imagine it, supposedly (Davis, 1996). It's also possible that this prolonged confinement in a dark space during their formative years has profound effects on the neurobiological development of their brain (Durwin, 2001), perhaps through the overproduction of nocturnal

brain chemicals made in the pineal gland, such as melatonin and, according to Strassman's (2001) as yet unproven hypothesis, endogenous DMT, a potent psychedelic molecule that is produced naturally in the human body.

The academic study of sensory deprivation was explored quite extensively in the 1950s and 1960s by pioneers of consciousness research like John Lilly (1977) who developed the floatation tank in 1954. Suspending the body in dense salt-infused temperature-controlled water and immersed in near silence and darkness, the floatation tank was able to reduce much of the external sensory stimulation of gravity, sound, light and ambient temperature. Lilly reported many psychological and physical benefits to the floatation tank, such as accelerated rest and rejuvenation relative to ordinary sleeping, and noted the profound nature of the visual hallucinations.

Much of the work conducted by other researchers during that era tended to focus on the psychopathological features of prolonged sensory deprivation – such as hallucinations – and sensory deprivation was used as a model psychosis. However, the findings of such research were invariably mixed, and it became

apparent that experiences in confined spaces were heavily contingent upon psychological priming, as was aptly demonstrated by Orne and Scheibe (1964) who found that the presence of a panic button and an 'emergency tray' with drugs and medical instruments in view greatly enhanced negative cognitions. The parallel here with psychedelics is served by the adage that experiences are derived not just from the 'substance' but also the 'set and setting', i.e., the person's prior state of mind and the conditions in which they have the experience (Leary, Litwin & Metzner, 1963).

With the commercial development of personal floatation tanks in the 1980s, the negative connotations of sensory deprivation began to be replaced by reports of spontaneous addiction cessation (Suedfeld & Coran, 1989) and the gaining of personal insights and the positive enhancement of mood (Suedfeld & Borrie, 1999), though research into the hallucinatory effects of sensory deprivation has generally waned since the 1960s.

One of the current project's research scientists, David Luke, teamed up with artists Blue Firth and Mark Pilkington in 2010 to explore darkroom experiences in a supposedly haunted room at the Royal Academy of Arts in London as part of an art–science collaboration (Luke, Firth & Pilkington, 2013). Divided into 8 groups, 100 people sat in silence and near-total darkness for 30 minutes in the allegedly haunted room. All the participants were informed that the room was supposedly haunted and about a quarter reported possibly or definitely having an inexplicable sense experience, with 7% of the group reporting that they possibly or definitely had a genuine paranormal experience (such as seeing an apparition). The certainty of having such experiences was found to be related to the reported number of labile temporal lobe symptoms, which are related to epilepsy, although those with such symptoms may not necessarily experience full epileptic seizures.

THE SOUND OF SILENCE

During the 1940s the acoustics expert Leo Beranek named and developed the first anechoic chamber. Such chambers are suspended and insulated rooms or compartments that are both shielded from external sound waves and lined with materials inside that absorb reflections of sound and deaden echoes from within. These chambers have primarily been used in the study of acoustic engineering, and very little research

has been conducted looking at the psychological properties of such chambers until recently. As with early sensory deprivation work, the limited psychological research with anechoic chambers has utilised these environments as safe methods for inducing 'psychotic-like experiences' in order to study them in a controlled manner.

These recent studies of darkroom anechoic chambers have found that even short periods (only 15 or 25 minutes) in these environments tended to increase the experience of perceptual distortions, such as faces and shapes, and even the sensed presence of an evil entity. Such effects were more elevated for hallucination-prone individuals and for those scoring higher on the personality trait of schizotypy, which is associated with an increased tendency to have unusual experiences and psychotic-like symptoms (Daniel, Lovatt & Mason, 2014; Mason & Brady, 2009).

SCIENCE MEETS SENSATION

The scientists working on the current project were approached by Haroon Mirza to collect psychological data for the anechoic darkroom installation he had entitled *Chamber for Endogenous DMT (Collapsing the Wave Function)*. Haroon was interested in exploring whether the altered state induced by the darkroom anechoic chamber was in any way similar to psychedelic experiences induced through substances like DMT, even speculating that the experiences might be due to elevated levels of endogenous DMT (i.e. that which is made within the body).

Within the confines of the gallery environment we were unable to do the full biochemical assaying necessary to detect and monitor levels of DMT in the body, but we were able to administer various psychological measures to help us identify and understand the kind of experiences induced by the chamber. Further, we were able to administer a number of other psychological measures before volunteers entered the chamber to establish which of an individual's personality traits would predict the kind of experience they would have, given that experiences are usually complex interactions of traits and states. That is, the person's underlying psychology and biology interacts with the situational factors (be that set, setting or substance) of the altered state. In the current study, the setting (Haroon's exhibition and staff at the gallery) and the substance (1–2 hours in the darkroom anechoic chamber) remained very constant.

METHODS

Numerous visitors to the gallery tried the chamber, and data was collected from 49 volunteers during the exhibition. Most of the participants spent two hours in the chamber, though a few spent a little less time in there, and occasionally a little longer. Times ranged from 60–255 minutes (mean = 116 mins).

Participants were briefed about the nature of the study and gave their informed consent to take part. First they completed a number of psychological profile measures. Upon entering the chamber they were reminded that they could leave at any time, should they wish, and they were supplied with a torch if they needed to leave although all they had to do was call out as they were constantly monitored by a microphone inside the chamber. They were provided with some soft cushions to sit or lie on, but they were asked not to fall asleep. Once their allotted time was complete (decided before entering by the participant) they were collected from the chamber and after a moment in an acclimatisation anteroom they then completed a number of psychological questionnaires to assess their experience. All but one participant – who asked to leave shortly after entering – stayed inside the chamber for their allotted time. The study was given ethical approval by the University of Greenwich Departmental Research Ethics Committee for Psychology.

PRE-CHAMBER MEASURES

A number of self-report questionnaire personality measures were used to predict experiences in the anechoic darkroom induced state. These included the Modified Tellegen Absorption Scale (MODTAS; Jamieson, 2005) and the Iowa Interview for Partial Seizure-like Symptoms (IIPSS; Roberts, 1999).

The MODTAS measures the psychological construct called ‘absorption’ which refers to an individual’s openness to a variety of cognitive, perceptual and imagistic experiences as well as vivid imagery, synaesthesia, and intense involvement in aesthetics and nature. Absorption has been found to be strongly associated with fantasy proneness, and modestly with openness to experience and hypnotic susceptibility (Roche & McConkey, 1990). Absorption was also found to be the best of a wide range of predictor variables of the psychological features of the altered state induced by psilocybin, the active ingredient in hallucinogenic mushrooms (Studerus, 2013).

The IIPSS measures various different sensory, cognitive and affective phenomena that may be related to disturbances of the temporal lobe, and is used to help identify the presence of partial seizure-like symptoms typical of epilepsy. Previous research has found that IIPSS scores can predict inexplicable or reportedly paranormal-

like sensory experiences (e.g. apparitions) in darkroom states (Luke, Firth & Pilkington, 2013) but can also predict performance on psi tasks of clairvoyance and precognition in relation to geomagnetic activity (Roney-Dougal, Ryan & Luke, 2014).

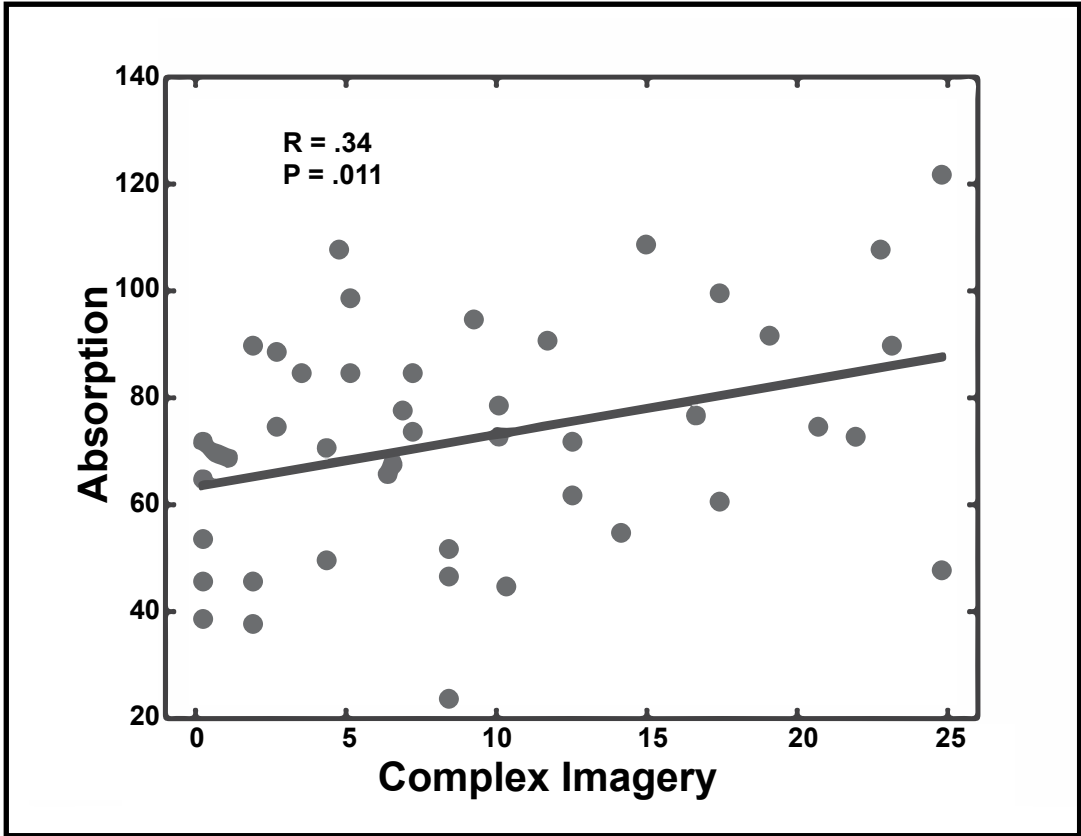
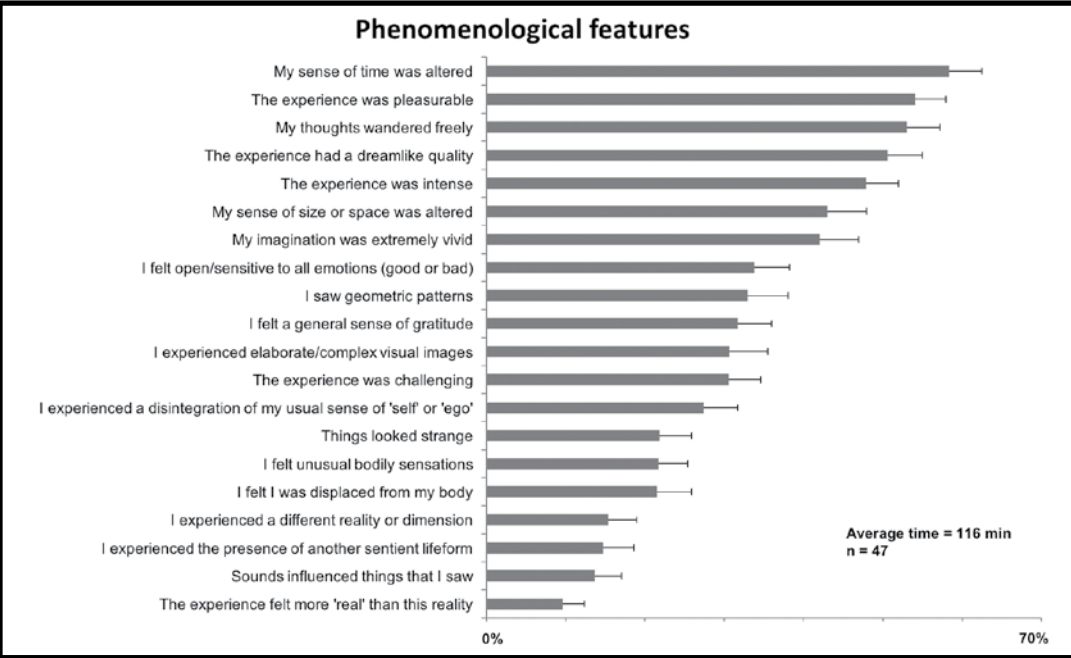
POST-CHAMBER MEASURES

A number of self-report questionnaire state measures were used to classify experiences following time spent in the anechoic darkroom. These included the Mystical Experiences Questionnaire (MEQ; Maclean, Leoutsakos, Johnson & Griffiths, 2012), the Five Dimensions of Altered States questionnaire (5D-ASC; Dittrich, Lamparter & Maurer, 2010), the researchers’ own devised Darkroom Visual Analogue Scale (DVAS), and a qualitative self-report section where participants wrote an account of their subjective experience in the chamber.

The MEQ was developed for assessing the occurrence of mystical experiences and was utilised in research exploring such experiences with psilocybin, whereby approximately 55–61% of high-dose psilocybin recipients reported

‘complete mystical experiences’ (e.g. Griffiths, Richards, McCann & Jesse, 2006). MEQ scores have also been found to predict better outcomes from psychedelic-assisted psychotherapy using psilocybin to treat tobacco smoking cessation and end-of-life-related depression and anxiety. The MEQ assesses features of the mystical experience alongside four factors: mystical experience, positive mood, transcendence of space and time, and ineffability (the inability to fully render the experience into language).

The 5D-ASC is a measure of altered states of consciousness and has been widely used to identify the psychological features of psychedelic experiences. Factors assessed with the 5D-ASC include the experience of unity, spiritual experience, anxiety, impaired cognition, synaesthesia and visual imagery. This measure was augmented by the researchers’ own scale (DVAS), which was devised to explore various psychological phenomena such as the experience of geometric visual percepts (called ‘entoptics’), out-of-body experiences, distortions of time, sensed presences of other beings, and emotional changes.



RESULTS: SLEEPY AND DREAMY

Almost all participants had some odd phenomena to report, although one or two of those who were very experienced in meditation did not find the experience to be especially different to their usual practice. According to the subjective written reports, about 25% of volunteers had a dreamlike quality to their experience and mostly suspected that they fell asleep for at least part of their time inside. Falling asleep is not surprising because it can be difficult to remain conscious in such circumstances, especially when at least 10% of people reported that they could not tell if their eyes were open or shut. Those reporting dreamlike experiences or suspecting that they fell asleep reported being significantly more sleepy before entering the chamber than those who did not report dreamlike experiences ($p = .017$).

VISUAL IMAGERY

The most common experience was the perception of visual images, primarily coloured shapes (about 50%), often described as mist or clouds of colour or flashes of light, and about 13% reported the perception of colourful geometric patterns (entoptics), though a few (7%) only saw shapes in black and white, or exotic shades of grey. Five per

cent reported being able to see their limbs when they moved them, although it is supposed that this was an hallucination due to expectation and kinaesthetic feedback about the position of one's body; a kind of visual phantom limb experience. (See the article by Jack Jelfs that follows this one in the book, on his experience and exploration of what I called the 'visual phantom limb phenomenon', unaware at the time that this was a known darkroom experience).

Assessing the relationship between pre- and post-chamber measures, complex imagery was correlated with absorption ($r = .34, p = .011$), and elementary imagery was correlated with absorption ($r = .34, p = .011$) and temporal lobe lability (TLL) ($r = .38, p = .006$). The perception of entoptics, specifically, was only correlated with TLL, as measured by both the DVAS ($r = .36, p = .007$) and the 5D-ASC entoptics items ($r = .45, p = .001$).

OF SOUND, BODY AND MIND

About 20% of participants reported auditory hallucinations, which primarily consisted of buzzing and humming sounds seemingly emanating from inside their head.

Those reporting buzzing/humming sounds scored significantly higher on absorption ($p = .014$). One participant ascribed the buzzing to tinnitus, although buzzing and humming sounds often accompany the early stages of out-of-body experiences (OBEs), which were also reported by 5% of participants, with a further 5% reporting the perceived disappearance of their body. Changes in body perception, however, were not accompanied by the perception of buzzing and humming sounds in these cases. Furthermore, the DVAS and 5D-ASC items relating to OBEs did not correlate with either absorption or TLL. Additionally, one person reported that their body had gone numb, whereas about 8% experienced 'energy' moving within their body, identified as 'kundalini' (an experience of energy rising up the spine, following esoteric yogic practices) by one person.

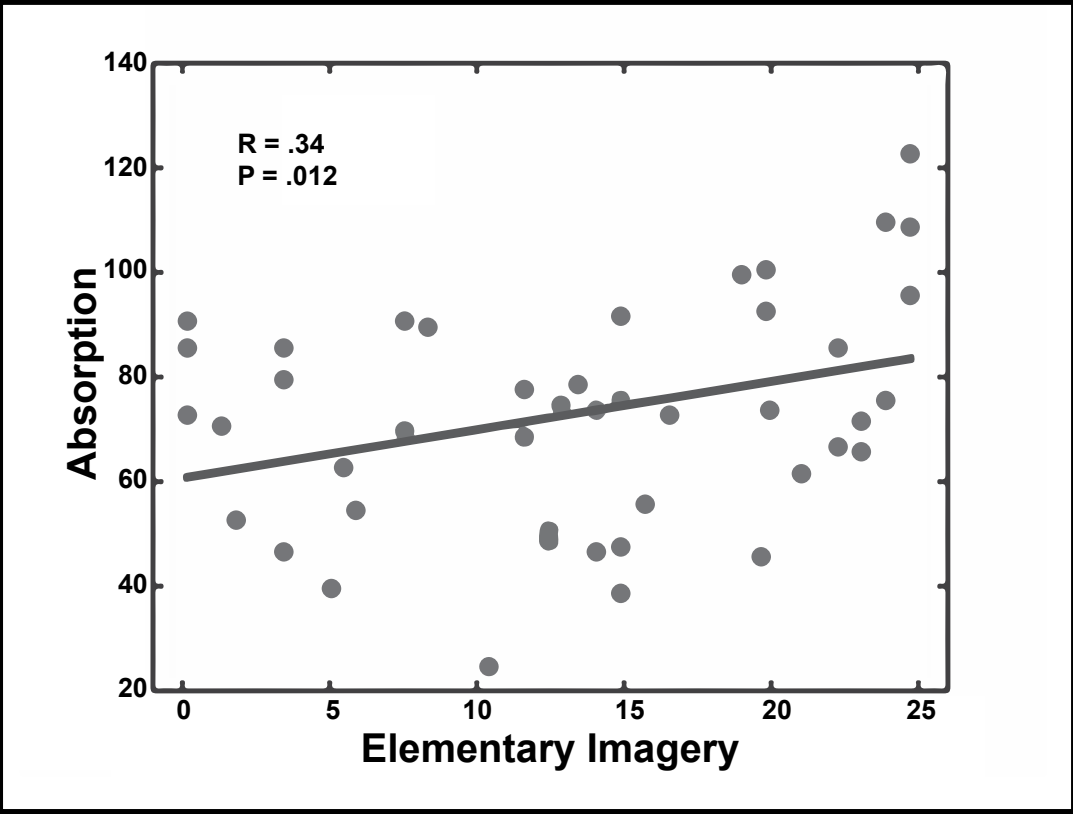
OMINOUS NUMINOUS

Perhaps surprisingly, 10% of participants reported the sensed presence of a sentient being in the room that they perceived to be threatening, although for one participant the presence changed to being non-threatening, and one

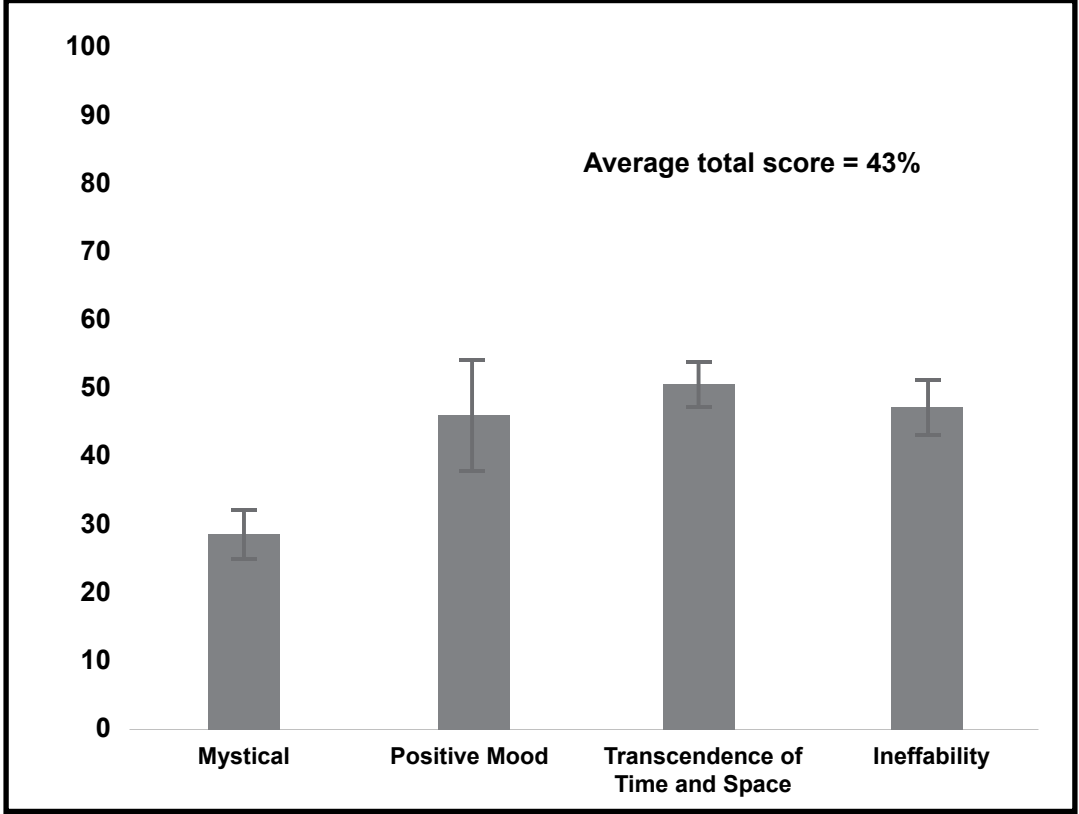
other person experienced only a non-threatening presence. Such experiences are common with sleep paralysis, a relatively common experience that occurs between waking and sleeping whereby the person is paralysed (as though they are sleeping) but feel as though they are consciously awake.

Curiously, however, *none* of the reports of sensed presence in the chamber came from the 25% of the sample who reported dreamlike experiences or who suspected that they had fallen asleep, although it is possible that those experiencing the sensed presence in the chamber had actually drifted into hypnagogia but had not realised it (as seemingly occurs with sleep paralysis). Nevertheless, no one reported the experience of paralysis so these sensed presences are most likely not caused by sleep paralysis experiences but may be related to them.

Exploratory analysis of the predictor variables found that those reporting sensed presences had 66% more temporal lobe symptoms than those who did not experience a sensed presence (statistically significant at $p = .032$). Furthermore, those experiencing threatening presences



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reported more than twice as many affective temporal lobe symptoms as those not reporting threatening presences (statistically significant at $p = .028$) and significantly more temporal lobe symptoms overall ($p = .036$), indicating that non-clinical epileptic symptoms (termed temporal lobe lability) are possibly related to the experience of sensed presence in darkrooms. However, in a prior study both temporal lobe lability and absorption were found to be only indirectly related to sleep paralysis, as all these factors are related to an increased vividness of dream and hypnagogic imagery (Spanos et al., 1995). However, after exploring responses to the specific DVAS item of 'sensed presence' in the chamber, this was not found to be correlated to TLL scores, but was correlated with absorption ($r = .34, p = .01$).

CONTRACTED HOURS

Changes to the perception of time were quite prevalent, with 23% reporting the complete loss of the sense of time and a further 15% reporting that time passed faster than expected in the chamber. Perhaps surprisingly, those reporting that time had contracted scored

significantly lower ($p = .033$) on the measure of absorption than those who did not experience time contraction.

Only one person reported that time 'dilated' and passed more slowly in the chamber, making a total of 41% of participants commenting on changes in time perception in their written reports. However, acknowledging that their 'sense of time was altered' on the DVAS measure was reported by 96% of participants, with the mean percentage of the most imaginable alteration in sense of time being 58%. Similarly, 100% of participants reported changes in space-time on the MEQ. When asked on the 5D-ASC if they experienced 'past, present and future as a unity' 39% responded that this had occurred more than usual, with a mean percentage increase of 14%.

The DVAS item that 'sense of time was altered' was not correlated with absorption but was correlated with sensory temporal lobe symptoms ($r = .43, p = .0016$), as was the MEQ changes in space-time subscale ($r = .38, p = .005$). The MEQ space-time subscale was also correlated with absorption ($r = .38, p = .006$), as was the

DASC item of experiencing all of time as one moment ($r = .45, p = .001$).

MYSTICAL CHAMBER

Only 2 of the 39 participants providing written subjective accounts explicitly reported having a spiritual experience in the chamber. One of these also scored above 60% of the total maximum on all four factors of the MEQ, qualifying them for having a 'complete mystical experience' (as defined by the developers of the MEQ). Only 2 out of 47 participants completing the MEQ qualified for a complete mystical experience, although two others were shy of this standard by a small amount (5% and 11%) on just one of the four factors, but exceeded 60% on the other three factors.

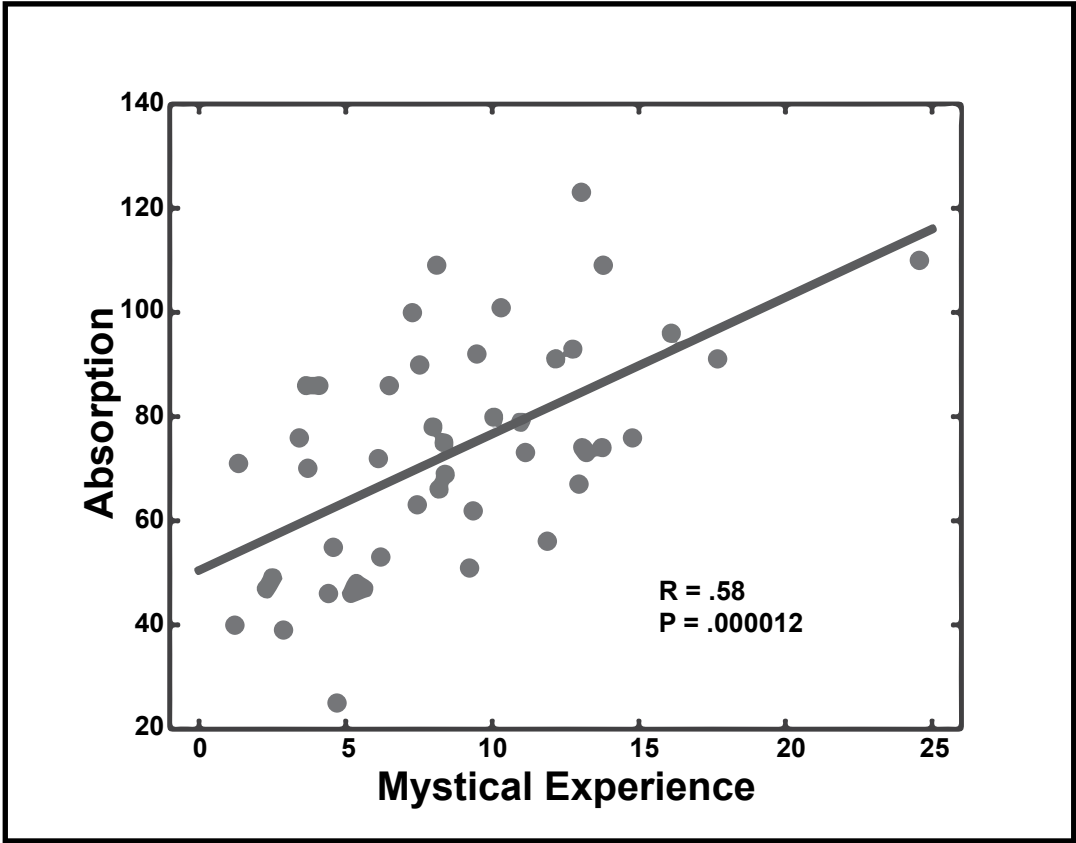
Equivalent percentages of complete mystical experience in a sample are expected with about 70µg/kg of psilocybin (a small dose). Nevertheless, the mystical experience factor of the MEQ demonstrated a weak correlation with time spent in the chamber ($r = .30, p = .02$) so duration could be thought of as somewhat relative to psychedelic dosage and presumably the longer spent in the chamber, the more mystical experiences and greater depths of altered consciousness would be expected. The overall average mystical experience score for the whole sample was 47% and, as with psilocybin-induced experiences, scores on the MEQ were highly significantly correlated with absorption scores ($r = .58, p = .000012$).

CHAMBERDELIC?

Comparing the profile of chamber experiences with that of psychedelically induced experiences, it can be seen that they share many of the same phenomenological features, such as the induction of visual hallucinations (including entoptics), changes in the perception of time, space and one's body, and enhanced positive mood. Strong psychedelic experiences, especially with DMT, ayahuasca and psilocybin, can also give rise to encounters with seemingly sentient and discarnate entities (Luke, 2017), and although these effects were not reproduced in the chamber a proportion of participants did have distinct (and disturbing) feelings of a sensed presence, if not full-blown entity encounters.

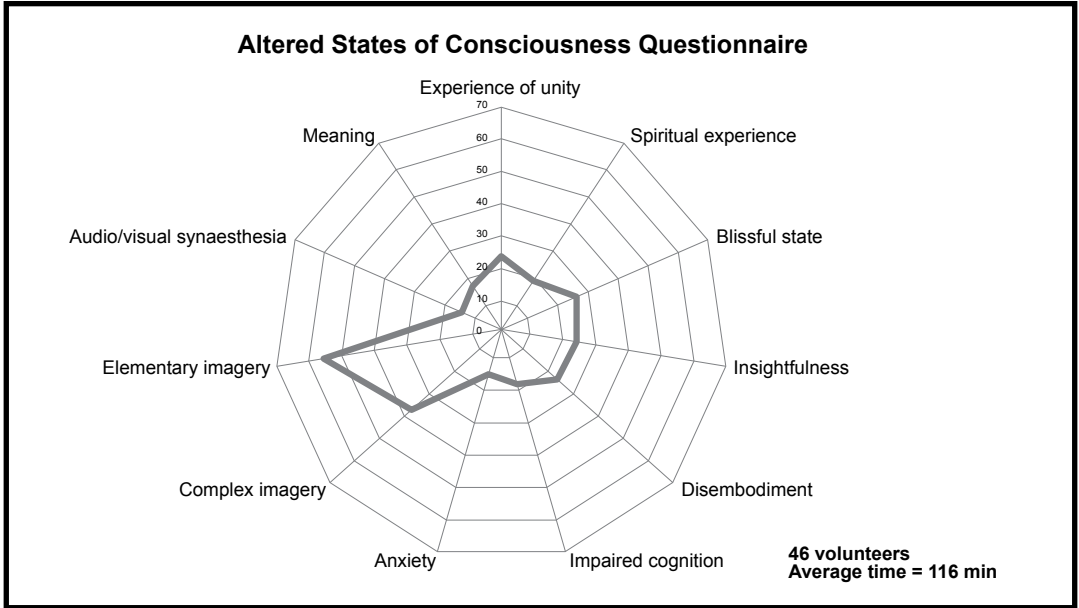
Some of the features typical of psychedelic experiences were essentially lacking from the written accounts, however, such as the experience of synaesthesia, impaired cognition, and changes in the meaningfulness of one's experience. Nevertheless, as with psychedelic experiences (with psilocybin) absorption was found to be a good predictor of experience, and in some respects the degree of altered consciousness was equivalent to the largest clinical dose (315µg/kg) of psilocybin (Studerus, 2013) or a reasonably strong oral dose (150µg) of LSD (Liechti, Dolder & Schmid, 2017), at least in terms of the percentage scores for elementary imagery.

Complex imagery was also a strong feature and equates to a moderate dose of psilocybin (about



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160µg/kg) or oral LSD (about 75µg), as does insightfulness, blissful state, the experience of unity and impaired cognition.

Disembodiment is also at about the same level for psilocybin (about 160µg/kg) and somewhat weaker for LSD (about 50µg). Experiences of changed meaning are roughly equivalent to a weak dose of psilocybin (about 60µg/kg) or LSD (about 50µg), with synaesthesia being somewhat weaker again (about 80µg/kg psilocybin or 30µg LSD).

Spiritual experience, however, was on a par with a reasonably strong dose of psilocybin (260µg/kg) or a moderate dose of LSD (about 100µg), and levels of anxiety were quite high in terms of dose (about 340µg/kg psilocybin or 200µg LSD), indicating that the chamber produced more anxiety relative to the degree of altered consciousness than do classic psychedelics.

CONCLUSION

In conclusion, it might be said that approximately two hours in the anechoic darkroom is long enough to induce genuine psychedelic-like experiences, with features of the altered state being equivalent to weak, moderate and even strong psychedelic experiences, depending on the specific phenomenon. As with psychedelics the psychological construct of absorption was shown to predict the depth of experiences participants had, and temporal lobe lability was able to predict some other phenomena that absorption did not, such as entoptics and sensed presences. As a final caveat, the statistical analyses reported here are merely exploratory and have not been corrected for multiple analyses, and so should be taken as indicative rather than evidential until further replicated experiments can be conducted.

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JACK JELFS

INVESTIGATING 'PHANTOM VISUAL IMAGERY' IN AN ANECHOIC DARKROOM – ANECDOTAL REPORT

During my first session in the chamber, I had constant low-level visual activity despite the darkness: blotches of colour and moving indistinct patterns. However, I also noticed another effect: when moving my arms I had the impression that I could see them. The effect was subtle, but seemed 'real' and not something I was simply imagining. There was no detail; my moving arms just appeared as black forms moving against the phosphene background. I couldn't make out any detail. I could also only detect my arms when they were moving; I had no visual sense of them when they were still.

At first I assumed that a small quantity of light was leaking into the chamber. However, following similar reports by other users, the chamber was inspected and it was concluded that this was unlikely – it appeared to be completely sealed to external light.

In fact, this effect has been known to science since a 1970 paper by Hofstetter,¹ who called it 'phantom visual imagery'. In further studies by Brosgole and colleagues^{2,3} it was named 'kinetic visual imagery'. More recently it was investigated by Dieter et al.⁴ who, with the help of an eye-tracking device, concluded that some people can indeed 'see' their own limbs moving even in

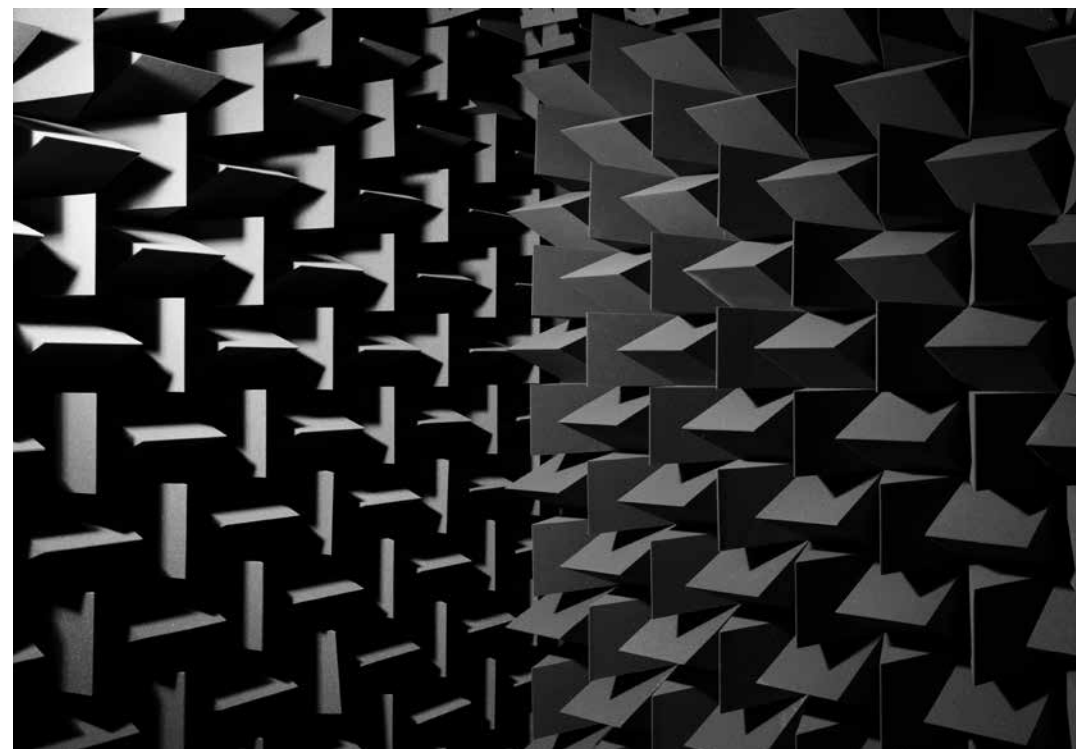
the absence of any light. They suggest that this is a result of the brain 'filling in' aspects of the visual field, based on what it expects to see.

To investigate the effect for ourselves, a colleague and I carried out some simple tests involving moving our limbs in the chamber and determining when, if ever, they were visible. These were not carried out with scientific rigour, and it would be of interest to repeat them under laboratory conditions. The results were as follows.

After allowing our eyes to adjust to the dark for around 15 minutes, we tried moving our own hands in front of our faces at various distances. We agreed that we could detect the movement, so long as the hand was roughly within 30 cm of our faces (we didn't have any way of accurately measuring distances). As with my first experience, the impression was of an indistinct black shape moving against the phosphene background. As before, it seemed like an actual visual experience and not something purely imagined.

Next, my colleague moved his hand back and forth in front of my face, at a distance of around 15–20 cm. I was unable to detect any movement.

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We had the same results when the roles were reversed: at no point could either of us detect the movement of the other person's hand.

For the final test, my colleague moved his hand in front of me while I was holding on to it with both hands. This time there was an impression of movement – I had a sense of being able to see my hands. This stopped when I let go and, as before, I was unable to see any movement when it wasn't my own limbs moving. My colleague reported the same impression when we reversed roles.

In conclusion, we both felt that we could visually detect some movement. This was only for movement of our own arms and hands; neither of us was able to tell when the other was moving. Furthermore, the impression only occurred when our arms were actually moving – when stationary, we had no sense of being able to see them. The impression of movement was slight and indistinct, but still noticeable. This is presumably the same effect described in the existing literature.

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CHAMBER EXPERIENCES

HRM002 (2 hrs)

It was very enjoyable and relaxing and felt like less than 2 hours. I often had a strange sense that there was a light source behind me and felt like I could see my limbs when I moved them. In general my field of vision was a mid-grey made up of small dots of pulsating colour and within that very complex geometric shapes would appear and become increasingly complex until they were no longer geometric: shapes became figurative, but constantly changing, and sometimes appeared as sharp, colourful images in a small area. I felt quite absorbed by what I saw and rarely found my thoughts drifting from the present moment.

HRM075 (30 mins)

At first I was a bit freaked out because I'm quite scared of the dark, so I shut my eyes and lay down. After a while, I lost track of time and became lost in my own thoughts. My internal monologue was turned up to full volume. I thought about recent events in my life, how they have affected me and how I generally felt. I felt like I was between states of consciousness – not asleep nor fully awake. I enjoyed it and would definitely like to experience it again.

HRM046 (2 hrs)

It took me a short time to relax into the experience. As time passed I was more comfortable engaging with the shapes my eyes were showing, and these were geometric shapes of purple colour. I wasn't sure if the purple was the veins behind my eyes being present, or something that my brain had conjured up. I also saw silver/white individual geometric shapes in my peripheral vision which appeared and vanished fairly quickly, yet frequently. I didn't hear any particular noises but a constant hum which I presumed was tinnitus – not that I have ever noticed tinnitus before. I felt like I was on the edge of falling asleep so sat upright in order to counteract this. I lost the ability to tell where I was and how close the edges of the room were to me – even though I knew in the 'real world', I was sitting in the middle of the room, I couldn't grasp that concept and the ceiling in particular felt like it was on the other side of my head. I felt like I was living in the past, present and future, and not being able to measure time really affected my experience – in a good way. I felt like there was no pretence, ego, reflecting, anticipation or being. I can't really describe how I felt, but the post-questionnaire summed it up quite well when it said 'Did you feel like you saw a glimpse of infinity?'.
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HRM042 (2 hrs – edited extract)

From the beginning I started seeing some little flashes of lights from the corners of my eyes. After that I had four similar short 'visions' in complete consciousness: eyes open, feeling hypnotised by waves of a blue/red/orange light that passed through my eyes, creating the shapes of cities, fires, skies, and the shadows of animals walking in lands. These short visions came without reason to my eyes, hypnotised me completely and then disappeared after what felt like a couple of minutes. The rest of the time I felt relaxed, a bit sleepy, and had a song repeating in my head. I never felt this kind of conscious hypnotisation before, and it impressed me a lot when I realised that I had been in the chamber for 2 hours, as I really felt it lasted a maximum of 45 minutes.

HRM063 (30 mins)

I did not in any way find it claustrophobic, and I did not fall asleep as I expected, as I fall asleep standing on the Tube, and generally within a minute of lying down anywhere, however noisy or light it may be. Thus the experience may have made me more aware in a sensory way. Images in my mind have been more closely defined than usual, and they may have slipped from one to another more than usual. I did not have any mental experience comparable to what I have in the past experienced with mescaline or LSD (those experiences, 40+ years ago, still colour my experience of nature).
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HRM009 (2 hrs – edited extract)

The most beautiful for me was when, in an attempt not to fall asleep, I had this instinct of moving my arms in the air as if I was swimming. All of a sudden it felt like I was actually in a black aquarium and all these tiny lights started appearing; electric blue and white and some reds and what looked like a giant orange and brown fish eye, a bit blurred. I was swimming in it and as I moved my hands they would swim away, like a shoal of fish, really sinuously. Shapes and forms were always indefinite and never looked like 'real-life' fish but some of them looked like jellyfish. I was enjoying it and then I felt again like there was some presence and this orange/brown eye belonged to a giant fish-like creature swimming in circles around me, which felt not scary but somehow vaguely threatening, but in a peaceful way, so I quieted down, and shortly after, all vanished away.

HRM037 (1 hr)

I felt very calm and relaxed and breathed deeply to start with and then forgot to very quickly. After what I thought was about 10 mins I started seeing flashes of light when I moved my eyes, and after a little longer I started to see wave-like shapes moving slowly across my vision. The waves looked like they were made of light. The absence of sound felt very novel to me and I really relished the lack of sound. I found this very relaxing and soothing.

HRM050 (30 mins)

Much more of a physical experience than I thought, or expected.

I felt physically more at ease and less in pain. It was a very relaxing, grounding experience both mentally and physically.

Change in perception of time.

HRM047 (2 hrs)

For the most part a huge sense of nothingness, like a pre-Big Bang universe where all there is nothing. Just me and nothing. Then lots of paranoia about some hostile presence also being in the space. I think perhaps I dozed off momentarily, and when I woke I had the only visual experience, which was lots of light grey geometric shapes that were also like smoke, and then the presence near me became positive and protective. Towards the end, I felt very aware that the time was probably almost over, so I put on my shoes (and sure enough, it finished soon after). I was also sure I could see the outline of the door when I was preparing for it to be opened. Other than all that ridiculousness, just a big feeling of spatial unawareness.

NICOLETTA FIORUCCI

Fiorucci Art Trust's founder and collector Nicoletta Fiorucci was invited by hrm199 to play the Alchemy Crystal Singing Bowls inside Haroon's anechoic *Chamber for Endogenous DMT*. Predominantly composed of quartz and infused with precious metals, these singing bowls are meant to reach the body and the seven chakras at different intensities, rebalancing the organism. The experiment in this case was to explore how their frequencies can stimulate our psychophysical system within the parameters of a sensory deprivation environment.



DENISE POOTE

Artist Denise Poote requested to make drawings and an audio recording while inside the chamber as part of her MA Drawing research practice investigating embodied drawing and shared experiential knowledge. She gave the following account:



I used the time to allow drawings to be made with no particular subject or outcome in mind. I prepared a series of drawing materials in advance and worked in the chamber on a board. I used a sound recorder to capture my drawing and any words I spoke/sounds I made. I worked with my eyes closed most of the time and, when I did remember to open them, I saw blackness except for a lifting grey arc as I moved my eyes around the space. Sounds I heard related to the drawing or shifting of my legs or hands rifling against the paper. I was aware of the voice recorder being active so my speech was self-aware and awkward at times. I also sniffed involuntarily, sighed and prefaced my spoken thoughts with 'So....'. The drawings I produced supported the feelings and compulsions I experienced during the session, including a curiosity with edges and the sound of the drawing materials. There was a persistent reiteration of the lack of agenda – nothing to be done here. At one point I tried figurative drawing – then abandoned it as pointless. By the end of the session I found that the sound of drawing was too noisy.

APPENDIX

LIST OF EXHIBITED WORKS

Haroon Mirza, *The System*, 2014

Bespoke media device, 3-channel video, 6-channel electrical signal, LEDs, speakers, copper tape Eileen Gray interpretation material from the Irish Museum of Modern Art, Dublin
Zabludowicz Collection, original version commissioned by Irish Museum of Modern Art and Lisson Gallery. pp. 19–27

Haroon Mirza, *9/11–11/9 Fear of the Unknown*, 2017

Emerging Paradigm media player, 4-channel video, 8-channel electrical signal, LEDs, speakers, carpet, canary grass (*Phalaris arundinacea*), plant stand 18:45 mins
Courtesy hrm199 and Lisson Gallery. pp. 28–31

Haroon Mirza, *An Act of Meditation*, 2017

Digital video, 3:54 mins
Courtesy hrm199, produced and commissioned by Zabludowicz Collection. pp. 40–41

Haroon Mirza, *Chamber for Endogenous DMT (Collapsing the Wave Function)*, 2017

Anechoic chamber, double-slit laser, live video feed, monitor
Courtesy hrm199 and Lisson Gallery, produced and commissioned by Zabludowicz Collection, with the support of iKoustic. p. 138

Haroon Mirza, *Pathological Theology*, 2017

Emerging Paradigm media player, 3-channel video, 8-channel electrical signal, carpet, artworks by:

Haroon Mirza, *Adam, Eve, others and a UFO*, 2013

Active speakers, UFO circuit, microphone cables, glass vases

Steven Claydon, *The Fictional Pixel*, 2008
Digital video, extract 9:00 mins

Rachel Maclean, *Germes*, 2013
Digital video, re-edited, 3:00 mins, commissioned by Bold Yin for Random Acts Channel 4

Sonny Sanjay Vadgama, *Eye For An Eye*, 2009
4D video, 2:37 mins

Stan VanDerBeek, *Poemfield No. 3*, 1967
Digitally transferred 16mm film, colour, silent, 9:45 mins, realised with Ken Knowlton
Loop: 13:36 mins, entire cycle: 66:80 mins

All works in *Pathological Theology*
Zabludowicz Collection, pp. 32–39

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Opening Celebration. Live performance by FlucT of *Sissy Joker La Pieta*, 2017, organised by Tiffany Zabludowicz. Live set by Factory Floor and DJ sets by Eddie Peake and Colin Dale. Cargo, Shoreditch, 28 September 2017, 10pm–1am

Studio Wayne McGregor. In Residence: 3–5 October. Performances 7:15pm, 7:45pm and 8:15pm, 5 October 2017

Guided Meditation, 10:30am–12pm, 19 October 2017

Sculptural Sounds: Laura Buckley and Franziska Lantz, 7–9pm, 19 October 2017

Okkyung Lee. In Residence: 25–28 October. Performance 7–9pm, 28 October 2017

Whale Harmonies: TOMAGA & Rosana Antolí, performance 7–9pm, 17 November 2017

Julie Cunningham & Company. In Residence: 23–25 November. Performances 7pm and 7:45pm, 25 November 2017

Psychedelics Panel Discussion, 7–9pm, 7 December 2017

Music Hackspace Workshop, 11am–6pm, 9 December 2017

Shiva Feshareki and Nik Void. In Residence: 12–16 December. Performance 7–9pm, 16 December 2017

PARTNERSHIPS

Rosana Antolí is an artist, living and working between London and other cities where she works on her artistic projects. She studied for an MA in Sculpture and Performance at the Royal College of Art (2015) and has exhibited in galleries and museums worldwide, including Centro de Arte Contemporáneo Wilfredo Lam (La Havana, Cuba, 2016), Joan Miro Foundation Museum (Barcelona, Spain, 2016) and the Herbert Read Gallery – UCA (Canterbury, UK, 2015). Awards and scholarships include Generaciones 2017 (Spain, 2016), 4th International Emerging Artist Award launch event (Dubai, UAE, 2015), Royal British Society of Sculptors Award (UK, 2015), BBVA National Video Art Prize (Spain, 2015) and a Gasworks International Fellowship (London – Colombia, 2015). Since 2015 Antolí has been a selected Member of the Royal British Society of Sculptors in London and a member of the International Advisory Board for the Institute of Social Choreography.

David Bebbler is a documentary and portrait photographer based in London with 20 years of professional experience working for himself as well as for *The Times*, Reuters and AFP in over 40 countries. davidbebbler.com

Antonia Blocker oversees the Collection's public programme. She was formerly Curator: Public Programmes at Whitechapel Gallery and has previously worked in public programming at the Institute of Contemporary Arts and the Serpentine Galleries. In a freelance capacity, she has organised exhibitions and events at Flat Time House, Gasworks, The Showroom and at LOOP Barcelona in Spain. She has an MA in Curating Contemporary Art from the Royal College of Art and a BA in History of Art and Spanish from UCL.

Tim Bowditch is a London-based photographer and film-maker. timbowditch.com

Laura Buckley's work has been exhibited widely in the UK and abroad. She has had solo exhibitions at EIGEN + ART Lab, Berlin; Site Gallery, Sheffield; and Cell Project Space, London, among others. Recent group shows include *Disappearing Into One*, Zabłudowicz Collection, London, and *Slate*, with Dan Coopey & Rob Smith, Turner Contemporary, Margate. She was shortlisted for the 2014 Jarman Award. Her work is included in a number of collections, including the Axa Collection of Irish Art, the Zabłudowicz Collection, the Saatchi Collection, the David Roberts Collection and University of the Arts London Collection. Buckley was born

in Galway, Ireland, in 1977. She currently lives and works in London, UK.

Hannah Burfield trained at the Rambert School of Ballet and Contemporary Dance. While at Rambert Hannah performed in Mark Baldwin's *The Rite of Spring* at the Royal Opera House, and alongside the Royal Shakespeare Company in Stratford-upon-Avon and at the Edinburgh International Festival. Hannah has worked with Gerrard Martin Dance and the Hannah K Vincent Dance Company as well as more commercially in film and music videos for artists such as Vaults. Hannah has been working with Julie Cunningham since autumn 2015.

Burgess & Beech is a multidisciplinary design practice based in London, set up by Barney Beech and Dougal Burgess. They produced all the design deliverables for the hrm199 exhibition. burgessandbeech.co.uk

Catarina Carvalho is a London-based dancer and choreographer. Born in Lisbon, Catarina trained at École supérieure de danse de Cannes Rosella Hightower in France with a scholarship from the Ambrosoli Foundation (Zürich). Catarina's career began at Ballet de L'Opéra National du Rhin, experiencing a broad range of the company's repertoire under the direction of Bertrand D'At. Catarina then moved back to Lisbon where she worked with various choreographers including Javier de Frutos, Vasco Wellenkamp and Rui Horta among others. Catarina danced for Company Wayne McGregor from 2008 to 2017 and has toured nationally and internationally in various company productions including *Entity*, *FAR*, *Atomos* and *Tree of Codes*. During this time Catarina was also Rehearsal Assistant and assisted Wayne McGregor in *Dyad 1909*, *Future Self* and *Outlier*. Catarina continues to collaborate with Studio Wayne McGregor in many projects, and often teaches workshops and masterclasses as part of Studio Wayne McGregor's Learning and Engagement programme.

Steven Claydon is a sculptor and musician based in London. He is concerned with anachronisms, fictional narratives and the 'might have been' of history. His mixed media sculptural work often features archetypal forms from the history of art, which he turns into something utterly unexpected by juxtaposing them with visually incongruous elements. His strategy of display conveys a sense of contradiction and irony through the casual connection of imagery

and materials, and thus undermines dominant chronologies. He has performed and shown work internationally in exhibitions at Tate Modern in London and Portikus in Frankfurt am Main, Germany. Claydon was a member of the now defunct electronica band Add N to (X).

Julie Cunningham was born in Liverpool and trained at the Rambert School of Ballet and Contemporary Dance. She has danced for Ballett der Stadt Theater Koblenz, Germany, Merce Cunningham Dance Company, Michael Clark Company, and more recently with Boris Charmatz and Jerome Bel. In 2014, Cunningham won the award for Outstanding Modern Performance at the Critics' Circle National Dance Awards and was nominated at the 2016 Awards for choreography. Her work has been performed at the Merce Cunningham Studio, New York; Dance Base Edinburgh; Tramway, Glasgow; Wilderness Festival, Oxfordshire; and Siobhan Davies Studios, The Place, Rambert, Barbican Centre, Victoria and Albert Museum, National Theatre and Royal Festival Hall, all London. Julie was the inaugural Leverhulme Choreography Fellow at Rambert for 2016/17 and part of the Dance Artist/Curator mentorship programme at Siobhan Davies Dance. Julie Cunningham & Company was founded in 2017 and the company will be a Rambert associate beginning this season.

Colin Dale has been one of London's most cutting-edge DJs for over 25 years. He cut his teeth in the 1980s warming up for Tim Westwood at the cult nightclub Gossips in Soho, and in 1985 was one of the key members of the pirate radio station Kiss FM. Soon after, the Abstrakt Dance radio show was born. For 16 years Abstrakt Dance was a ground-breaking show that brought Techno to the masses. Guests on the show included Ritchie Hawtin, Laurent Garnier and Carl Cox, among others. In 1993 the show went online, the first ever Techno show to be transmitted live with visuals. Dale also works as a producer and runs the Abstrakt Dance record label.

Riane Eisler was born in Vienna, fled from the Nazis with her parents to Cuba, and later emigrated to the United States. She obtained degrees in sociology and law from the University of California, taught pioneering classes on women and the law at UCLA, and now teaches in the graduate Transformative Leadership programme at the California Institute of Integral Studies. Eisler has written over 400 articles in publications including *Behavioural Science*,

Futures, Political Psychology, The Christian Science Monitor, Challenge, The UNESCO Courier to Brain and Mind, Human Rights Quarterly, International Journal of Women's Studies and the *World Encyclopaedia of Peace*. She sits on editorial boards of both scholarly and popular journals. She has received many honours, including honorary PhD degrees, the Alice Paul ERA Education Award and the Nuclear Age Peace Foundation's 2009 Distinguished Peace Leadership Award, and is included in the award-winning book *Great Peacemakers* as one of 20 leaders for world peace, along with Mahatma Gandhi, Mother Teresa and Martin Luther King. Dr Eisler lives on the Monterey Peninsula of California with her husband, social psychologist and evolutionary scholar David Loye, and can be contacted at center@partnershipway.org

Factory Floor is Nik Void and Gabriel Gurnsey, whose electronic improvisational style of performance has seen them perform in gallery spaces like Tate Modern and clubs like Fabric and Berghain. Void joined forces with Gurnsey and former member Dominic Butler in 2009. Originally based in East London, they initially released music on Blast First (Petit) and Optimo Music. In 2012 they relocated to a warehouse in Seven Sisters, London, where they built their own studio space, Mono House, which became a creative hub for online music magazine *The Quietus*, multidisciplinary artists and filmmakers. Their first LP on New York label DFA was recorded and produced there alongside plans and preparations for their one-year residency at London ICA. Dominic Butler departed in 2014, and Void and Gurnsey followed up with LP number two, *25 25*, in 2016.

Shiva Feshareki is an experimental classical composer, researcher and turntablist working with both electronic and acoustic sound. Her work explores the physicality of sound in relation to light, perspective, movement and sculpture. She prefers to work with mainly analogue instruments and purpose-built hardware components rather than computers. In 2016, Shiva worked with archivist/composer James Bulley to realise a lost Daphne Oram piece premiered by the London Contemporary Orchestra – 'Still Point' for orchestra, treated instrumental recordings and turntables – at St John's Smith Square as part of the Southbank Centre's 'Deep Minimalism' Festival. Recent work includes 'GABA-analogue' – a composition for surround sound orchestra and spatialised dance break, which had its premiere at Printworks London – and 'O',

a composition for spatialised acoustic orchestra, acoustic organ and turntables which was premiered by the Aarhus Symphony Orchestra at Musikhuset, Aarhus. She also recently curated 'Occam River XV', which showcased a new composition by Éliane Radigue and Lee Gamble's first ever acoustic compositions, and took place in the Heights of Abraham Cave, Matlock. As part of her work with NTS Radio, she hosts a monthly show titled 'NEW FORMS' which deals with live manipulations of vinyl material, and she received the 2017 British Composer Award for Innovation.

Neil Fleming Brown, born in Glasgow, danced for Company Wayne McGregor from 2006 to 2010, and has toured nationally and internationally in various company productions including *Entity* and *Dyad 1909*. He continues to collaborate with Studio Wayne McGregor as Rehearsal Assistant, as a re-stager of McGregor works by dance schools and other companies, and often teaches workshops and masterclasses as part of Studio Wayne McGregor's Learning and Engagement programme. Neil has re-staged *Polar Sequences* for Trinity Laban Conservatoire of Music and Dance, *Chroma* for the National Ballet of Poland and *Infra* for The Australian Ballet.

FlucT is the collaborative work of two New York-based artists, Sigrid Lauren and Monica Mirabile, addressing issues of capital and obedience in American culture through choreography and performance. Creating original narrative soundscapes and violently intimate dance, their work attempts to expose the psychology of social paradigms.

Gaia Fugazza is an artist, born in Milan, Italy, and living and working in London where she completed an MA in Fine Art, Chelsea College of Arts, in 2014. She is one of the directors of hrm199. Alternately the onlooker, the researcher and the actress, in her work she explores the constants and variables of yesterday, today and tomorrow, throughout a series of archetypes able to bridge subjects as disparate as nomadism, agriculture, mobile technology, shamanism and motherhood. Recent solo exhibitions include *Gatherer Hardwiring*, Porcino, Berlin, 2017, and *Present and Distracted*, Zabłudowicz Collection, London, 2016.

Marija Gimbutas (1921–1994) was a Lithuanian-American archaeologist known for her research into the Neolithic and Bronze Age cultures of Old Europe. In 1942 she completed her master's thesis, 'Modes of Burial in Lithuania

in the Iron Age'. In 1946, Gimbutas received a doctorate in archaeology, with minors in ethnology and history of religion, from Tübingen University. Her dissertation 'Prehistoric Burial Rites in Lithuania' (in German) was published later that year. Gimbutas's theories have been extended and embraced by a number of neopagan authors. Gimbutas identified the diverse and complex Palaeolithic and Neolithic female representations she recognised as depicting a single universal Great Goddess, but which also manifested as a range of female deities: snake goddess, bee goddess, bird goddess, mountain goddess, Mistress of the Animals, etc. She left Europe in 1949 for the United States, where she worked at Harvard University translating Eastern European archaeological texts. She became a lecturer in the Department of Anthropology.

Jack Jelfs is an artist and musician living in London. His work uses elements of sculpture, music, video and performance to explore the interplay between consciousness and matter, with a current focus on the ways that magickal and shamanic ritual can shape human perception. He has released music under various aliases and has performed or exhibited at venues including Tate Modern, the Barbican, the Serpentine Gallery and the Roundhouse. In 2017 he was the joint recipient (with Haroon Mirza) of the COLLIDE International Award, a two-month artistic residency at the European Organisation for Nuclear Research (CERN), and is involved in a number of ongoing collaborative projects with Mirza and others. He holds an MSci in theoretical physics from Imperial College London and a BA in philosophy from the University of Liverpool.

Ewa Justka is a self-taught instrument builder and electronics teacher based in London. In her artistic work Justka attempts to explore the concept of materiality of the hidden. She has performed and led workshops at festivals and venues such as Loop Festival, Sonic Acts Academy, Supernormal Festival, Club Transmediale, STEIM, Colour out of Space, Beam Festival, Café Oto, and more.

Mendel Kaelen PhD is a neuroscientist at Imperial College London. His research focuses on the brain mechanisms of psychedelics, the therapeutic function of music in mental health, and the use of music in psychedelic therapy. He is the founder of Wavepaths, a team that unifies immersive arts, psychotherapies and intelligent technologies into a new model of mental healthcare.

Franziska Lantz is an artist and musician based in London. She merges visual and audio work in moody installations and uncompromising performances in a perpetual quest to unearth hidden landscapes and lost remains from a post-apocalyptic future–past. Lantz founded the Global Warming Records label in 2014, recently releasing *expanding arid zones*, her double album of filthy, bone-grinding techno. Since 2008 she has been producing DriftShift, a weekly radio show on London's ResonanceFM, from which she regularly broadcasts her electronic music experiments into space.

Okkyung Lee as a New York-based artist and South Korea native. She has created a body of work blurring genre boundaries through collaborations and compositions while testing the limit of contemporary cello performance techniques. Her music draws inspiration from noise and extended techniques, jazz, Western classical and Korean traditional and popular music. Okkyung's unique approach to her instrument and improvisation has led to collaborations with artists such as Laurie Anderson, David Behrman, John Butcher, Chris Corsano, Mark Fell, Douglas Gordon, Vijay Iyer, Christian Marclay, Lasse Marhaug, Thurston Moore, Ikue Mori, Bill Orcutt, Marina Rosenfeld, Evan Parker, Wadada Leo Smith, Swans, Cecil Taylor and John Zorn, to name just a few. As a composer, her recent work includes *Cheol-Kkot-Sae (Steel Flower Bird)* for two traditional Korean musicians and five improvisers, commissioned by SWR2 in Germany for Donaueschingen Music Festival in 2016, and *still hoping for a miracle...?*, commissioned by Borealis Festival in Bergen, Norway, in 2017. Okkyung was the recipient of the Doris Duke Performing Artist Award in 2015 and a Foundation for Contemporary Arts Grant in 2010.

David Luke is Senior Lecturer in Psychology at the University of Greenwich where he teaches the Psychology of Exceptional Human Experience. He was President of the Parapsychological Association from 2009–2011 and has published more than 100 academic papers on the intersection of transpersonal experiences, anomalous phenomena and altered states of consciousness. He has co-authored/co-edited eight books on psychedelics and paranormal experience, directs the Ecology, Cosmos and Consciousness Salon at the Institute of Ecotechnics, and co-founded Breaking Convention.

Rachel Maclean is a Glasgow-based multi-media artist who has rapidly established herself as one of the most distinctive creative voices in the UK. Creating baroque, hyper-real worlds using performance, green-screen technology and computer animation, Maclean spins razor-sharp contemporary fables that deal in timeless themes such as sexuality, power, innocence and corruption. Recent exhibitions include *Spite Your Face* in Chiesa Santa Caterina, Alchemy Film and Arts Scotland+Venice (2017), *Wot u : -) about?*, HOME, Manchester and Tate Britain (2016), *We Want Data!*, Artpace San Antonio, Texas (2016), *British Art Show 8* (2015), *Ok, You've Had Your Fun*, Casino Luxembourg (2015), *Please, Sir...*, Rowing, London (2014), *The Weepers*, Comar, Mull (2014) and *Happy & Glorious*, CCA, Glasgow (2014). Maclean is currently working towards the 2018 Zabłudowicz Collection Annual Commission and a new work for BBC Television.

Maitreyi Maheshwari is Programme Director at the Zabłudowicz Collection and has worked with the Collection since 2007, initially responsible for the public programme. Since 2014 she has overseen exhibitions, residencies and events across all locations. She previously worked on the Interaction programme at Artangel and the Youth programme at Tate Modern. She has a degree in History of Art from Edinburgh University and a research masters in Humanities and Cultural Studies from the London Consortium, Birkbeck College.

Wayne McGregor is a multi-award-winning British choreographer and director, and Artistic Director of Studio Wayne McGregor. He has choreographed over 30 works for his own group of dancers, Company Wayne McGregor, the chief exponents of his distinctive visual style. He is also Resident Choreographer at the Royal Ballet, where his productions are acclaimed for their daring reconfiguring of classical language. McGregor is regularly commissioned by and has works in the repertoires of the most important ballet companies around the world, including Paris Opera Ballet, New York City Ballet, Nederlands Dans Theater 1, Bolshoi Ballet, Australian Ballet and San Francisco Ballet. Theatre and opera credits include *Dido and Aeneas*, *Acis and Galatea* (La Scala/Royal Opera) and productions at English National Opera, The Old Vic, National Theatre and The Royal Court. He has choreographed movement for films (*Harry Potter and the Goblet of Fire*, *Tarzan*, *Fantastic Beasts* and *Sing*) and music videos for Radiohead and The Chemical Brothers.

He is Professor of Choreography at Trinity Laban Conservatoire of Music and Dance, holds an Honorary Doctorate in Science from Plymouth University and an Honorary Doctorate of Letters from the University of Leeds. He was awarded an Honorary Fellowship by the British Science Association in 2017 and is serving on jury for the RIBA International Prize in 2018. McGregor was awarded a CBE for Services to Dance in 2011.

Studio Wayne McGregor fuels the breadth of choreographer and director Wayne McGregor's creative work including the development and touring of signature works on his ensemble of world-class dancers, Company Wayne McGregor (Resident Company at Sadler's Wells); a portfolio of international commissions and artistic collaborations across genres including dance, visual arts, film, theatre and opera; a highly specialised programme of learning and engagement for individuals and communities; artist development initiatives; and collaborative research projects across the interface of the arts with science, technology and academic research. In 2017 Studio Wayne McGregor opened its own newly created studio space at Here East in Queen Elizabeth Olympic Park, a shared space for making where the creative brains of the day can exchange knowledge and invent together.

Terence McKenna (1946–2000) was an author and explorer who spent the last 25 years of his life in the study of the ontological foundations of shamanism and the ethno-pharmacology of spiritual transformation. McKenna, the founder of Novelty Theory, graduated from the University of California at Berkeley with a distributed major in Ecology, Resource Conservation and Shamanism. After graduation he travelled extensively in the Asian and New World tropics, becoming an expert in shamanism and ethno-medicine in the Amazon Basin. With his brother Dennis, he is the author of *The Invisible Landscape* and *Psilocybin: The Magic Mushroom Growers' Guide*, a study of the impact of psychotropic plants on human culture and evolution. His most infamous book is *Food of the Gods: A Radical History of Plants, Drugs and Human Evolution* (1992).

Haroon Mirza is an award-winning artist working at the intersection of architecture, sculpture, sound and music. Creating installations that merge these mediums to create experiences that are physical and highly perceptual, he foregrounds the primacy of physical experience over mediated communication. Mirza was born in London in 1977 where he lives and works.

He has a BA in Painting from Winchester School of Art (2002), an MA in Design Critical Practice and Theory from Goldsmiths College (2006) and an MA in Fine Art from Chelsea College of Art and Design (2007). Recent solo exhibitions include LiFE, Saint-Nazaire, France (2017); Contemporary Art Gallery, Vancouver, BC, Canada (2017); Summerhall Festival 2016, Edinburgh, UK; Pivô, Sao Paulo, Brazil (2016); Nam June Paik Center, Seoul, South Korea (2015); Matadero, Madrid, Spain (2015); Museum Tinguely, Basel, Switzerland (2015); Museum Haus Konstruktiv, Zurich, Switzerland (2014); Le Corbusier's Villa Savoye, Poissy, France (2014); IMMA, Dublin, Ireland (2014); Le Grand Café, Saint-Nazaire, France (2014); The Hepworth, Wakefield, UK (2013); MIMA, Middlesbrough, UK (2013); The New Museum, New York, USA (2012); Kunst Halle Sankt Gallen, St Gallen, Switzerland (2012); University of Michigan Museum of Art, Ann Arbor, USA (2012); Camden Arts Centre, London, UK (2011) and A Foundation, Liverpool, UK (2009). His work was included in the 7th Shenzhen Sculpture Biennale, China (2012), and the 54th Venice Biennale, Italy (2011), where he was awarded the Silver Lion. He was awarded the Northern Art Prize in 2011, the DAIWA Foundation Art Prize in 2012, the Zurich Art Prize in 2013, the Nam June Paik Art Center Prize in 2014 and the Calder Art Prize in 2015.

hrm199 is an ongoing collaborative platform that was founded in 2004 with the aim of inspiring people from a diverse range of disciplines to intertwine their practices and collaborate. The project has predominantly been developing within the visual arts: however, the work also incorporates music, architecture, design, physics and electronics. The context in which the outcome is materialised can range from an opera house to a nightclub, from an iconic piece of architecture to museums, galleries, biennales and artist residencies.

Music Hackspace is a London-based community for innovators and hobbyists passionate about music technology and sound art. They run a programme of DIY workshops and events and are residents at the Somerset House Studios.

Elizabeth Neilson is Director of the Zabłudowicz Collection. Since joining the Collection in 2005 she has overseen the strategy, acquisitions and direction of the Collection. She is also responsible for new artists, commissions

and permanent projects and was the curator of this exhibition with hrm199. She completed an MA in Curating at Goldsmiths College, University of London, in 2005 and a BA in Art History and Women's Studies at the University of East London in 2003.

Dr Alex O'Bryan-Tear is one of the Beckley Foundation's Science Advisors. He keeps an eye on scientific developments taking place in the labs of the Beckley Foundation's collaborators worldwide, and contributes the scientific content to its website, newsletters and blogs. Prior to this position, Alex completed a PhD at the University of Cambridge, studying how the brain's ingenious data-processing mechanisms lead – under the influence of certain drugs, and in everyday life – to delusions and hallucinations of the type seen in psychosis.

Eddie Peake is an artist working with performance, sculpture, installation, video, photography and music. His main focus lies in the losses inherent in the process of translation between verbal and non-verbal modes of communication. Peake creates scenarios that slip between spectacular and uncomfortable, erotic and threatening. Peake's work has been shown in many international solo exhibitions including at the Barbican, London, and White Cube, São Paulo.

Kerry Rowberry graduated as a journalist in 2004. While on a personal journey to address the depression she suffered following redundancy, she came across ayahuasca. Having experienced ayahuasca's efficacy first-hand she set out to help others see it too. Not as a supplier, but as a researcher. In 2011 she embarked on a part-time PhD with the University of Cumbria which aims to provide an ethnographic perspective of Amazonian shamanism in Britain. She founded the Psychedelic Society of Birmingham in February 2015, and has presented at a variety of academic conferences over the course of her PhD, including Breaking Convention 2015 and 2017.

Sonny Sanjay Vadgama is a British artist working with film, animation, print and holography. He has studied at the Byam Shaw School of Art, London, the Royal Institute of Art, Stockholm, and Central St Martins, London. He is based in Berlin.

Leonard Shlain (1937–2009) was an American surgeon, author and inventor. He was chairperson of laparoscopic surgery at the California Pacific Medical Center in San Francisco, and was an associate professor of surgery at the University

BIBLIOGRAPHY

of California, San Francisco. His books include *Art & Physics: Parallel Visions in Space, Time, and Light* (1991), *The Alphabet Versus the Goddess: The Conflict Between Word and Image* (1998), and *Sex, Time and Power: How Women's Sexuality Shaped Human Evolution* (2003).

Rick Strassman, M.D. is a writer and currently Clinical Associate Professor of Psychiatry at the University of New Mexico School of Medicine, Albuquerque. He attended the Albert Einstein College of Medicine of Yeshiva University in the Bronx, New York, where he obtained his medical degree with honours in 1977. From 1982-1983, he obtained fellowship training in clinical psychopharmacology research at the University of California, San Diego's Veteran's Administration Medical Center. He then served on the clinical faculty in the department of psychiatry at UC Davis Medical Center, before taking a full-time academic position in the department of psychiatry at the University of New Mexico School of Medicine in 1984. At UNM, Dr. Strassman began the first new US government approved and funded clinical research with psychedelic drugs, including DMT, in over twenty years. He has published nearly thirty peer-reviewed scientific papers, and has served as a reviewer for several psychiatric research journals. He has been a consultant to the US Food and Drug Administration, National Institute on Drug Abuse, Veteran's Administration Hospitals, Social Security Administration, and other state and local agencies. In 2007 he founded, with Steve Barker and Andrew Stone, the Cottonwood Research Foundation.

Christopher Timmermann obtained a BSc in Psychology in Santiago, Chile, and a MSc in Cognitive Neuroscience at the University of Bologna in Italy. He is currently completing a PhD at Imperial College London, leading a project focusing on the effects of DMT on the brain and human consciousness. He is interested in the use of methods bridging the relationship between the phenomenology evoked by the psychedelic experience and changes in brain activity using diverse neuroimaging tools.

TOMAGA channel various forms of multi-instrumentalism into music that moves by turns through industrial, jazz, psychedelia and minimalism, on its way to somewhere wholly other. Devoted to musical exploration, this London-based duo obsessively deconstruct familiar tropes, looking for the tension that lies between improvisation and form.

Stan VanDerBeek (1927–1984) was a pioneer in the development of experimental film and live-action animation techniques and a visionary of avant-garde and expanded cinema. Advocating a utopian fusion of art and technology, he produced theatrical multimedia experiments that included projection systems, dance, planetarium events and the exploration of early computer graphics and image-processing systems. He studied at Cooper Union and Black Mountain College, and was awarded an honorary doctorate from Cooper Union in 1972. He was artist-in-residence at WGBH and the University of South Florida, and Professor of Art at the University of Maryland, Baltimore. His work was the subject of retrospectives at the Museum of Modern Art and the Whitney Museum of American Art in New York. VanDerBeek was also intimately involved with the artists and art movements of his time: he filmed happenings and merged dance with films and videos. VanDerBeek was a pre-eminent thinker, scientist, artist and inventor who forged new links between art, technology, perception and humankind. In 1966, he wrote a visionary manifesto about man losing his way in his place on earth and the power of artists to rectify the course.

Nik Void is an experimental electronic artist and producer, one half of DFA signings Factory Floor and one third of Carter Tutti Void with artist Cosey Fanni Tutti and musician Chris Carter. Nik is currently working on a commission for this year's Spitalfields Music Festival. Early in 2018 she will release studio works with Editions Mego label founder Peter Rehburg as NPVR. 33. She also collaborates with Swedish sound artist Klara Lewis, performing at Liverpool Philharmonic, Café Oto, and broadcasting on BBC Radio 3. In 2016 she created a midi score for artist Phillipe Parreno's Hyundai commission at Tate Modern. In 2015 she took part, with Haroon Mirza, in a residency during *Station to Station*, curated by Doug Aitken at the Barbican Centre. In 2014, she and Mirza also undertook a residency on Stromboli, commissioned by the Fiorucci Art Trust and NTS Radio, prompted by performances at Art Basel and the Serpentine Galleries. Also in 2014, she performed at Wysing Arts Centre. In 2012 she took part in a year-long residency at the the Institute of Contemporary Arts (ICA), London.

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Marija Gimbutas, *The Goddesses and Gods of Old Europe, 6500–3500 BC: Myths and Cult Images*. Thames and Hudson Ltd, London. First published in Great Britain in 1974 under the title *The God and Goddesses of Old Europe, 7000–3500 BC*. New and updated edition in paperback 1982. Reprinted 1989.

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Rick Strassman, M.D., *DMT: The Spirit Molecule: A Doctor's Revolutionary Research into the Biology of Near-Death and Mystical Experiences*. Park Street Press, Rochester, VT. © 2001. Reprinted by permission of Inner Traditions International and Bear & Company. www.innertraditions.com.

NOTES FOR READER BOOKLETS

Riane Eisler, *The Chalice and the Blade: Our History, Our Future*.

Introduction (pp. xiii–xxi).

Notes:

1. See, for example, Fritjof Capra, *The Turning Point: Science, Society, and the Rising Culture* (New York: Simon & Schuster, 1982); Marilyn Ferguson, *The Aquarian Conspiracy: Personal and Social Transformation in the 1980s* (Los Angeles: Tarcher, 1980); George Leonard, *The Transformation: A Guide to the Inevitable Changes in Humankind* (New York: Delta, 1972).
2. The first paper to advance the theory that the Minoan civilisation was destroyed by earthquakes and tidal waves was by Spyridon Marinatos in 1939 (The volcanic destruction of Minoan Crete, *Antiquity*, 13, 425–439). Since then, evidence has appeared that suggests it is more likely that these natural disasters weakened Crete, making it vulnerable to a takeover by Achaean (Mycenaean) overlords. There is no evidence that this takeover was through a full-scale armed invasion.
3. Mellaart, J. (1975). *The Neolithic of the Near East*. New York: Scribner.
4. Sangren, S. P. (1983). Female gender in

- Chinese religious symbols: Kuan Yin, Ma Tsu, and the 'eternal mother', *Signs*, 9, 6.
5. In connection with the dominator model, an important distinction should be made between domination and actualisation hierarchies. The term 'domination hierarchies' describes hierarchies based on force or the express or implied threat of force, which are characteristic of the human rank orderings in male-dominant societies. Such hierarchies are very different from the types of hierarchy found in progressions from lower to higher orderings of functioning – such as the progression from cells to organs in living organisms, for example. These types of hierarchy may be characterised by the term 'actualisation hierarchies' because their function is to maximise the organism's potential. By contrast, as evidenced by both sociological and psychological studies, human hierarchies based on force or the threat of force not only inhibit personal creativity but also result in social systems in which the lowest (basest) human qualities are reinforced and humanity's higher aspirations (traits such as compassion and empathy, as well as the striving for truth and justice) are systematically suppressed.
 6. A fascinating analysis of the transformation

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- of Aztec culture towards rigid male dominance and, with it, male violence, is found in an article by June Nash from 1978 (The Aztecs and the ideology of male dominance, *Signs*, 4, 349–362). As Nash observes, some of the ancient myths in many cultures refer to a more peaceful, just time when women had high status. For example, the Chinese *Tao Te Ching*, as R. B. Blakney notes, refers to a time before the imposition of male dominance (see, e.g., Blakney, R. B. (1955), ed. and trans., *The Way of Life: Tao Te Ching* [New York: Mentor]). Similarly, Joseph Needham tells of the Taoist doctrine of 'regressive evolution' (in other words, cultural regression from an earlier, more civilised time). He also notes that some of the best-known statements of the earlier Taoist period of The Great Togetherness (or *Ta Thung*) occur in the second century BCE. *Hua Nan Tsu* and the later Confucian Li Chi (Joseph Needham, 'Time and Knowledge in China and the West,' in J. T. Fraser, ed., *The Voices of Time*. New York: Braziller, 1966)
7. Gimbutas, M. (1977). The first wave of Eurasian steppe pastoralists into Copper Age Europe. *Journal of Indo-European Studies*, 5, 281.
 8. For some works on human behaviour not being genetically pre-programmed but instead the product of a complex interaction between biological and social/environmental factors, see, e.g., R. A. Hinde, *Biological Bases of Human Social Behavior* (New York: McGraw-Hill, 1974); Ruth Hubbard and Marian Lowe, eds, *Genes and Gender II* (New York: Gordian Press, 1979); Helen Lambert (1978), Biology and equality: A perspective on sex differences, *Signs*, 4, 97–117; Riane Eisler and Vilmos Csanyi, Human biology and social structure (work in progress); Ethel Tobach and Betty Rosoff, eds, *Genes and Gender: I* (New York: Gordian Press, 1978); Ruth Bleier, *Science and Gender* (Elmsford, NY: Pergamon Press, 1984); Ashton Barfield, Biological influences on sex differences in behavior, in M. Teitelbaum, ed., *Sex Differences: Social and Biological Perspectives* (New York: Doubleday Anchor, 1976); Linda Marie Fedigan, *Primate Paradigms: Sex Roles and Social Bonds* (Montreal: Eden Press, 1982) and R. C. Lewontin, Steven Rose and Leon Kamin, *Not in Our Genes* (New York: Pantheon, 1984). An excellent overview of aggressive behaviour (a very effective refutation of the current

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- sociobiological revival of nineteenth-century social Darwinism) may be found in Ashley Montagu, *The Nature of Human Aggression* (New York: Oxford University Press, 1976). Even the question of instinct in animals is not as clear-cut as was once believed. For instance, new research indicates that even in birds learning or experience must take place if a capacity is to become an ability. See, e.g., Gilbert Gottlieb, *Development of Species Identification in Birds: An Inquiry into the Determinants of Prenatal Perception* (Chicago: University of Chicago Press, 1971); Daniel Lehrman (1953), A critique of Konrad Lorenz's theory of instinctive behavior, *Quarterly Review of Biology*, 28, 337–363; John Crook (ed.), *Social Behavior in Birds and Mammals* (New York: Academic Press, 1970); and Peter Klopfer, *On Behavior: Instinct Is a Cheshire Cat* (Philadelphia: Lippincott, 1973).
9. These systems configurations are examined in detail in a second book (Riane Eisler and David Loye, *Breaking Free*, work in progress). See also Riane Eisler and David Loye, Peace and feminist thought: New directions, in the *World Encyclopedia of Peace* (London: Pergamon Press, 1986); Riane Eisler (1984), Violence and male dominance: The ticking time bomb, *Humanities in Society*, 7, 3–18; and Riane Eisler and David Loye (1983), The failure of liberalism: A reassessment of ideology from a new feminine–masculine perspective, *Political Psychology*, 4, 375–391.
 10. See note 9. For more detailed anthropological data, see, e.g., Colin Turnbull, *The Forest People: A Study of the Pygmies of the Congo* (New York: Simon & Schuster, 1961) and Pat Draper, !Kung women: Contrasts in sexual egalitarianism in foraging and sedentary contexts, in Raya Reiter (ed.), *Towards an Anthropology of Women* (New York: Monthly Review Press, 1975). See also Richard Leakey and Roger Lewin, *People of the Lake* (New York: Doubleday Anchor, 1978). Please also note that in this book 'egalitarian' is used instead of the more conventional 'egalitarian'. This is because 'egalitarian' has traditionally only described equality between men and men (as the works of Locke, Rousseau and other 'right of man' philosophers, as well as modern history, evidence). 'Equalitarian' describes social relations in an equal partnership. This is why this usage is increasing among feminists.
 11. See Riane Eisler, 'The Blade and the Chalice:

Technology at the Turning Point' (paper presented at the General Assembly, World Future Society, Washington, DC, 1984); Riane Eisler, Cultural evolution: Social shifts and phase changes, in Ervin Laszlo (ed.), *The New Evolutionary Paradigm* (Boston, MA: New Science Library, 1987); and Riane Eisler, Women, men, and the evolution of social structure, *World Futures* 23 (Spring 1987).

Marija Gimbutas, *The Goddesses and Gods of Old Europe, 6500–3500 BC: Myths and Cult Images*.

Chapter 6: 'Cosmogonical & Cosmological Images' (pp. 89–91).
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Terence McKenna, *Food of the Gods: The Search for the Original Tree of Knowledge: A Radical History of Plants, Drugs and Human Evolution*.

Chapter 2: 'The Magic in Food: A Shaggy Primate Story' (pp. 14–30), 'The Real Missing Link' (pp. 32–34), Chapter 5: 'Habit as Culture and Religion' (pp. 57–65).

Notes:

Chapter 2: 'The Magic in Food'

1. Rodriguez, E., Aregullin, M., Uehara, S., Nishida, T. et al. (1985). Thiarubrine-A, a bioactive constituent of *Aspilia* (Asteraceae) consumed by wild chimpanzees. *Experientia*, 41, 419–420.
2. Wilson, E. O. (1984). *Biophilia*. Cambridge, MA: Harvard University Press, p. 33.
3. Lumsden, C. J. & Wilson, E. O. (1983). *Promethean Fire: Reflections on the Origin of Mind*. Cambridge, MA: Harvard University Press, p. 12.
4. Ibid, p. 15.
5. Fisher, R., Hill, R., Thatcher, K. & Scheib, J. (1970). Psilocybin-induced contraction of nearby visual space. *Agents and Actions*, 1(4), 190–197.
6. McKenna, D. (1984) 'Hallucinogens and evolution.' Seminar transcript abstract, given at the Esalen Institute, California, p. 2.

Chapter 3: 'The Search for the Original Tree of Knowledge'

1. Hoffer, A. & Osmond, H. (1968). *New Hope for Alcoholics*. New York: University Books.

Leonard Shlain, *The Alphabet Versus the Goddess: The Conflict between Word and Image*.

Appendix (p. 465); 'A Reader's Guide to the Alphabet and the Goddess' (pp. 1–9).

Rick Strassman, M.D., *DMT: The Spirit Molecule: A Doctor's Revolutionary Research into the Biology of Near-Death and Mystical Experiences*.

Chapter 21: 'DMT: The Spirit Molecule' (pp. 310–328).

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Notes:

Chapter 21

1. There was little contact between volunteers at earlier stages of the research. When they did meet, either in social settings at my house or in the support group that formed towards the end of the study, volunteers were uniformly shy and uncomfortable discussing their strange encounters. Neither were Terence McKenna's lectures and writings especially popular when we first started hearing these unusual reports from our research subjects. I often asked volunteers if they were familiar with popular accounts of DMT-mediated encounters with elves or insectoid aliens. Few were. Thus, I don't think these reports were a type of mass hysteria or a self-fulfilling prophecy. Indeed, if this process was operating, I would have expected an 'epidemic' of mystical and near-death experiences instead, because I was expecting and hoping for them.
2. Before television engineers developed the 'picture in a picture' option, I could have extended this analogy by saying these levels of reality are mutually exclusive. That is, we could not watch Channel 3 and Channel 4 at the same time. However, we can now. The 'picture in a picture' concept actually helps with the TV comparison, though, if we recall how many times volunteers opened their eyes to see different levels of reality mix and blend. Often, too, volunteers would fully engage with the new world to which DMT provided access while still remembering that their bodies were in Room 531 of the University Hospital. They had their feet in several worlds at once – a truly mythic multitasking effort!
3. Deutsch, D. (1997). *The Fabric of Reality*. New York: Penguin.

4. Deutsch, D. (January 2000). Personal communication.
5. Ibid, June 1999.
6. Smith, N. & Spooner, N. (2000). The search for dark matter. *Physics World*, 13, 4.
7. Why entities or alien intelligences desire to interact with us is, of course, a crucial question. Many of Mack's abduction experiencers describe human–alien hybrid projects intended to repopulate our dying planet. Some of our volunteers also returned with a 'breeding' motif, having found themselves in rooms with toys, cribs and other items from infancy. Additionally, the transfer of information and the 'tuning' and 'reprogramming' of consciousness follow a similar thread – of an advanced race wishing to impart to us some of what they know. This often relates to the pressing environmental problems facing our planet. Here, too, there are similarities with a few of our volunteers' tales. Several of our research subjects also refer to the non-material nature of the beings, particularly their lack of emotion (such as love and relatedness), as being crucial to their interest in us. Somehow, by interacting and learning from us, they are able to relearn things they have forgotten or lost long ago. Such descriptions border on 'spirit possession' and take on disturbing overtones. On a less sober note, recall the playfulness of some of the figures our volunteers described, bringing to mind fairies, pixies and elves from our own folkloric past.
8. Jansen, K. L. R. (1997). The ketamine model of the near-death experience: A central role for the N-methyl-D-aspartate receptor. *Journal of Near-Death Studies*, 16, 5–26. (I have searched for, but been unable to find, any data regarding whether DMT is neuroprotective.)

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