frontespiece

Blurb

Life Sciences

Professor Tim Elliott & Professor Anneke Lucassen

Private View

The Human Genome is often called the Book of Life.

This is quite an understatement, because at 3 billion letters it makes the longest conventionally read novel; Proust's *A la Recherche Du Temps Perdu* (a mere 9.6 million characters); look like a verse of Japanese haiku. As Kevin Davies states in his evocative account of the Human Genome Project[1], if the book of life were printed in letters of 10 point, the resulting opus would be roughly equivalent to a library of 4,000 books each of 350 pages. Each gene runs to about 5 pages and each of the 23 human chromosomes would be covered by 200 volumes. It would take an entire lifetime to listen to an unedited recital of the genome sequence. He goes on to remind us that "there is no perceivable plot, most of the text is gibberish, and hundreds of pages are made up of the same sequence repeated over and over again. When the words do make sense, the chapters frequently leave the reader totally confused as to meaning".

The book of life is not written in ink, but in strings of DNA, 4 letters spaced 0.34 nanometers apart. 2 meters of this are crammed into a nucleus about 5 microns across. The full-stop at the bottom of this exclamation mark would cover over 200 nuclei or 400 metres of DNA! If the nucleus was magnified 300,000 times so it appeared as big as a VW beetle, the thread of DNA would appear as thick as a strand of cotton the length of the M1.

2. The Personal Library

We are therefore each unknowing librarians of a personal collection the size of a modest University library. Like university libraries – the subjects covered are more or less the same – but its precise content defines the individuality of the institution.

Humans differ from one another in spelling discrepancies between DNA sequences – about one every 500 letters. This means that there are on average 600 million variations between any two people. Some of these can have profound effects on their own: for example a single letter change in a chapter, that describes how to make an important protein that is essential for healthy life, can cause a life-changing disease. However, most of them just go to make up what we expect as normal variation between individuals. We have no choice over which of these genetic variations are displayed to the outside world an so if we pick two people at random out of the 2 billion or so to choose from we find that Leonid Stadnyk, a 37 year old vet from Podoliansky Ukraine has white skin and Gul Mohammad, a 30 year old Indian peasant was born with brown skin. This fact reflects not where they were born or the lives that they lead, but the gene that they carry for melanin synthesis. But if you were to see them standing side by side you would hardly notice the colour of their skin, because Mr Stadnyk is the world's tallest man at 8'5.5" and Mr Mohammad the shortest at 1'10.5". This unlikely pair has the same number of differences between their libraries as any other pair drawn randomly from the world's population, but the striking differences in their physical presence comes down to the precise details of the text therein. It turns out that Mr Stadnyk was born with a combination of gene variants that caused his pituitary gland to secrete copious amounts of growth hormone wheras Mr Mohammad was born with a single change that causes a gene, that controls secretion of the same hormone, to be switched off. Thus two different misspellings lead to two different interpretations – or advertisements - of the personal library. Neither of these men had any control over their skin colour or their size, and when we consider the consequences of this on their lives; and the fact that the level of their DNA text, they are no more dissimilar from each other than Gwyneth Paltrow is from Jennifer Aniston; we can begin to appreciate just how genetic differences are advertised to the outside world in a rather arbitrary and random way.

To the trained eye of the clinical geneticist the genetic changes that underpin Messrs Stadynk and Mohammad's physical appearance can be readily identified; along with a host of other genetic changes in the population at large that are not so easily recognised by the lay person. Most genetic variations are harmless, but some can dictate a life-course of fatal disease – diseases that are either treatable or not depending on the progress of medicine. Some of these variations leave traces in the morphology of the human body that can be recognised by doctors who might then be able to treat or subvert the worst consequences of the disease by making an early diagnosis. Others leave clues in our chemistry that only a laboratory urine test will detect. Yet others are hidden even better, and require the help of a fully equipped research laboratory to find.

Whichever way, there are clearly cases where ones fate is to a large extent written in ones genetic library and so if you know where to look (ie have the expertise to use the library index) the information is there to read.[2] So you might have to dig deep to investigate the nature of some genetic changes that distinguishes a personal library – perhaps needing to read a fair proportion of the 3 billion characters before you came across the following 31 that spell the simple phrase "All books will be bound in red leather". Other information about the personal library is expressed in the way that a casual browse would reveal. For example the spelling of certain words might give an indication of the origins of that book: Color rather than colour indicates an American origin and in the same way random differences in the genetic code may indicate a certain ancestry.

3. Library Access

The important thing about our personal library it is a collection of books that have been published. It represents a personal collection whose uniqueness arises from the combination of works rather than the works themselves. Given the intrinsically "shared" nature of the books in the library and the publicly available text that they use to describe the physicality of the human state; can the library or its contents be considered private? And if so who should be allowed access?

At the heart of any notion of self and personal identity is the ability to recognise a boundary between what is private and what is public - where the boundary lies between us and others. For something to be private it must not be apparent to others. Much of our genetic variation is not apparent to the outside world and may mean all sorts of things about us such as our lifestyle and our risk of disease or tendency to certain lifestyles or behaviour. So being able to restrict access to this information might be seen as a way of exercising our right to privacy, and, by drawing a boundary, a way of securing personal identity and a strong notion of

self. An additional motivation behind such a desire for privacy might be to prevent discrimination against us by employers or insurance companies who might think our genetic code put us at a disadvantage. Yet at the same time we share genetic information with family members; so why should we not have the right to access their libraries, if they have already homed in on we know that they contain information that could, for example help us to avert a life-course of misery.

If genetic information is not inherently private-either because it's easily accessible by technology (or simply because it is advertised to the outside world in the way we look) does this pose a threat to our idea of ourselves as individuals? Craig Ventor and James Watson, the two adversarial captains of the race to sequence the human genome, have made a clear decision about this. At the time of writing, tThey are two of only four individuals in the world today whose ENTIRE genome is out in the public domain for all to read. Are we invading their privacy by looking at the published version? The answer to that question may depend on our ability to make sense out of the jumble of letters that the genomic library represents. If they tell the general public nothing, then perhaps not, but if they show predict that Ventor is will become a homophobe who is likely to be violent towards others and that Watson will most likely develop Aalzheimers disease then perhaps we might feel that we have encroached their privacy to a greater extent. Yet again can their privacy be invaded if they have given considered consent to the publication of their genomes?

4. Cases for Consideration

In rambling through the bibliographic analogy, two linked themes have emerged: the issue of *genetic privacy* and the issue of *personal identity*. They are linked by the concept of an individual library to which rights of access have yet to be decided, and their relevance is illustrated in the following two real-life, but in the first case, anonymised, examples:

Case 1: Andrew has an inherited form of bowel cancer (HNPCC/ Lynch) confirmed on DNA testing. He is very ill with advanced colorectal cancer. He has a rare mutation in one of his genes that is shared by only 0.01% of individuals, but because he has inherited it from his (now dead) father parents,

there is a 50% chance that each of his three brothers have inherited the mutation. However, he is reluctant to tell them - not to withhold this information maliciously but, because of the lack of contact, he finds it difficult to approach them and he has many other things on his mind. The clinical genetics department service that detected Andrew's mutation, have has offered Andrew help to make contact with his siblings but Andrew he has declined and said he will do it himself, but would just like to get over his current treatment first. Andrew's GP also looks after other members of the family but does not want to disclose any risk health information to them without Andrew's consent.

A year later Andrew's brother presents aged 39 with an advanced Duke's C bowel cancer that he will later die from. If the cancer had been detected a year earlier, there was an excellent chance that early treatment would have arrested the disease. This is a serious harm that might have been preventable if the brother had been told of his risk and received colonoscopic surveillance. Did Andrew or his carers health professionals have a duty to pass on this genetic information to his brothers with or without his (or their) consent? Should he have a right to privacy when it comes to genetic information that affects a family member so profoundly? How important is the confidentiality surrounding the patient doctor relationship in cases like this where a diagnosis affects other individuals – even other patients for whom the doctor has a duty of care?

Case 2: Darnell from the TV show "Big Brother" hit the tabloid headlines when his bewildered housemate expressed surprise at him being black "you're not black are you Darnell" she said to the white skinned, blonde haired man – more as a statement than a question. Darnell has Afro-carribean ancestry, but because of a mis-spelling in one of his genes that encodes a tyrosine kinase receptor, his skin cells can produce no pigmentation. Ethnicity and racial ancestries are often merged or confused. How much is ethnicity a social construct which says something about ones cultural geographic and religious background; ones perceived identity? And how much is it determined by our genetic code? It used to be thought that race was a less subjective value, that there were 4 distinct

racial groupings with various degrees of admixture. However, there is nowmore recent genetic evidence suggests that this there has been a much greater degree of admixture during man's migration across the globe. Whether or not probably not the case, and that there are no discernable pedigrees of ancestry that are accurately traceable in the genome library is now disputed. In light of this, how are we to judge forensic evidenceexpensive internet kits that claims to identify ethnicity on the strength of a selection of one or two genetic variants that are commonly found among individuals of a particular race? Are we moving to a consensus view shared by the Equality and Human Rights commission Commission for Racial Equalitythat ethnicity is a subjective matter that will change with time. As reporter Sean Thomas discovered, they also agree that which has famously stated that "if a red haired Welshman feels 'black' then he is black". Darnel's confused housemate still has a long way to go – and she is not alone as every day we see the new mixed-race President of the United States proudly and confidently described as "black", whilest he is surely as good an example of mixed race as possible, with a "white" mother of he himself has yet to declare his ethnicityNorthern European descent.

1. *Cracking the Human Genome* by Kevin Davies, Humana Press, 2005.

2. This is something of an over-simplification for the purpose of illustration. It is true for some highly penetrant human diseases such as Huntingdon's Chorea. Most diseases, while having a genetic component also depend heavily on the environment in which those genes are expressed. So, for example, an inherited change in the gene for the skin protein melanocortin that is associated with skin cancer will contribute to the development of skin cancer only if other mutations are induced by excessive sunlight.

Trish Bould, Kathy Oldridge & Charlotte Knox-Williams

Between Place, Performance and Score: Drawing on the Archive

Re-accessing archival material through a dynamic process of exchange, through writing, framing and re-framing, we three individual (in our own cars, and in and out of one another's) have explored the dynamics of interpretation within collaborative exchange.

Initially, we approached the investigation and navigation of archived material through a case study, an experimental exchange between a musician and drawer. This event was envisioned as a means of picturing difference and identifying potential for further collaborative exchanges. The work explored the dispersal of various intersections within the case study, within our collaboration and within the context of our own research interests. The case study itself exploited links and frameworks of Sound Seminar which took place between the School of Art and the School of Music in 2007-08.

In creating materials for this publication and related exhibition our aim has been to open access to the complex processes that have been involved in the research, to understand them better and to offer entry to our field of thinking

Research encompasses many layers, including lived experience, archive and re-construction. However, the focus is often placed primarily on the presentation of the reconstruction, by its nature a partial representation of the whole, often smoothed to allow a particular angle to emerge.

moved between the conscious and the unconscious mind, between image itself and thought, the work is built, changed. In dialogue and flux, often arriving at the gap between language and line".

Our research has taken the form of sketches and forays that have subsequently been tightened, condensed and ordered. Adopting a performative approach, using observation participation and reflection, meaning was not excavated but took place in the present".

In this presentation we reveal our enquiry and our exchanges as complex and layered interactions; we open our studio, exploring the opportunities within this printed format to reveal different facets of our thinking and inviting public access to our process. What we are offering is a kind of matrix of thinking, reference, methodologies and fragmentary contributions selected so as to provide coordinates and map potentialities. A framework of our collaborative engagement which might open access to our research, offering entry to our field of thinking and enable further participation through individualised routes.

The Seminar aimed to open discussion between researchers from Winchester School of Art and from Southampton's Music Dept. regarding relationships between Sound, Art, Composition and to seek

Working collaboratively is a different form of exchange where access to emergent ideas and context is often necessary. Our research has centred on making comparisons between processes of exchange and drawing, where ideas and perceptions are in flux and development.

Differences between disciplines, individuals, approaches and methodologies form an essential component in the way we have approached collaboration. An investigation through different practices offers opportunities to understand the greater potential of collaboration as a means of production where re-orientation from a distance or from unfamiliar territories functions in a generative way.

At the heart of any notion of self and personal identity is the ability to recognise a boundary between what is private and what is public - where the boundary lies between us and others. For something to be private it must not be apparent to others. (Elliott, 2008)

The essay 'Private View' by Tim Elliott and Anneke Lucassen has formed a parallel to our own work, producing connections and intersections at a number of points. Our focus on the complexity of linage and ownership, and on private and public access through our collaboration form firm methodological rather than thematic links with the issues raised.

- Personal libraries form distinctions between individuals that are subtle and complicated, and are actualised through exchange in unpredictable ways. From within a potentially massive array of macro cosmic outcomes, an individual brings about a state of difference that is unpredictable and user-defined. Tracing origins, underlying causes or links can prove difficult.

- An indication of ancestry is given by a system of referencing, connecting origins with outcomes or manifestations. However, whilst we may seek to open out our own private libraries or sets of indices to one another, this revelation is always partial. Even with good intention, our interpersonal communication in the 'open' domain remains bounded by 'hidden' and 'blind' areas, (Luft).

- Inviting access to this personal library or system of referrals, initially within a closed collaboration and then within a public sphere. Rather than re-presenting final outcomes, revealing the processes and situations that allowed their emergence and enables access to the frameworks and processes that have shaped our thinking.

- In doing so access is also made to unfinished thinking exposing potential mistakes and signatures of personal traits and indexes that are still present but partially hidden.

Methods

Genetic identity is like a personal library or archive, of which only a particular and partial version is visible or accessible. This library is both unique to each individual, and inseparably interlinked with others through lineage, referrals and similarities. In 'Drawing on the Archive', we have utilised a project that existed between many individuals' libraries, and have operated on the resulting archive in a practical way, bringing different aspects of it to the surface.

In developing this set of methodologies for approaching an archive and for utilising discrepancies between personal libraries of discipline-specific knowledge, we have modelled a system of exchange, for re-use and development. However, we offer only a partial revelation. Our text and our format have been reconfigured through interchange, centred on the particular framework of the anthology. In representing our work we journey between image and text, retrieving and reordering meaning as we move towards completion.

From working together previously, in various combinations, we had shared methods and experiences particularly in relation to looking and thinking about practice. However, for this project, we deliberately utilised difference, locating points where we did not overlap.

Our collaborative research has been developed here through sketches and forays, which have subsequently been condensed and ordered. Through a performative approach, utilising observation, participation and reflection, meaning was not excavated but took place 'in the present' (Rogoff, 2008).

The Sound Seminar Archive is a bank of material to be pulled out and interpreted; a store of fragments through which to consider collaboration and explore ways of representing practice. Our methods have been developed in response to archived material privately, between individuals and within the group; 'Conversations moved between the conscious and the unconscious mind, between things seen and thought; the work is built, changed, in dialogue and flux, often arriving at the gap between language and line'. (Bould, T. Oldridge K. 2009 p68-67)
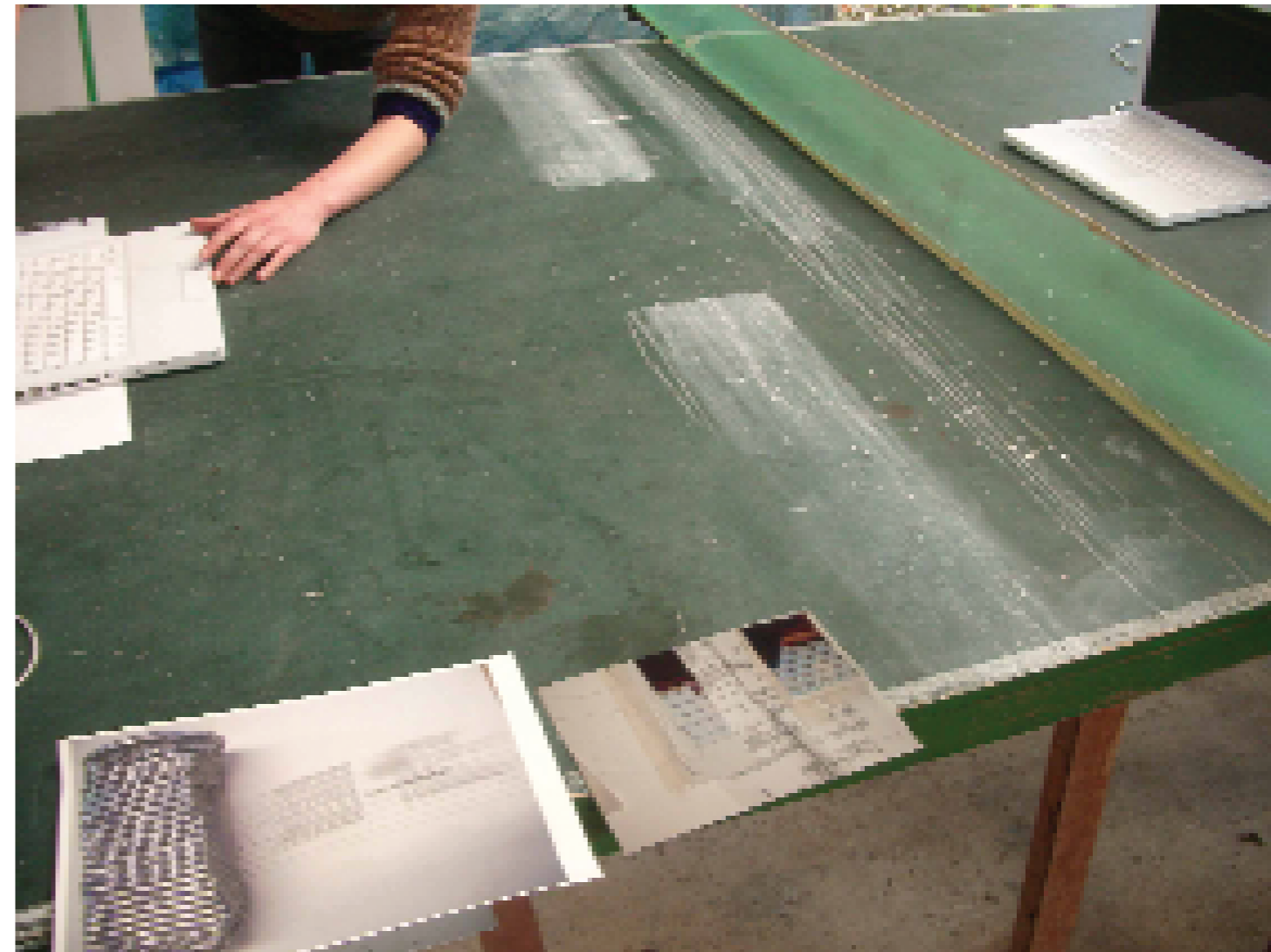
**practice led, practice based research, practice in research**
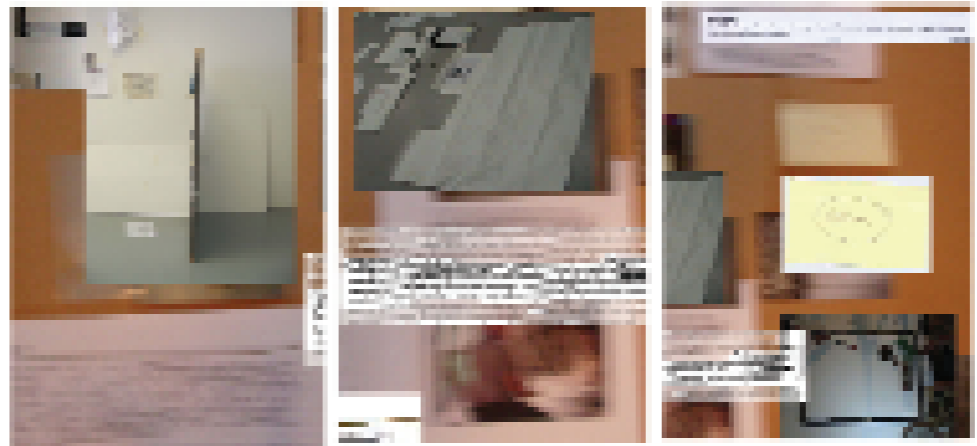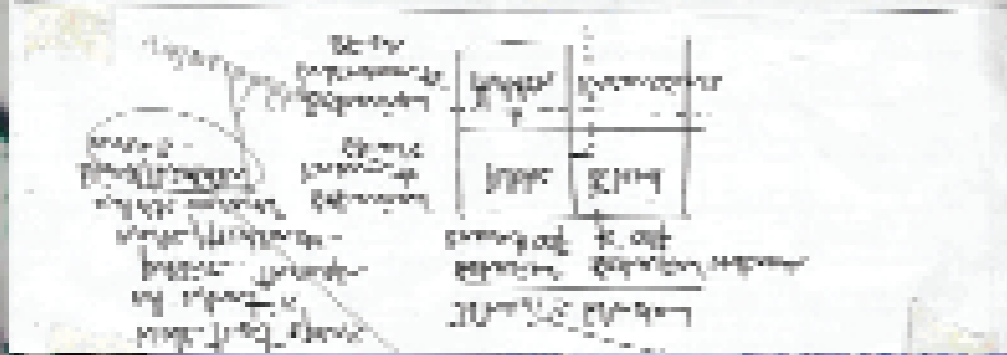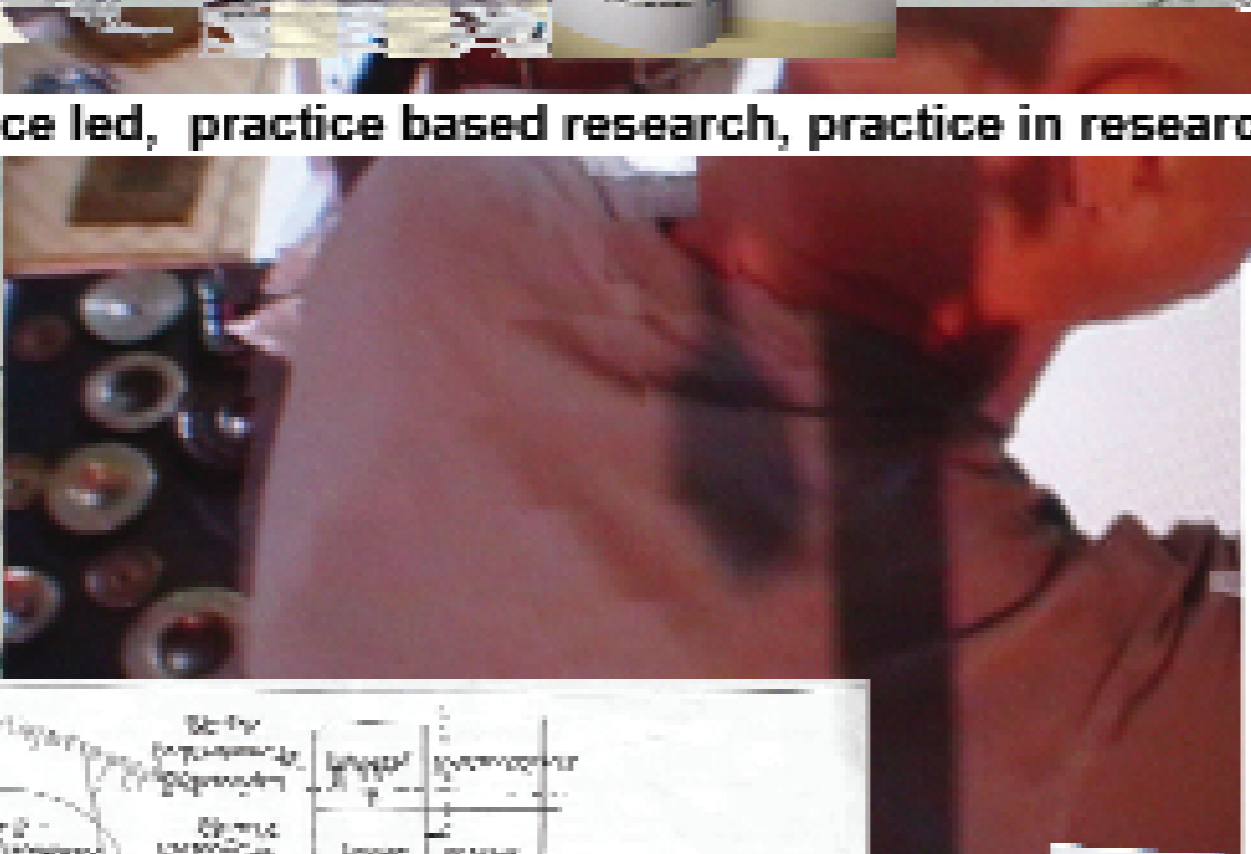
Although in Benjamin's
discrete, they exhibit fe
proofs of pieces that ha
they remained open to

'Benjamin repeatedly treated the elements of his text according to the principle of building blocks' p32

Composing a work entirely of quotation... material in the collection remain mobile Knowledge that is stored in slips and scraps knows no hierarchy p32

'At the heart of any notion of self and personal identity is the ability to recognise a boundary between what is private and what is public - where the boundary lies between
us and others. For something to be private it must not be apparent to others.' Paper 2
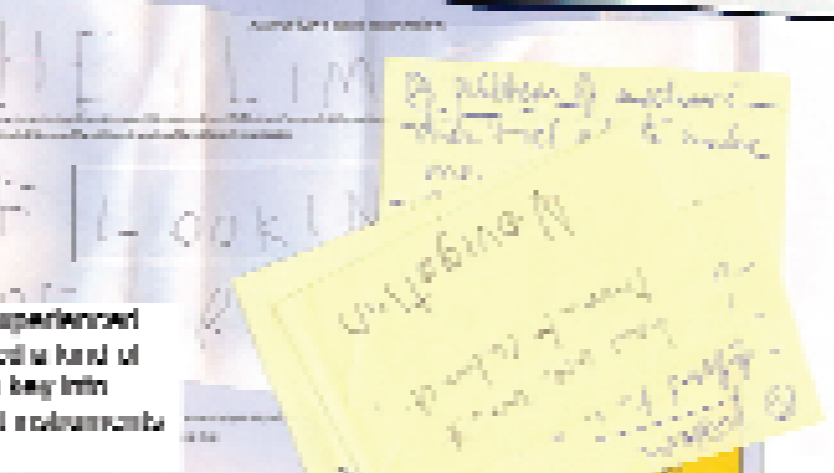
As we set out materials and moved into the first sketch I experienced
the extreme emptiness of my paper, the instruments formed a kind of
wall dividing our territory as I looked across trying to find a key into
beginning making marks the very physical and densely set instruments
intensified the emptiness of my paper
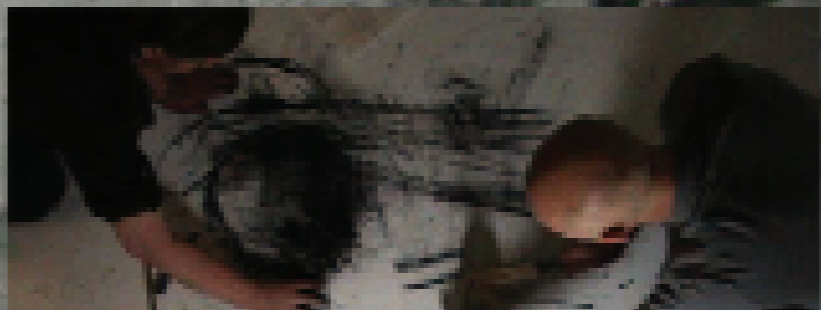
Conclusion

As our source material, Sound Seminar has provided access to an important range of engagements which have underpinned and clarified our thinking of the performative dynamics within the visual, revealing a common exchange between sound and visual within movement over time. Opening onto a different set of values and methodologies has provided access to a broader range of references, enabling us to place our own investigations within a larger field of practice.

'It was incredibly unsatisfactory as a means of drawing, in opposition to that of generating imagery, when drawing I am pulling things from different places to create a new reality, -performing drawing across a sequence of papers literally scattered the visual- rupturing the image making it impossible to hold together.' [1]

Approaching this publication, our aim was to open our studio, exploring opportunities within the printed format to reveal different facets of our thinking and to invite public access to our process. We recognise, however, that even as we reveal our enquiry and exchanges as complex and layered interactions only limited aspects become visible.

Our working has itself changed the very nature of the archive, it's inherently precarious form has been marked by our own journey. Our new traces introduce incidences, humps of instability. The 'image' of our production is ruptured, existing across and between the different forms and across different pages and participants. Even with shared aims and a shared knowledge of our exchanges, as we bring together the fragments of our 'image' we discover they belong to different images, different orders.

The diffraction (Barad, 2007) of our diverse experiences and interpretation has excavated new understanding, re ordering knowledge according to different frameworks and in relation to new contexts. Rearranging knowledge within one another's index has brought about new insights, opened new avenues of thinking, offering us a better appreciation of our own place. We recognise, however, that we can only see the world from our own place, using this viewpoint to clarify and extend our own understanding.

As outcomes we have formulated a series of maps or matrices of thinking, each with its own access points. This is seen as a way of allowing individual navigations and enabling multiplications of meaning, whilst acknowledging the end results currently presented are actualised from a vast field of possible configurations.

A double sided poster offers the audience the opportunity to engage with detail whilst at the same time providing barriers, in its format, for a total view. On the reverse and on a set of postcards for exhibition and use, are presented as a series of viewpoints through which we have interpreted our collaboration, offering an index to our thinking,

In this paper the reader is presented with a written essay, where fragmentary and visual information breaks its linear form offering individualised routes through a series of images and text.

This map has been partially translated and re-configured in order to cohere with the format of the anthology publication, and it is our intention to re-open it again within the exhibition.

In realising temporary, fleeting coherence from our own specific points of view through poster, through book and through exhibition, we offer a navigation of fields of references, methodologies and fragmentary contributions and how they have been selected so as to open access to our research, offering entry to our field of thinking and enabling further participation.

'in becoming archive – the world in which we do not exist refracts into a succession of moments whose meaning is revealed to be arbitrary, up for grabs.' (Spieker, 2008 p.145)

References

AHRC CHEAD 2008 Requested response to the 'state of play' Practice-led research in Architecture, Art and Design (AAAD). [on line] Available from http://www.chead.ac.uk/PDFs/AHRCplrreport.pdf, [accessed 28 Jan 2009]

BARAD, K. 2007 *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Duke University Press

BENSON, B.E. 2003 *The Improvisation of musical dialogue- A Phenomenology of Music*, Cambridge University Press, Cambridge p25

BOULD, T., OLDRIDGE, K. 2007 Dilemmas and Practices, Telling Places Conference, UCL Slade/Bartlett. IN Multi, the Journal of Diversity and Plurality in Design RIT, New York [online] Volume 2 Winter 2008, pp66-87 available from http://library.rit.edu/oajournals/index.php/multi

ELLIOT, T., LUCASSEN, A. 2008 'Private View'.

FOUCAULT, M. 1969 *The Archaeology of Knowledge*, Routledge: London.

GROCOTT, L. 2008 Productive Ambiguity: the reflective and discursive agency of the visual essay, in Biggs, M. and Buchler D., The problem of interpretation, 5th Research into Practice Conference, 2008 Royal Society of Arts London, University of Herefordshire

LESLIE, E. 2007 *Walter Benjamin's Archive* Verso, London Elliot

LUFT, J. 1969 *Of Human Interaction*, National Press Books, Palo Alto

ROGOFF, I. We – Collectivities, Mutualities, Participations, [online] available at http://theater.kein.org/node/95 (accessed 14/1/2008)

THE HIGHER EDUCATION ACADEMY 2008, Creative Scholars: Research Economies in Art and Design Conference Tate Britain.
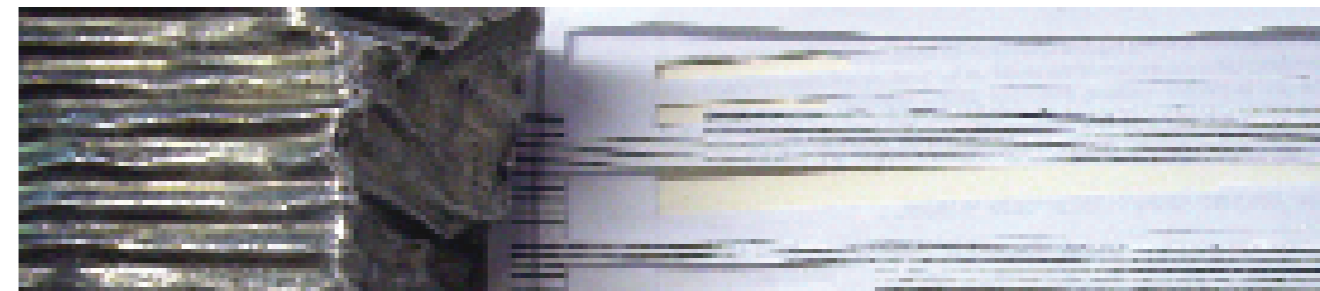
Andrew Carnie

Unfolding

Successions of recent generations have peered further and further inside the self, using increasingly advanced technology. My own artistic practice over the last few years has looked at how as individuals we absorb both contemporary scientific ideas and imagery. The uncovering and deciphering of the genetic code is one of the most significant breakthroughs of modern times. Crucial to this science is how we look at the information about ourselves that the decoding of the genome exposes and what controls how this information is shared with others to promote health and well-being to the individual and to society.

This visual response serves as a useful and interesting continuation of my work and supports my contention that best practice in visual arts production suggests work should be made out of the very material one is working with: that the idea explored, the content, is developed in unison with form. This is not unlike the relationship in genetics of phenotype to genotype.

Using the human form and the 'library' as metaphors to make work I explore sequencing, in so doing I investigate the complexity of what is revealed in the genetic code, people's connectedness to each other and the issues of ownership. Images of library shelves and books are juxtaposed with silhouetted images of people. Titles include texts that have addressed the issues of heredity, from *The Origin of Species*, *Blood Matters*, *The Bible*, to works by Richard Dawkins, *The Selfish Gene*, *A Life Decoded* and *The Double Helix*.
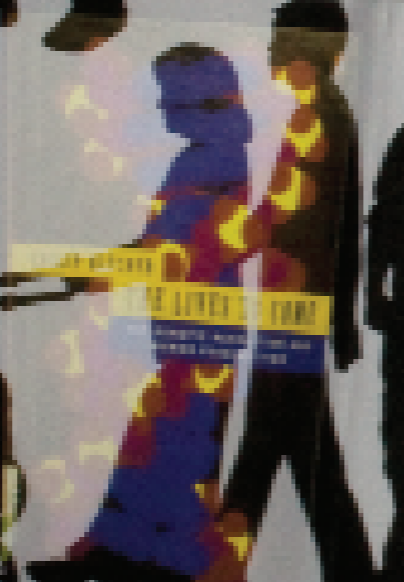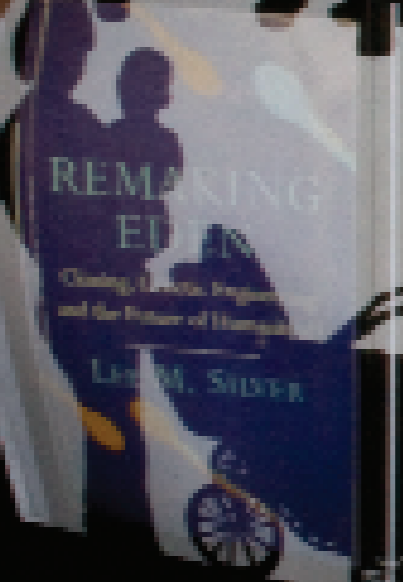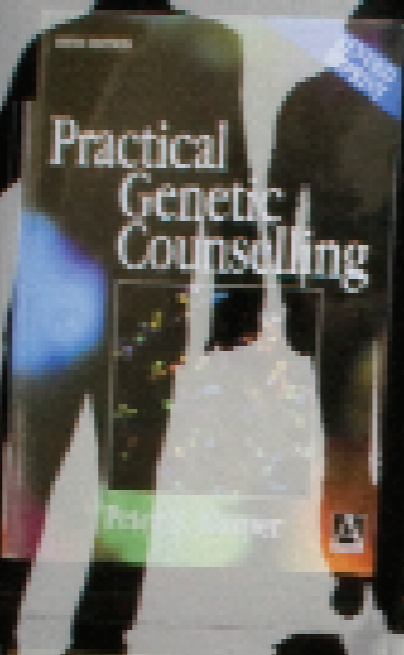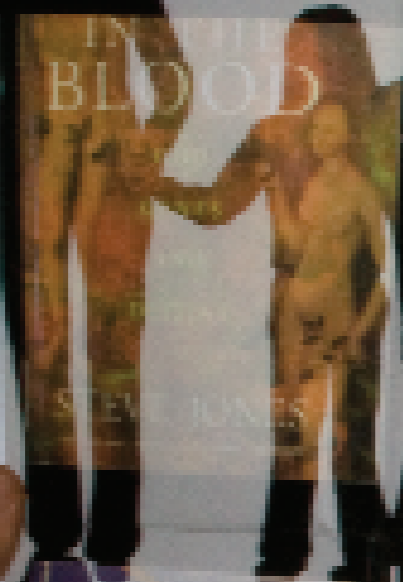
Yvonne Jones

701085

The 28 gridded images are part of a series of stills and videos taken as I tracked the progress of my hair in preparation for analysis. Hair cut from my head was processed into a numbered liquid, with a chemical analysis as the outcome. The outcome indicates high levels of Sodium, Potassium, Sulphur, and Phosphorus. Further research showed that these levels are in the hair product used, rather than being given out in excess from the body.

In a separate case, a similar analysis showed extraordinarily high levels of Arsenic present in a sample. The person had been seriously ill some years earlier but no diagnosis was forthcoming even after several admissions to hospital and many investigations. The symptoms suffered during the episodes of illness are in keeping with Arsenic poisoning.

We carry information around with us, often unaware of the nature of information that can be harvested without our agreement.

Hair Analysis Results

|	Your Results	Recommended Values	Units
Calcium	1075	400	mg/kg
Magnesium	85.5	50	mg/kg
Potassium	1782.6	75	mg/kg
Iron	99.5	20	mg/kg
Chromium	5.63	1.59	mg/kg
Cobalt	0.78	0.21	mg/kg
Copper	38.4	22.3	mg/kg
Manganese	4.72	1.79	mg/kg
Nickel	1.94	1.19	mg/kg
Selenium	1.81	2.25	mg/kg
Zinc	151	186	mg/kg
		Threshold values	
Aluminium	2.53	2.00	mg/kg
Cadmium	0.17	0.17	mg/kg
Mercury	0.09	0.15	mg/kg
Lead	1.66	1.40	mg/kg
Molybdenum	0.08	0.18	mg/kg
Vanadium	0.24	0.18	mg/kg
Arsenic	0.079		
Sodium	13467.7	91	mg/kg
Sulphur	52600	−	
Phosphorus	1654	−	
Antimony	0.004		
Tin	0.086		
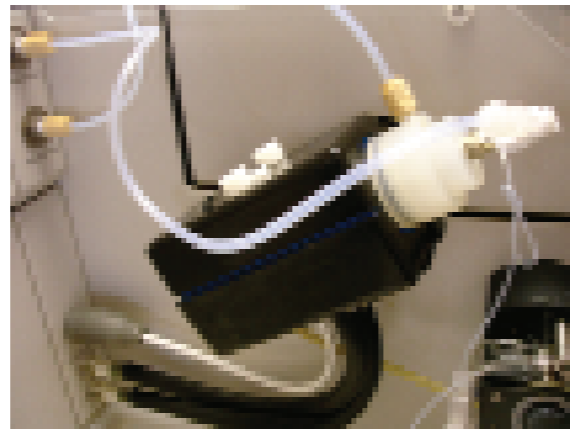
Alex Schady

....they are no more dissimilar from each other than
Gwyneth Paltrow is from Jennifer Aniston...
(Elliott, 2008)
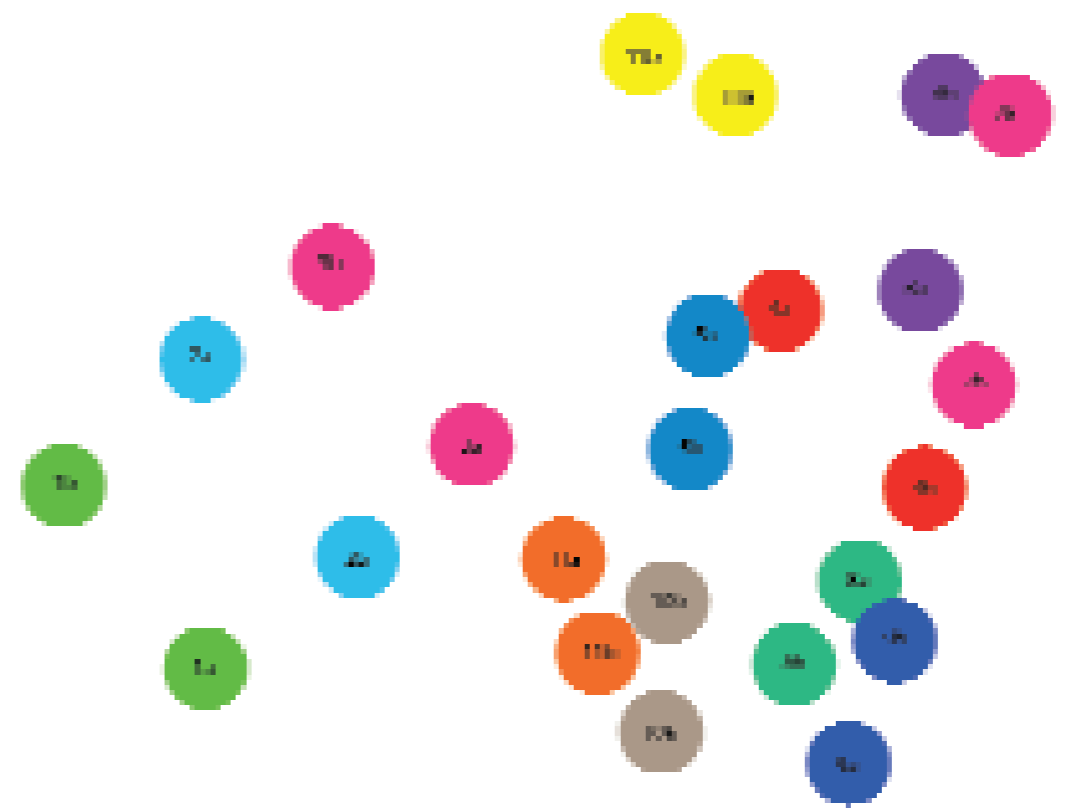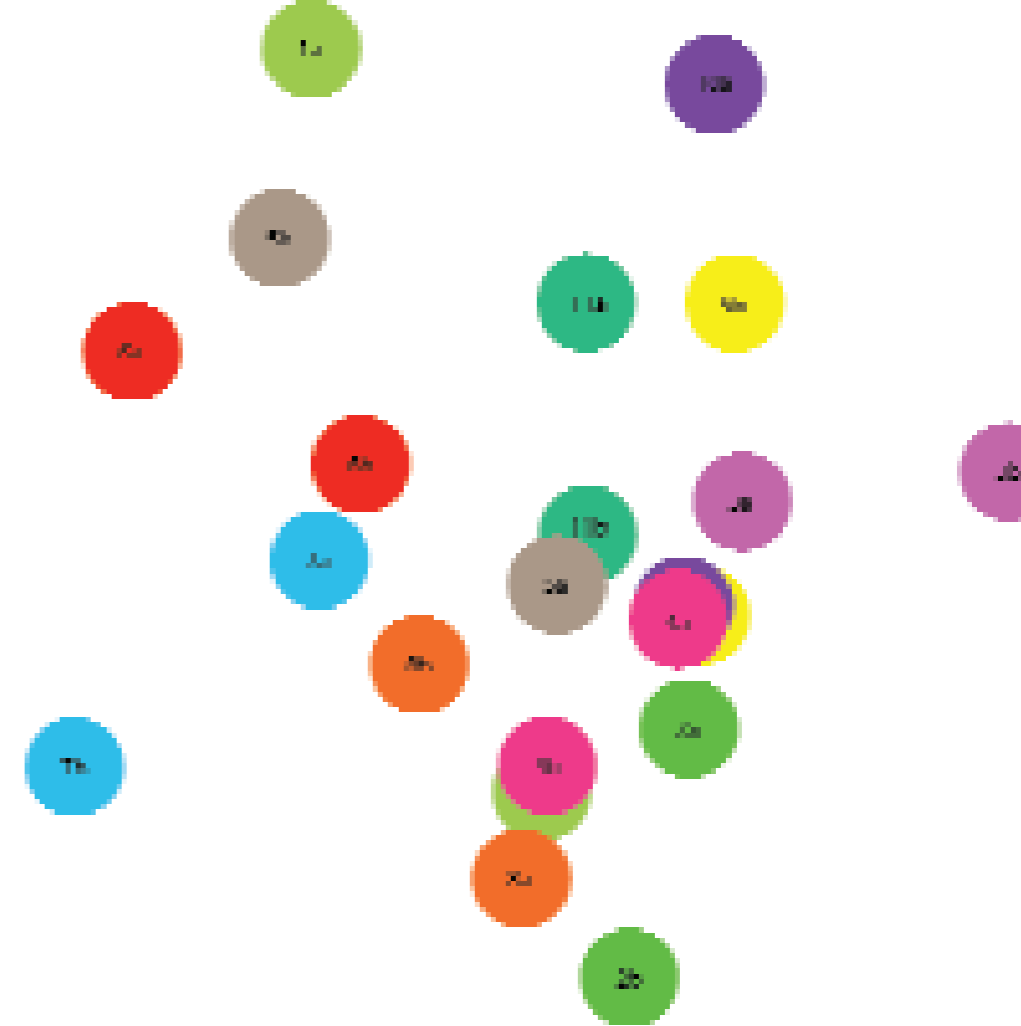
Dr. Caroline Bassett

To Compute the Meaning of Words: The Digital Economy

Things that owe their existence exclusively to men nevertheless constantly condition their human makers. (Hannah Arendt, 1998/1958:9)

Folksonomy and Domain Knowledge

These things are known: The Digital Economy is not automatically a creative economy. Digital work is not automatically creative work. Digital productivity may entail drudgery, exploitation, low wages, and poor conditions. How you experience precarious labour depends on who you are/where you are. The weightlessness of the information economy also depends on a particular perspective: Lightness 'here' hides heaviness 'there'. The weight of hardware, the pollutants used in manufacture, the cost of transportation, the burden of the flow of components, products, and software coders, and others engaged in delivering human capital to the information economy, can't be felt in the handheld device in your pocket and doesn't register on the screen. It isn't even clear what information 'is': When everything moves, physical 'packets' as well as informational ones, the distinction between material goods and symbolic ones threatens to dissolve, to become motion blur, screen-captured, but not understood as material.

These things are known: Knowledge of many kinds is freely available on the web. Knowledge architectures (data visualizations for instance) are offering new insights into social and cultural processes. Thousands of software applications have been offered for common use and developed co-operatively. Sub-Saharan African countries are making a currency out of mobile phone airtime, by-passing expensive money transfer mechanisms. There are moves to open up science publishing. Sometimes my computer makes me sing. Along the South Coast of England recently the six foot long body of a man made of yellow plastic bricks floated onto the beach. People were there to photograph it with mobile phones and cameras, as they were in the tube tunnels in the London bombings and as they were at Abu Ghraib prison. Motivations are irrelevant: the point is that the images, a form of witnessing, came into circulation, and are now almost irrepressible .

These things are known: The labour of users creates value in social networking sites and interactive media productions - but not only there. Book choices I make on Amazon are served back to me as the new books Amazon thinks I may like to explore. As Mark Andrejevic puts it, we labour to be watched (Andrejevic, 2002). Digital surveillance is indistinguishable from digital interaction. Locative, intimate, devices link-in real world physical spaces to the network; bodies begin to be included. The connection extends to genomics: A UK journalist recently had his genome mapped. The results were presented on USB that will self-destruct if hacked. His data record is protected from criminals. It isn't clear who keeps the master copy, but it wouldn't be safe in a Government database: if interaction is surveillance, the bias of databases is that they want to connect. Internet polls, a form of media activism, which is also (but not only) another form of work, have become consumer entertainment: Are you in favour of the digital economy, or against?

Knowledge Economics (I)

Of course, the question is unanswerable in the form proposed. Digitally enabled plebiscite democracy amounts to the digital economy polling itself - and reveals the inanity of the mode of address. More the term itself contains ambiguities and contradictions: the highly compressed textual Wordle above expresses multiple, conflicting, trajectories, proposals, future-visions, anxieties and hopes, all bound up in the digital economy. The term has different (more or less ideological or descriptive) connotations depending on the various contexts within which it is deployed. It tends however to cleave in the end to a naturalized understanding of the natural relationship between (digitally-enhanced) productivity, growth and progress. If it seems worth de-naturalizing this relationship somewhat, this is because I am made uneasy by the circulation and overlaying of a series of recurring epithets used to describe the Digital Economy. For instance as weightless, light, fluid, productive, creative, smart, free, powerful: the future. 'Are you in favour of the future?'

Friedrich Kittler notes that the history of medium technologies is recursive so that the same issues are taken up 'again and again at regular intervals'

although 'with different connotations or results'. (Kittler in Armitage, 2006: 33). The return to these issues is made as if they were new so that amnesia is also a characteristic element of the cycle through which new technologies become old and are replaced or upgraded (Bassett, 2007). These recursive/amnesiac qualities pattern the development of digital systems – informing the way in which a series of claims made for technology's transformative power grow, fracture and are re-built, with every new innovation. The history is complicated by the different forms memory may take: What people forget, computers may 'remember', techno-cultural forms inscribed in hardware or software commonly persist after the social formations that produced them have passed away - what was 'built free', for instance, may be difficult to commoditize, or close down. These dynamics condition new claims being made for 'intelligent' technologies central to the evolution of the Digital Economy.

Knowledge Economics (II)

This much the web knows: Much more than it used to. And it will know more. New developments in the digital economy, variously labeled as web 3.0, the semantic web, the social semantic web, the Giant Global Grid, all describe forms of intelligent computing and intelligent computing environments. The 'network of technologies and institutions that 'allow cultures to select, store and process relevant data' (Kittler, cited in Armitage, 2006: 37) are once again being re-shaped. Exploring this process in a different era, Kittler once said that cinema dreamed of itself. If a prevalent version of web 3.0 is realized, the semantic web will understand its own content - or will at least be able to compute it.

A Wikipedia entry defines the semantic web as 'a vision of information that is understandable by computers, so that they can perform more of the tedious work involved in finding, sharing and combining information on the web'. The work of watching or making may be made less tiring, through its intelligent automation, but the productivity of our informational and laborious leisure will increase by virtue of the powers we delegate to our new digital butlers, even as we are less active. (*If* we are less active; post-war US housewives worked harder

than ever in their labour saving appliance filled kitchens. Technology makes its own demands). There is more to this than a simple release, the granting of freedom from tedious work. If information of all kinds is worked upon by and between machines, humans' relationships also change.

In the 1990s the artist Harwood described the hygienic distance computers place between those who act upon others. The evolution of new forms of 'intelligent' delegation widens that distance. Decisions previously personal, close-up, may become actions taken according to domain rules and general principles, actions for which nobody is truly responsible or accountable. It might be said that these are decisions that are no longer available to experience. This is already the case for many aspects of contemporary web use, as Adrian MacKenzie notes in work on wireless as an experience of transition (MacKenzie, 2007). In a semantic web this realm expands to include many more forms of activity, which are, in a sense automated out of sight.

This process is consistent with the general trajectory of human computer interaction design, which has tended to discourage looking inside or human in-sight. The point of invisible computing, after all, is to make technology vanish as far as is possible. The difficulty is when what is made invisible is the capacity to know what is being disappeared. Somnolent or literally absent-minded productivity however comfortable is a disturbing image. And, how is this comfort built? What is its counter-weight?

This much I demand: Forms of thinking about designing the future (future informational objects) based on principles of 'making visible'. There isn't necessarily a contradiction between building in new forms of visibility and transparency as part of a design agenda that includes post-interface, intimate, pervasive, ambient computing. The point is a new negotiation. And one that is constructed partly in code, using new tools to make new tools visible. For instance, would it be possible to design something that signals, even as it is used absent mindedly, what it is that that is being given and gained, what it is that is being taken and used (which bits of earth, whose labour – yours and other peoples?) An ethical

internet would articulate, as a dimension of its intelligent operation, the relations of production and consumption each operation it computed contained - whether 'we' carried out these operations, or our machines did it 'on their own'. To build this kind of awareness of these kinds of multi-accented footprints - the carbon cost, the labour relations, the long shadow of our own intersections, actions and reactions - would be to develop an ethical internet. This would operate beyond privacy with a responsible sense of the visual. It would perhaps constitute a smart form of Fair Trade.

References

ANDREJEVIC, M. 2002 'The Work of Being Watched: Interactive Media and the Exploitation of Self-Disclosure', Critical Studies in Media Communication, vol. 19, no. 2, 230-248

ARENDT, H. 1998 *The Human Condition*, Chicago, Chicago University Press

BASSETT, C. 2006 Cultural Studies and New Media: On Being Less Forgetful, in *New Cultural Studies, Adventures in Theory*, Edinburgh, Edinburgh UP. 220-238

HARWOOD, G. 1997 Interview, in GRAHAM, B (ed) *Serious Games*, London, Barbican Art Gallery, 38-41

LATOUR, B. 2002 'When Things Strike Back', British Journal of Sociology, Millennium Issue.

MACKENZIE, A. 2007 'Wirelessness as experience of transition', Fibreculture, 13 (special issue 'After Convergence, What Connects')
http://journal.fibreculture.org/issue13/index.html

opposite: Charlotte Knox-Williams
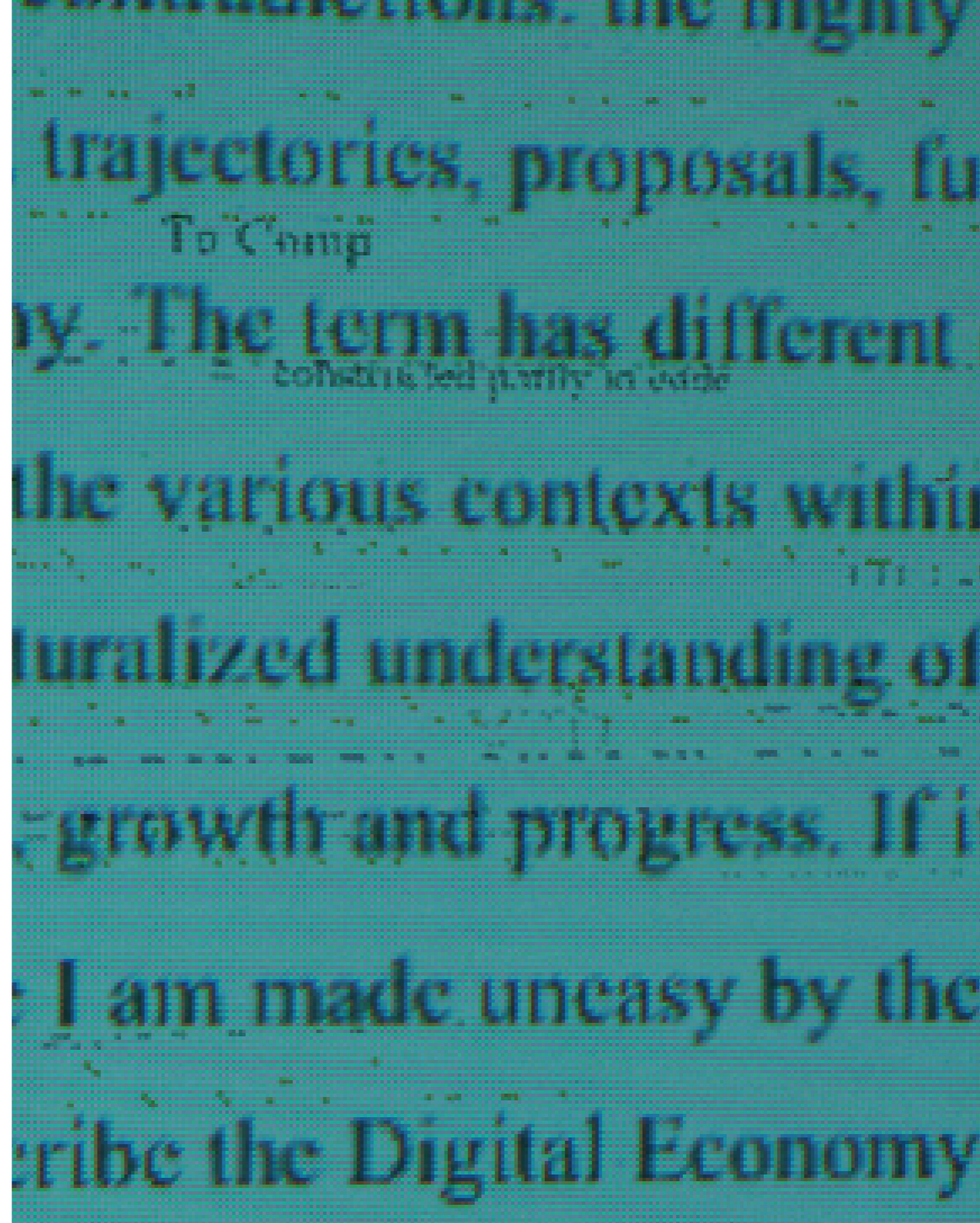
(Danny Aldred)

Claire Barber

You are the Journey: Public Art in Your Pocket

Art Plus is an Arts Council England and SEEDA (South East England Development Agency) Award Scheme for Art in Public Places. Place Space and Identity 2 is a response to the social economic and environmental changes taking place in North Staffordshire and is a strategic initiative funded by Arts Council England West Midlands, Renew North Staffordshire, and Stoke City Council, and managed by B Arts. www.placespaceidenitity.net

A bus ticket may seem a rather small and throwaway space for a public artwork. However it is the ticket's facility to reach so many individuals on a very immediate and human level during their journey that fascinates me. As a ticket is bought, handled, stuffed into purse or back pocket it presents a discreet level of human intimacy that contrasts with the digital and mechanical functionality of the ticket as artefact.

You Are the Journey originated on the Hythe to Southampton Ferry Ten Journey Ticket. In collaboration with the artist R.A.Webb and with support from an Art Plus Award we redesigned the front of the ticket asking commuters to write a few words during their journey. The commuters' responses were then repositioned in the spaces where the tickets are clipped creating an ephemeral poetry and weaving social patterns that were erased through a punch hole each day.

My teenage step-son noted at the time that he doesn't always carry a pen on a journey, but he would rarely leave the house without a mobile phone.

I was commissioned, in November 2008, to develop You Are the Journey: North Staffordshire for Place Space Identity and I am now in the process of executing the work. By posing questions on the reverse side of each bus ticket in the North Staffordshire region passengers will be enticed to text in responses to their journey. As Dr. Caroline Bassett puts it images taken with mobile phones become a form of witnessing, which I seek to harness, develop and reveal as public art, using the immediacy and transportability of text messaging to capture peoples thoughts, insights and ideas at a particular moment in time.

The first batch of 367,000 bus tickets was released on 8th December 2008 on the First Group fleet of buses leaving the Hanley and Adderley Green depot, Stoke-on-Trent. Many of the texts received in my 'in box' were subsequently printed onto the back of bus tickets early in 2009 subtly revealed through the subliminal texts covering the back of their ticket, but being read through the front, working within the economy of thin bus ticket paper and non archival inks.

Ella Clocksin
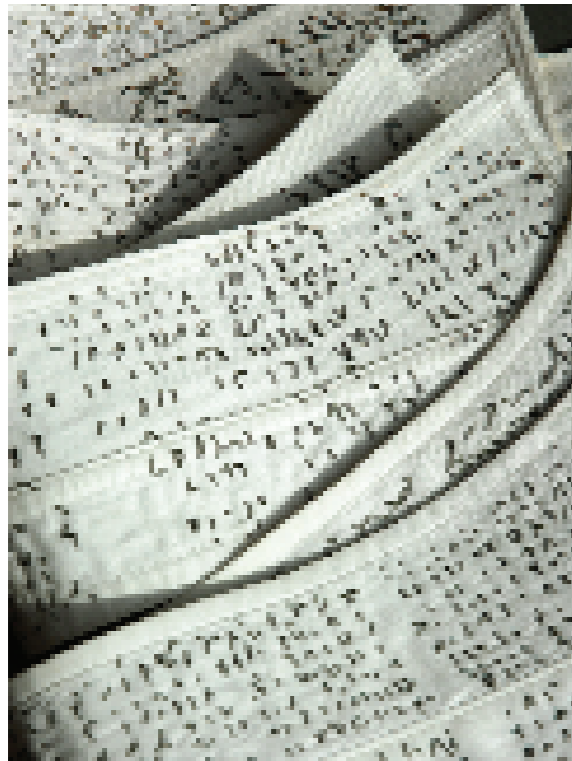
Slippage

In the digital economy, context, communication and meaning can drift apart, militating against the visibility and transparency called for in Caroline Bassett's essay, *To Compute the Meaning of Words: The Digital Economy*. *Slippage* uses code-like symbols, and the differences that occur with their repeated transcription, as a visual metaphor for the exchange of digital information. These marks are hand-stitched onto a series of five vintage shirt collars, which recall the era of pioneer computer programming in the 1940s. The enigmatic nature of the marks probes some of the ambiguities that computer programming has produced. The advantages of instant communication and access to unlimited information cannot be understated. However, the proliferation of context-free, disembodied, digital material has not always produced more discriminating use of information, while inattention to issues of privacy has well-documented drawbacks.

In *Slippage*, hand stitching re-embeds the physical rhythm of the body - lost in digital text - into the marks, slowing down time to that of painstaking, character-by-character transcription. It also creates a deliberate process of visual slippage through repetition and transfer of the marks from one collar to the next, which produces a slightly different version each time. Moreover, the lines of thread on the reverse side acquire calligraphic form themselves. Unreadable writing implies that there is something to say, even without an interpretive key. The opaque texts in *Slippage* suggest that information may appropriately be contained or withheld, with a re-stating of boundaries between public and private domains. They hint at the pleasures of inaccessible communication and a poetics of reticence.

images:
Ella Clocksin
Slippage (2009)
Men's vintage cotton collars, stitched cotton thread
Average size, approx. 43 x 10 x 0.3 cm
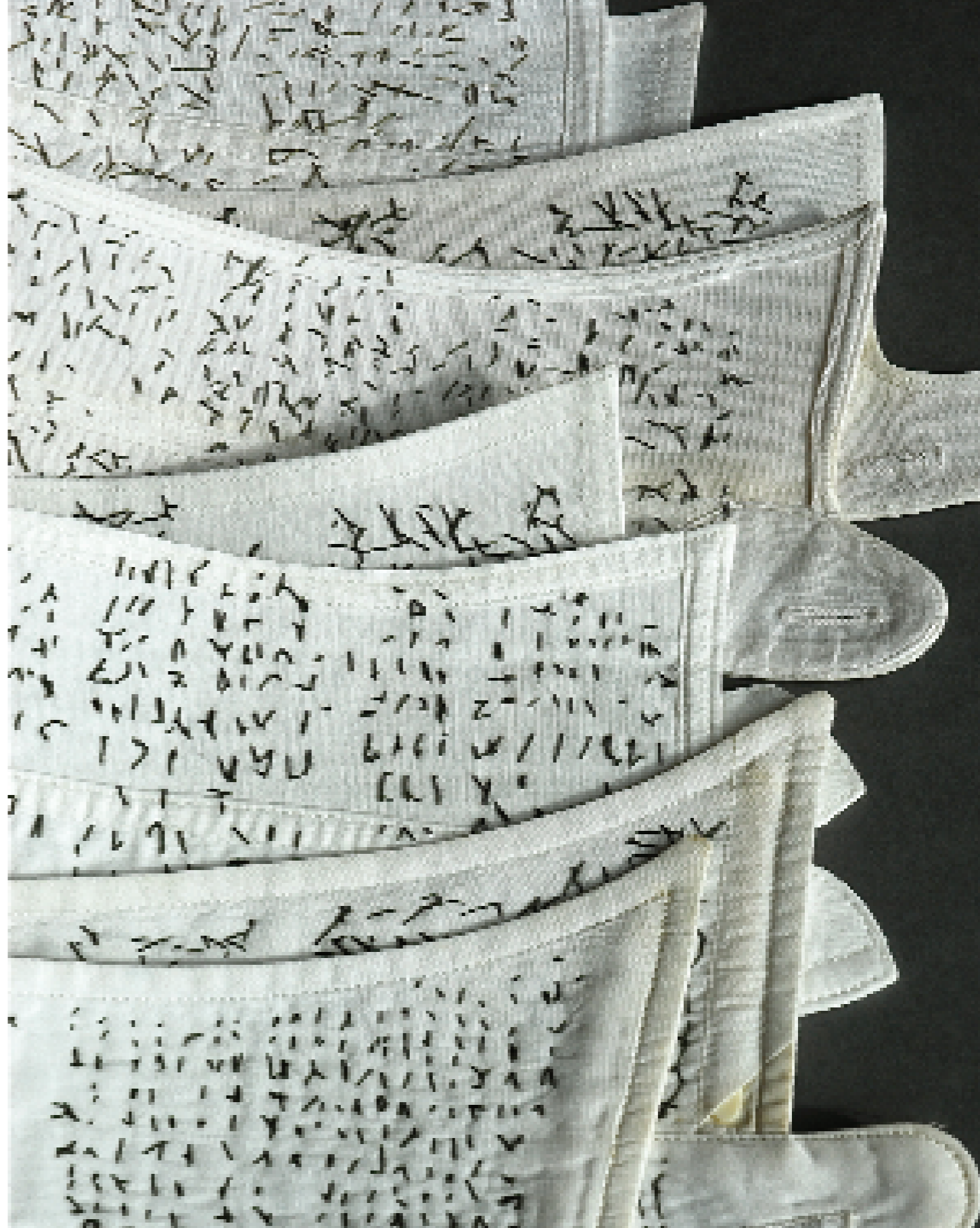
John Gillett

Are You in Favour of the Future?

I am here in frustration of my own firm intentions. This anthology is meant to demonstrate, amongst other things, the ability of artists and designers to address any issue that needs addressing. Knowing that significant numbers of my colleagues were bound to be irresistibly drawn to any digital theme - because the encroachment of the digital on the 'old ways' is as live an issue and as much an opportunity in our disciplines as it is in most other walks of life - I forswore it. Yet resistance is indeed futile. For here I am. And the reason is the very particular qualities of Caroline Bassett's text. It yields a clear set of messages, offered up over successive readings, about the beguiling lightness of the digital realm and the harshness of the economic realities which it is bound up with and yet conceals. It is a text that in its richness mimics the underlying complexity of the digital realm, but its effective interface is a series of simple vignettes, vivid and pictorial. My response is an urge to illustrate it, to make its visual qualities real.
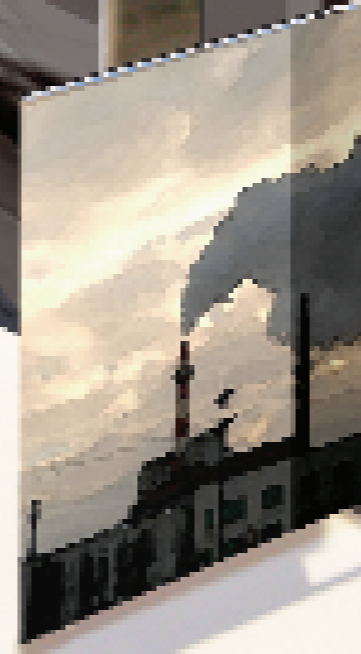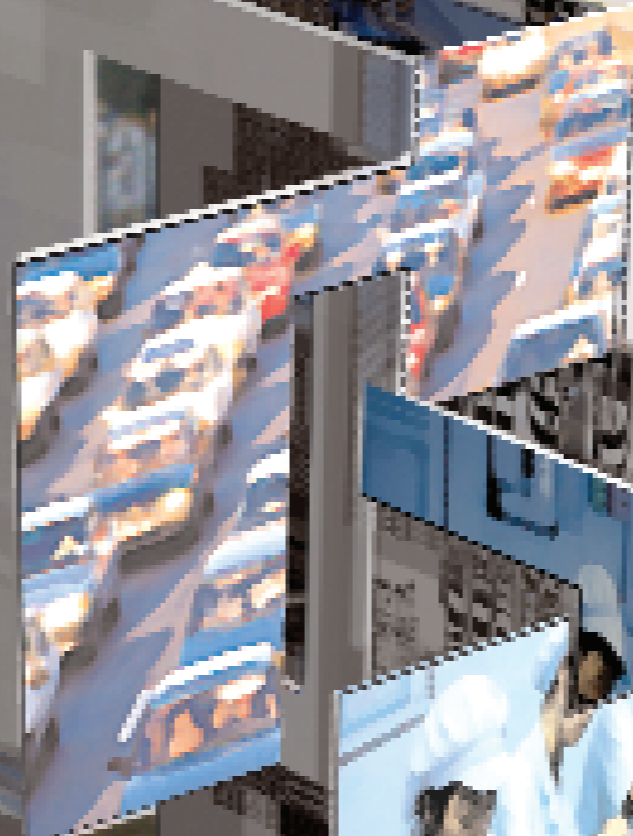
The exercise became the occasion to attempt a design development of the basic mechanism of the paper pop-up, to make it not so much pop up as flip over; to use the simple visual vocabulary of nursery books to parallel the effect of the little pictures conjured up by the text, and very literally flip the image, to reveal what might lie behind it.
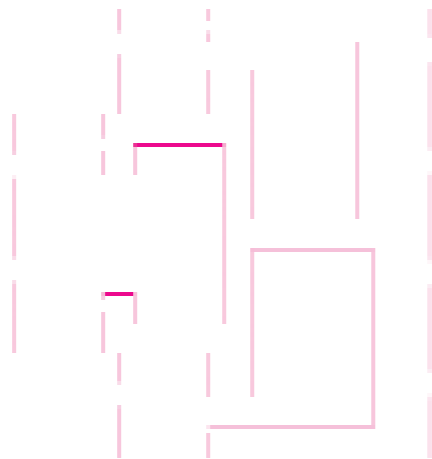
Dr. Beth Harland
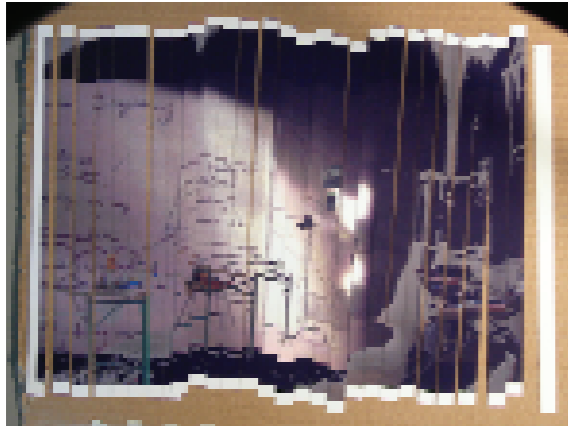
To Compute an Impossible Image

The point of invisible computing, after all, is to make technology vanish as far as possible. The difficulty is when what is made invisible is the capacity to know what is being disappeared. (Bassett, 2008)

Response

In responding to ideas around invisibility and the hidden in the digital economy explored in Caroline Bassett's text, I wanted to develop a process through which to re-frame a series of images, using temporary modes of ordering which might both reveal and conceal. This has involved applying a number of references and processes in the reconfiguration of an image, or rather in the attempt to compute an 'impossible image' (Melville, 2001). I've borrowed the model of making utilised by the French painter François Rouan - 'tressage' - which involves the re-organisation of an image through the interruption of a second image in a process during which they are sliced and literally woven together. This process offers a means not only to address questions of image and sense and painting's basic pre-occupation with surface/depth, figure/ground, but also to engage the territory of the digital, operating as it does in terms of zeros and ones; on/off, visible/invisible.

In my research I have explored the potential impact of digital imaging in re-conceptualising painting's temporality, viewing the spatial and durational aspects of the digital as a means of expanding painting's topography. Against this backdrop I here re-make some of my own, and source images, using both actual tressage on printed material, and digitally produced tressage. Bassett points to the hidden weight/cost of the digital economy, and suggests that a process of making visible – a re-making applied to a system - might reveal something of the system's operation. In this work I make a parallel action, a piece which results in having the image reveal its ground; an image *showing through itself*. Here visibility is explicitly a function of materiality and the process of showing leads also to concealment.

I wanted to make a work that reflects something of the ambivalence often experienced in our relation to technology as it inflects our sense of identity, an ambivalence which I read in Bassett's text, a double-edged proposition; the digital economy as pleasure and anxiety.

Over-under

Jean-Luc Nancy explores the territory of ground/image/sense, repeatedly coming back to metaphors of weaving: 'Sense consists only in being woven or knit together. Text is textile; it is the material of sense.' (Nancy, 2005: 66). And of course, the early development of the computer is linked to the punch cards of the automated loom. Sadie Plant traces this path via Ada Lovelace and Charles Babbage (whose 'Difference Engine' was otherwise known as a 'thinking machine'), '...a gathering of threads which twist and turn through the history of computing, technology, the science and arts...' from automated weaving to '...the Net, the matrices to come'. (Plant, 1998: 12)

Writing of Rouan's woven tressage works, Stephen Melville comments that here 'beneathness' is an unequivocal dimension of the painting, 'an integral condition of its surface.' (Melville, 2001: 146) In this process of making, the surface is fundamentally restructured, 'surface as everywhere punctuated or interrupted by its depth' (Melville, 2001: 146). Depth is, in an entirely explicit way, a condition of surface, and as Melville points out, it is because the painterly depth is interpreted by tressage 'as a structural fact of surface' (Melville, 2001: 146) that the process has been linked to psychoanalytic thinking.

Rouan's works prompted comment from Jacques Lacan in the form of a series of enigmatic notes and diagrams for the catalogue of his 1978 show in Marseilles. Lacan's text critiques the artist's method, and seeks to replace Rouan's woven technique with the three strands of a braid (drawing no less than 17 diagrams, he presses the alternative model of a Borromean knot) which at first sight might be seen to correspond with his three registers of the Real, the Symbolic and the Imaginary. The writer Hubert Damisch (an early champion of Rouan) counters this viewpoint, claiming that by painting on the woven bands, the artist 'does in fact make something structured as a braid' (Melville, 2001: 242). This seems to me an accurate observation, and what appears to be missing in Lacan's piece is an understanding, beyond the surface, of what occurs in the thing itself and the process of its making.

Through working with the process myself (both in the form of woven printed images, and tressage

produced entirely digitally) I was intrigued by this sense of different registers and the slippage that occurred in relation to the images. In wanting to retain something of the original connection I had to the chosen source material, I found the 'threefold' experience (the two images, plus process, leading to a third almost completely unknowable image) puzzling, even disarming. It seems to me that this process does encompass Lacan's three orders, as Melville describes them: 'one brute and contingent, one lawful, and one arising as *the impossible image of their possible harmony or synthesis...*' (My emphasis) (Melville, 2001: 242)

Framing in the digital economy

In the works produced here, image is destabilized, fractured and re-built – a process referred to by Bassett as the condition of medium technologies, figured as repetitive modes wherein repetition generates difference, and forgetting: 'These recursive/amnesiac qualities pattern the development of digital systems...' (Bassett, 2008: 2)

In this process the image becomes data
In this process the image forgets itself

The method throws open the surface of the image, impacting in a radically 'anti-compositional' way on its very identity. In support of this effect, Damisch connects tressage with an effort to oppose the stronghold of perspective over painting, a notion which he expands in his fascinating text Theory of Cloud. (Damisch, 2002). The kind of space engendered by digital imaging, which I have argued elsewhere is haptic and aggregate as opposed to optic and systematic (as is perspective), might perhaps be seen to operate in just these terms. I venture that the digital register operates not only a haptic spatiality, but a haptic temporality, impacting upon the identity of image and our relation to it (Harland, 2009).

How do we negotiate an identity in the digital economy, in a situation 'when what is made invisible is the capacity to know what is being disappeared'? (Bassett, 2008: 3) These works attempt to negotiate some kind of position in between the visible points of ground and figure of an image, generated through the contradictory process of showing and concealing, organising and fragmenting.

In this process the autonomy of the image, in a manner that could be seen as akin to the autonomy of the individual, is somehow maintained by a contradiction that surpasses and escapes it

While any sense of cohesion is provisional and open-ended, the method draws attention to the act of framing, a gesture elaborated by Deleuze and Guattari as the necessary condition for the formation of territory, and the making of art '…in order to form a composed chaos that becomes sensory…' (Deleuze and Guattari 1994:206) The attempt of these *interrupted* images might then be to generate sensation in the territory of the digital, in the light of that which remains invisible.

How do we *tell* something of that which we can't quite see? As artists, we make an impossible image of it.

References

BASSETT, C. 2008 'To Compute the Meaning of Words: The Digital Economy'

DAMISCH, H. 2002 *Theory of Cloud*, Stanford University Press

DELEUZE, G. & GUATTARI, F. 1994 *What is Philosophy?* Columbia University Press
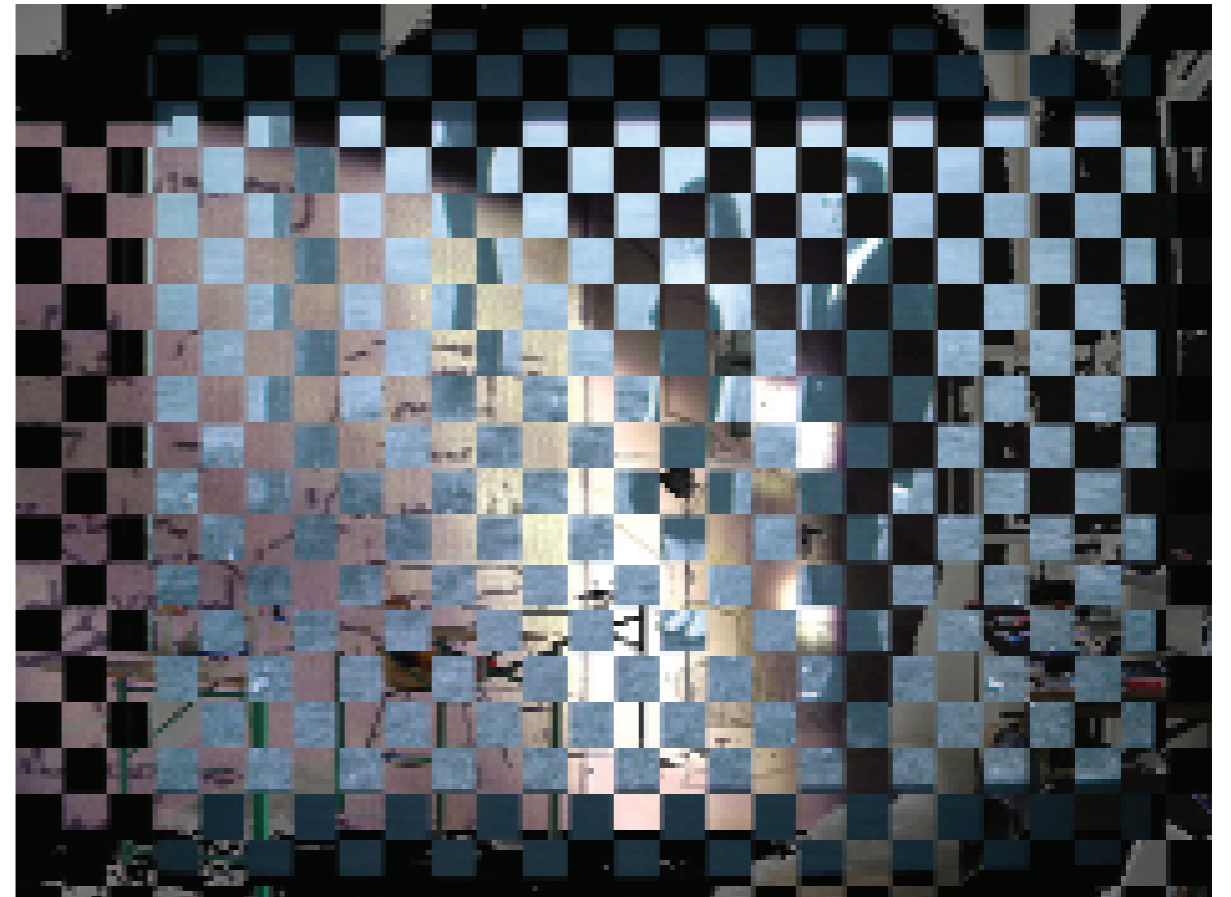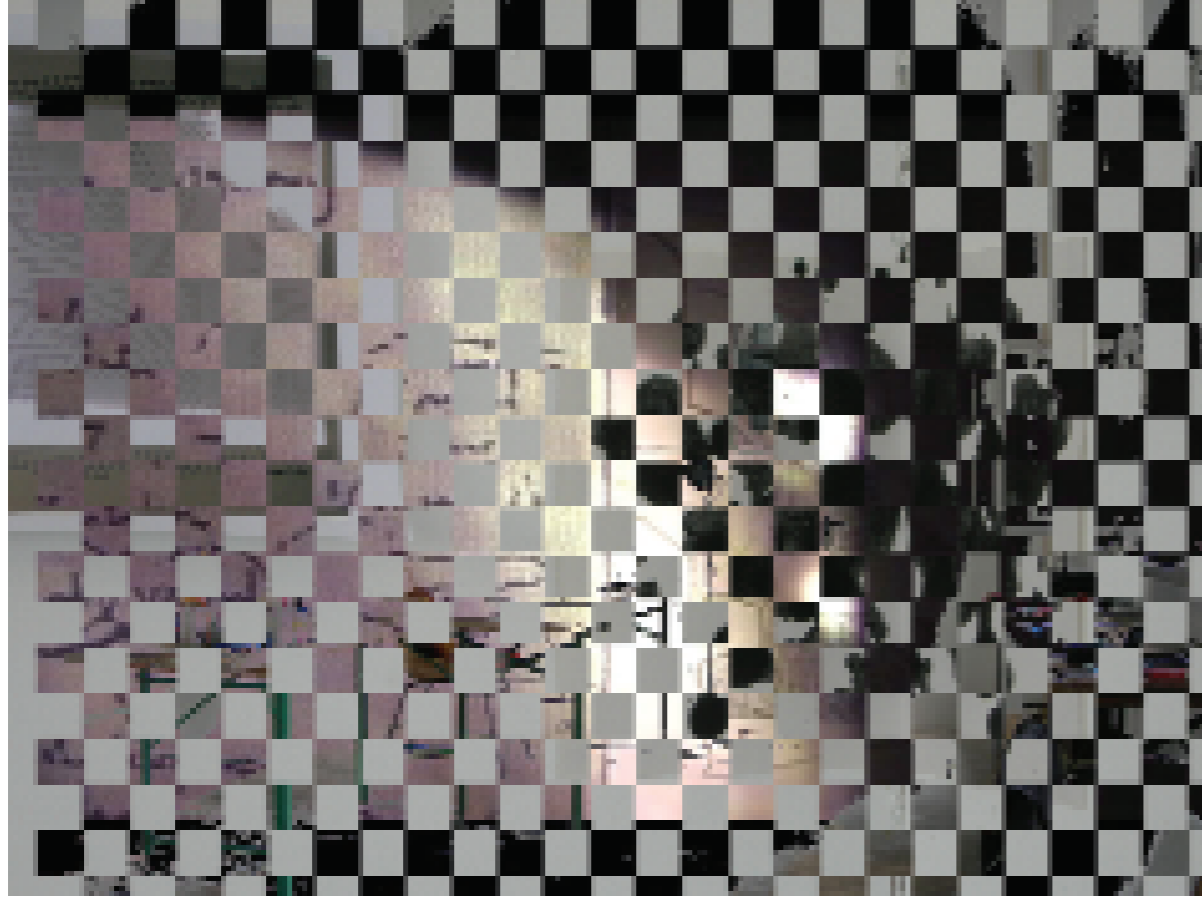
HARLAND, B. 2009 'A Fragment of Time in the Pure State; Painting in Search of Haptic Time' *Journal of Visual Arts Practice* (vol 8, no.1)

MELVILLE, S. 2001 *As Painting: Division and Displacement*, The MIT Press/Wexner Centre for the Arts

NANCY, J.L. 2005 *The Ground of the Image*, Fordham University Press

PLANT, S. 1998 *Zeros and Ones*, Fourth Estate

Charlotte Knox-Williams

Transactions with the virtual

When everything moves, physical 'packets' as well as informational ones, the distinction between material goods and symbolic ones threatens to dissolve, to become motion blur, screen-captured, but not understood as material. (Bassett, 2008)

Bassett describes the digital economy as one essentially concerned with transfer - the transfer of goods and information, the exchange of value through social networking sites, and the process of technological advancement. This transportation is described as resulting in loss of separation between the digital and the concrete and subsequently in various levels of memory loss. Through 'transformative integration, translation and relay' (Bassett, 2008) between the digital and the analogue, the virtual is realised, and the transactions between the actual and the digital become the components of an archive of these transitional states. In understanding them as such, it becomes possible to conceive of a means of the virtual storage and retrieval of the altering structure or system thereby created, and in this way of addressing the 'amnesia' that Basset argues is inherent within the digital economy. (Bassett, 2008)

Derrida described an archive of the virtual as impossible, as being composed of events that were somehow divorced of any relation to actuality or physicality. (Derrida, 1997) Indeed, a digital document might be considered to be closest to this conception of a virtual event; A store of the immaterial, with indefinite and amorphous structures of space and time within it. (Ng, 2007) However, whilst such an event might contain possibility, closer inspection reveals that the virtual lies not within the digital but within the very transitions that take place between digital documents and concrete manifestations. The mutability of digital documents necessitates a relationship with the concrete in order for them to become virtual because digital documents are resolvable to indistinguishable, interchangeable bits of code and therefore merely contain complete possibility. (Massumi, 2002) Rather than viewing the informational or digital as having control over materiality, the virtual is a means of revealing a mode of thinking that proves useful in re-aligning the relationship between the material and the digital; virtuality is the understanding that 'material objects are interpenetrated by informational patterns' (Hayles, 2000)

Remaining inaccessible and immaterial, the virtual is nonetheless real. Zizek gives the example of an

attractor in mathematics: 'The existence of this form is purely virtual, being nothing more than the shape toward which lines and points tend. However, precisely as such, the virtual is the real of this field.' (Zizek, 2004) By this understanding, the archive must be made up of precisely the structures of translation, the effects and causes of virtuality.

An archive of the virtual is possible and useful because it deals not with the history of the development of the technological systems, nor with past iterations of packets of information or material goods. This archive instead acts as the basis for the formation of a system for understanding the transactions, translations and interactions between them. (Spieker, 2008) This system is one 'that is perpetually in construction or collapsing, and of a process that is perpetually prolonging itself' (Deleuze & Guattari, 1988) It is a system, an archive of the virtual, that can be thought and therefore accessed.

This developing conception of virtuality has implications for the specific kind of digital document that this research process is dealing with: A digital text. Reading lies 'When everything moves, physical 'packets' as well as informational ones, the distinction between material goods and symbolic ones threatens to dissolve, to become motion blur, screen-captured, but not understood as material.' (Bassett, 2008) between the concrete and the immaterial and is rendered virtual in that the mental processes involved are necessarily accompanied by physical movements. Reading is one of the processes that renders the digital document virtual. Bergson (2004) agrees: 'Virtual sensations themselves, in order to become real, must tend to urge the body to action.'

'The virtual is best approached topologically', (Massumi, 2002) that is, through transfer, movement and translation. Written language is a primary tool of the archive, and forms a site for metaphor. Metaphor is the carriage, transport or transfer of meaning from one context to another. Often, the words remain in their new location long after the original context that leant the metaphor its meaning has dissolved. These remaining structures allow the re-excavation of the original meaning. The persistence of the evidence of these transitions

despite the structural elapse of context is one of the features of an archive of the virtual. 'The history is complicated by the different forms memory may take: What people forget, computers may 'remember', techno-cultural forms inscribed in hardware or software commonly persist after the social formations that produced them have passed away. ' (Bassett, 2008)

The digital text of Bassett's essay has formed the basis for this research, and it is vital to establish the relevance and importance of the concept of transfer throughout. Transitions and interrelations have informed methodologies, resulting in a constant interrelation of reading, writing, looking, documenting and drawing in relation to image and text. The archive of the virtual can only exist and can therefore only be useful here in relation to the concrete, that is, through systems of practice and approaches to materiality within research.

Virtuality allows the consideration of human and digital memory as linked within the same system or structure, thereby allowing for retrieval through an archive of this sort. Virtuality is pure recollection, however, 'There is no virtual which does not become actual in relation to the actual, the latter becoming virtual through the same relation: it is a place and its obverse which are totally reversible. ' (Deleuze, 1989) In order to exist, this archive must be one that develops through process and within the schism between actual and digital. Its index, the form of its making remains as a means of re navigating it.

The drawing manifests, continually archives the condition of the virtual text. This text is not virtual because it is digital, but virtual within the states of pure transfer operational within its becoming. 'The point of invisible computing, after all, is to make technology vanish as far as is possible. The difficulty is when what is made invisible is the capacity to know what is being disappeared. ' (Bassett, 2008) It is this issue of disappearance of the structures and evidence of transfer that an archive of the virtual can resolve. Itself 'based on principles of 'making visible' (Bassett, 2008), the structure can reveal modes of procession and translation between the digital and the concrete.

This research has aimed at 'a new negotiation. And one that is constructed partly in code, using new tools to make new tools visible.' (Bassett, 2008) The drawing forms both a kind of index and archive; A positional navigation of transfer mechanisms between the digital document and the actual surface. Revealing the structures and creation of an archive of the virtual, the drawing is neither a trace nor an outline. Rather it attempts to visualise a record of the materiality of the digital itself, the structure of the text as an image. Forming a record of it that is a plotting, a process of charting between portions or segments of the essay and this writing as it has developed. 'Images of the virtual make the virtual appear not in their content or form but in fleeting, in their sequencing or sampling' (Massumi, 2000)

References

BASSETT, C. 2008 The Digital Economy

BERGSON, H. 2004 *Matter and Memory* London, G.Allen & Co.

DELEUZE, G. 1989 *Cinema 2: The Time Image* London, Routledge

DELEUZE, G. & GUATTARI, F 1988 *A Thousand Plateaus: Capitalism and Schizophrenia* London: Athalone Press

DERRIDA, J. 1997 *Archive Fever: A Freudian Impression* Chicago, University of Chicago Press

MASSUMI, B. 2002 *Parables for the Virtual: Movement, Affect, Sensation* London: Duke University Press

NG, J. 2007 'Virtual Cinematography and the digital real: (dis)placing the moving image between reality and simulacra.' Sutton, D, Brind, S, Mackenzie, B Ed. *The State of the Real: Aesthetics in the Digital Age* London: I B Tauris

HAYLES, K. 2000 'The condition of virtuality' *The Digital Dialectic* Cambridge, Mass: MIT Press

SPEIKER, S. 2008 *The Big Archive: Art form Bureaucracy* Cambridge, Mass: MIT Press

ZIZEK, S. 2004 *Organs without bodies: Deleuze and Consequences* London: Routledge
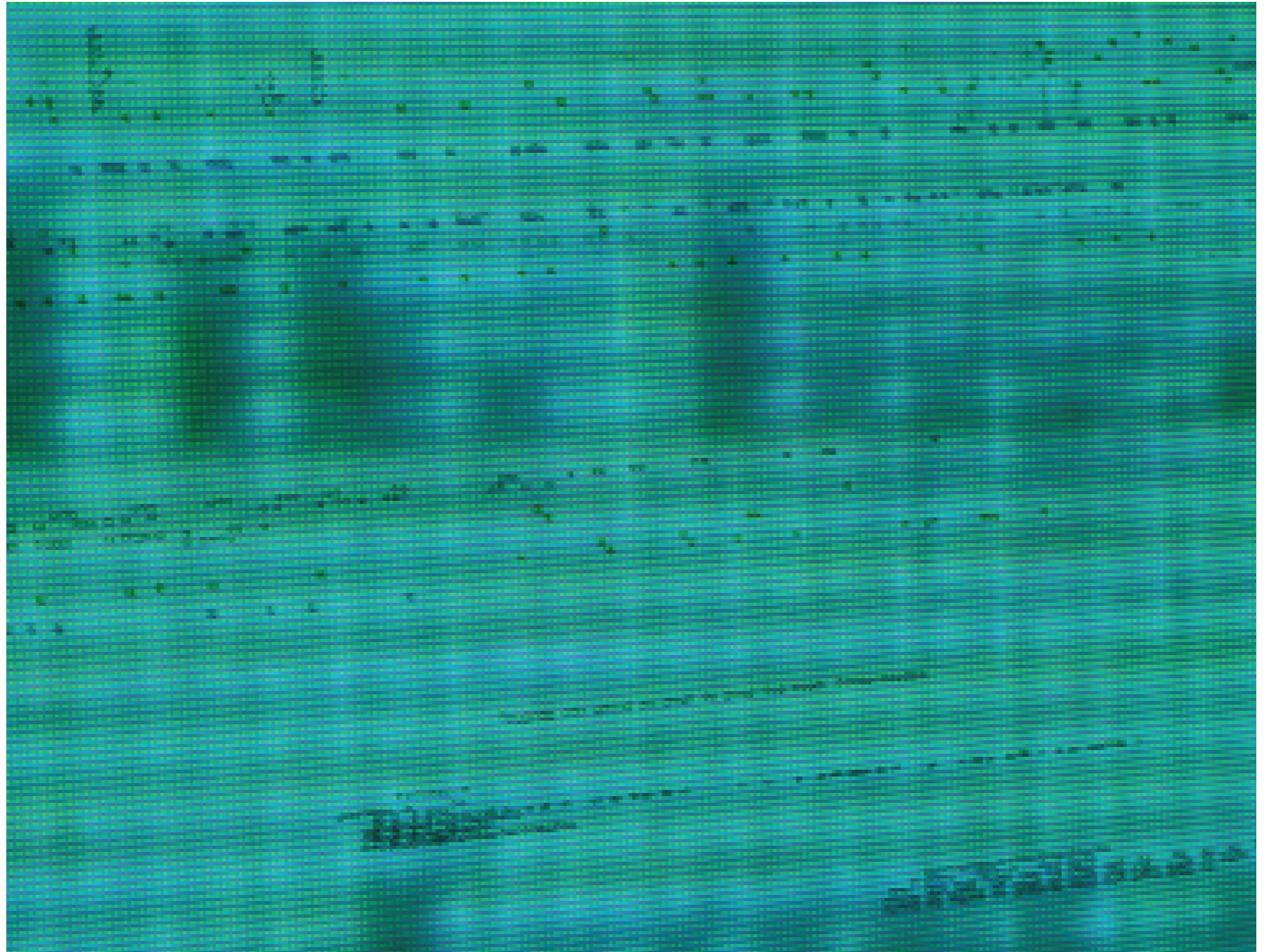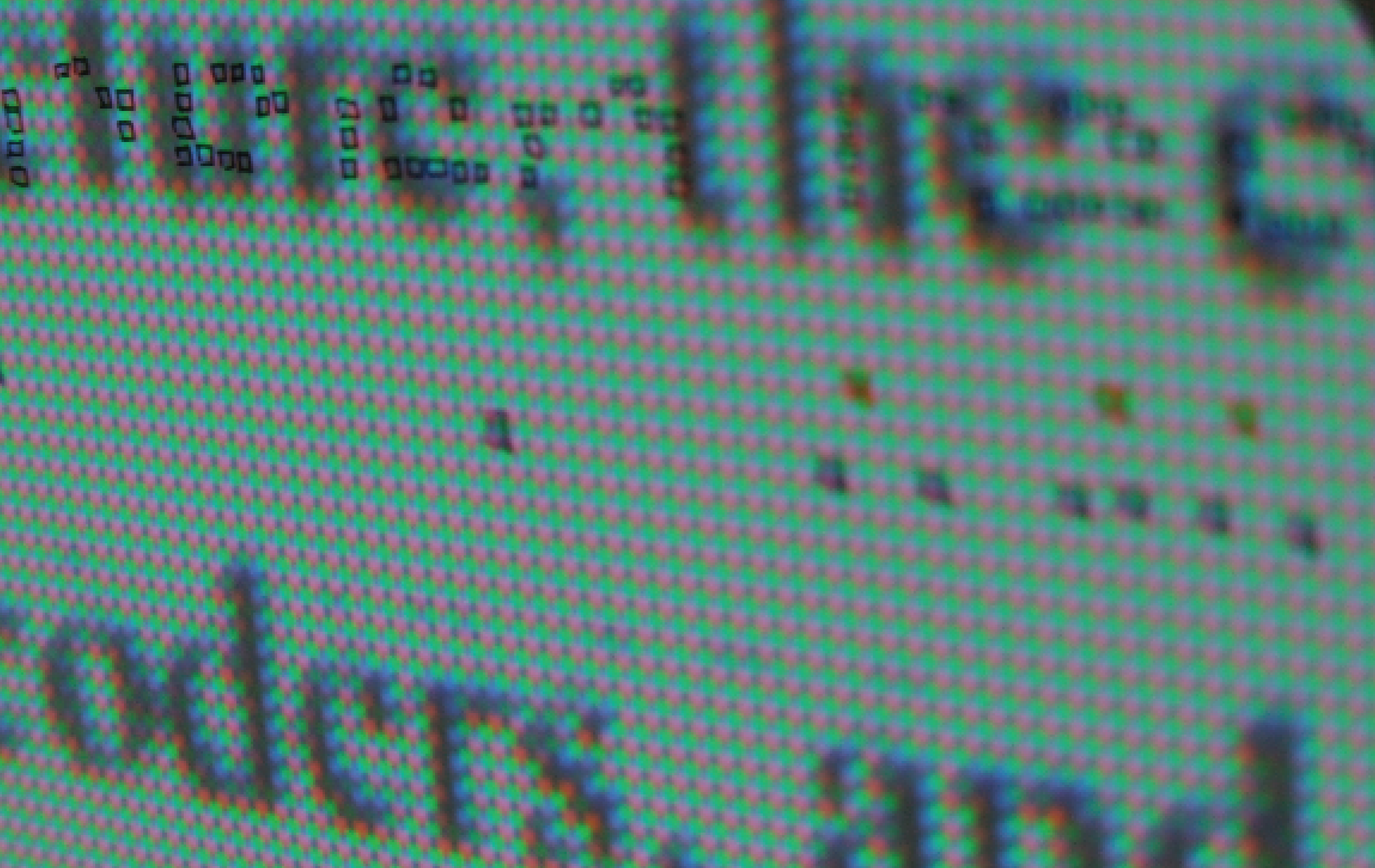
pressed

visions,

or less

ich it is

natural

Yonat Nitzan-Green

in collaboration with Lamees Khoury

Between Knowledge and Understanding

The point of invisible computing, after all, is to make technology vanish as far as is possible. The difficulty is when what is made invisible is the capacity to know what is being disappeared. Somnolent or literally absent-minded productivity however comfortable is a disturbing image. (Bassett, 2008)

1. A denial of knowledge…

'The difficulty is when what is made invisible is the capacity to know what is being disappeared'. I read this statement as a denial of opportunities for new knowledge.

Does it mean that the more we know the more we understand?

Is the disappearing of some knowledge not a normality, a natural phenomena, 'the way things are, anyway'?

If knowledge is being limited or censored, understanding, nevertheless, is not easily shut.

I would like to explore the relationship between knowledge and understanding, based on the inevitability of a certain level of negation of knowledge, inherent in any form of communication, on the one hand, and not knowing as a fundamental condition for making any artwork, on the other hand.

In Gaston Bachelard's words:

Knowing must therefore be accompanied by an equal capacity to forget knowing. Non-knowing is not a form of ignorance but a difficult transcendence of knowledge. …In poetry, non-knowing is a primal condition; … the entire life of the image is in its dazzling splendour, in the fact that an image is a transcending of all the premises of sensibility.

I think that the capacity to know what is being disappeared although invisible, is not inaccessible, because its source is not the digital machine but the mutuality between the machine and the human mind.

I also think that invisibility is not the equivalent of not-knowing.

2. How?…

It seems that the writer is calling for a digital technology which will be able to reflect on its own actions.

It seems that the writer is demanding 'future informational objects' 'based on principals of 'making visible'. The question is what does the writer mean by 'making visible'? Although the text explains one level of meaning within the context of

digital economy, the question that follows is this: Considering the collaborative nature of this project, in which on the other side there is an artist whose regular practice is to make things visible, is language the 'door' to come in? Were these particular words ('making visible') chosen knowingly?

While 'visual' refers to the sense of vision, visible refers to consciousness. Artists use the visual (and audio) to make visible; to illuminate an idea. Yet, a certain level of ambiguity is intrinsic to every artwork. Negotiation, interpretation, knowing and not-knowing, understanding and misunderstanding are words which portrays 'making visible' in the context of art.

Recently a large army exercise took place in Israel, near the border with Syria. This was reported in the army web site (Galei Tzahal). The final words were summed up by the army reporter who interviewed one of the soldiers. To the reporter's request to sum the exercise up, the soldier said "mud, cold and bombs" (Botz, Kor ve-Pa-ga-zim), and the reporter added "three words which say it all".

I have used this little verbal exchange as a starting point for a visual-verbal discourse, using email. I wanted to challenge a certain habit of brief communication. This habit on the one hand is nurtured by long Jewish aesthetic tradition of using as little words as possible to convey a great idea. This 'opens a door' for and invites personal interpretation. In this respect, this tradition is highly ethical, encouraging activism and personal responsibility. On the other hand, this form of communication negates knowledge, and may lead to assumptions and illusion of understanding.

The intention is to shed light on the aesthetic aspect of the 'labour of users', as well as on the digital media itself through the use of email. To engage in reflective practice in which the human and the digital machine collaborate.

References

BASSETT, C. 2008 'To Compute the Meaning of Words: The Digital Economy'

BACHELARD, G. 1994 *The Poetics of Space*, Beacon Press, Boston Massachusetts, U.S.A., 1994, pp. xxxii- xxxiii.
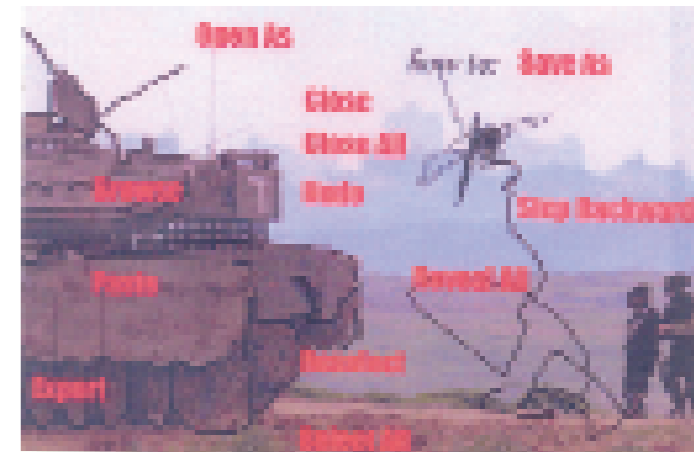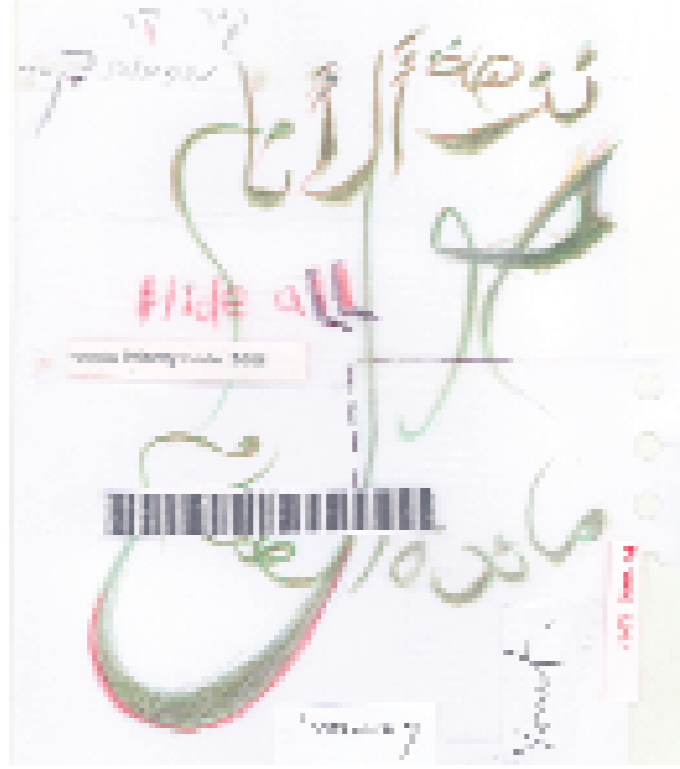
Clio Padovani &
Dr. Paul Whittaker

As we consider the implications of weight and heaviness set out in Bassett's vision of a transparently ethical digital production domain, we are also reminded of how invisible computing has entranced and suspended users in economies of desire.

Where there are calls to return from sentient computing to a system where decision making lies in the realm of experience and human responsibility, we argue users increasingly overcome such tensions by entering domains such as Second Life. Here they succumb to the fantasy of comfort engineered by automated, invisible processing, composing avatars who operate economies built on maintaining the solace of fantasy.

The longed for "freedom from tedious work" becomes then part of a pieced together, layered, quilt or comforter, where the opacity around the processes needed to support desires facilitates "forgetting" and the existence of increasingly superficial networked relations.

In the 19th century, American pioneers recount sleeping under the crushing weight of five or more pieced quilts or comforters. These were stitched together celebrating collective social labour; the intricate patterns, often of feathers, talk of weightlessness in shared work.

Screen work, digital work now, propels us into realms which offer light and opportunity: their texture however could engage us in density, not as a companion to experience and reality, but as that which propels us towards somnolent, comfortable amnesia.

Transgression of the law: enjoyment is attainable if only it were not forbidden.
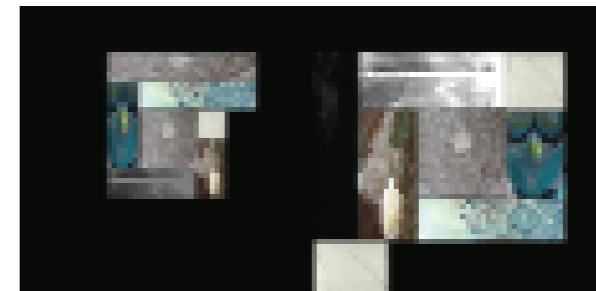
Specular fantasy is an image at work in a signifying chain.

The power of the specular image to capture and captivate in a disabling fixation.
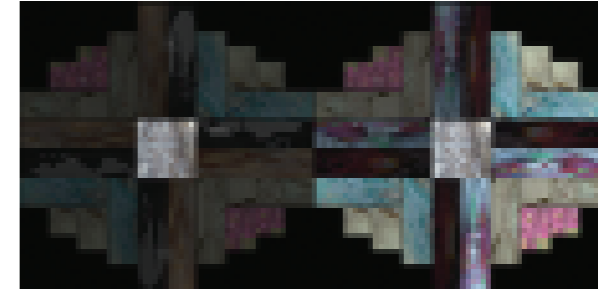
The work of fantasy is to sustain an impossible relation to the impossible.
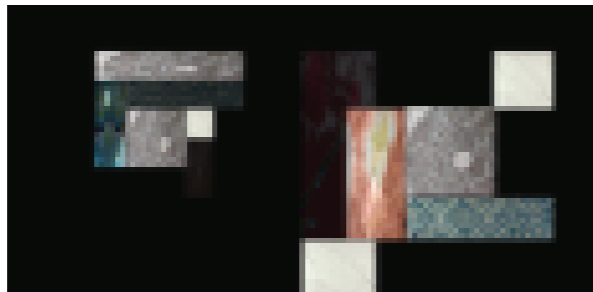
The economy of the specular veil: the staged image of desire allows jouissance in return for a compromised subject.
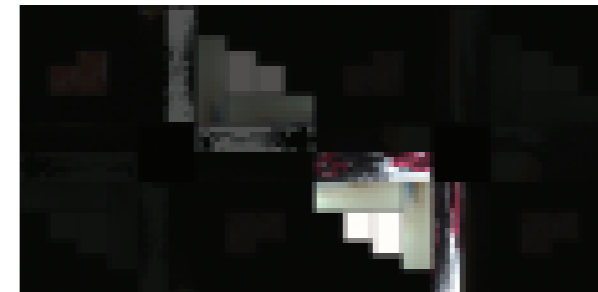
The vacillation of the fantasy image: the specular image is that which enables the subject to sustain desire at the point of the subject's disappearance.

Jill Townsley

Decisions previously personal, close-up, may become actions taken according to domain rules and general principle, actions for which nobody is truly responsible or accountable (Bassett, C. 2008: 3)

I propose to make visible the movements of a computer mouse over a set period of time - repeated. I will make a pantographic-like mechanism linking the mouse to a drawing implement. An image will be made that records the movement of the mouse during a period of general activity.

This Process is consistent with the general trajectory of the human computer interaction design, which has tended to discourage looking inside or human-insight. (Bassett, C. 2008: 3)

The drawing (reminiscent of the process drawings of William Anastasi 'Subway Drawings, 1970's and of the Victorian harmonagraph), is a by-product of the relationship between machine and human. The artist in this case becomes a channel for making visible, the by-product of computer activity – forsaking authorship for the system.

The drawing process is repeated for a set period of time. Each drawing is made on top of the previous drawing, obliterating and adding (The recursive/amnesic qualities pattern the development of digital systems. (Bassett, C. 2008: 2)

However each individual drawing is scanned into the computer that provided the system, providing a systematic accumulative record of each stage of the drawing. The process is repeated many times.

The computer scans accumulate, and are compiled into a time-laps movie representing the build up of marks. In this way the activity is fixed both digitally and within human experience.
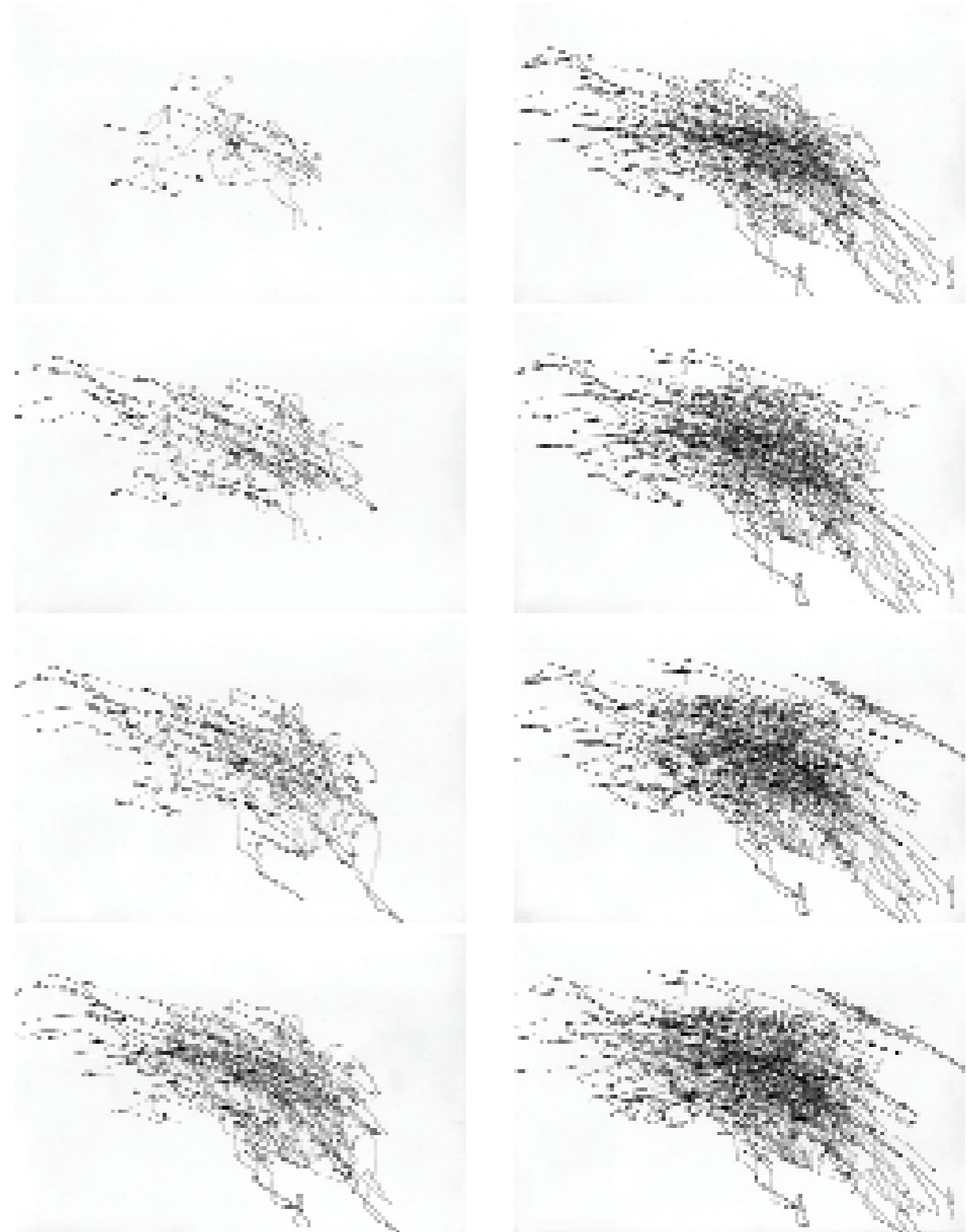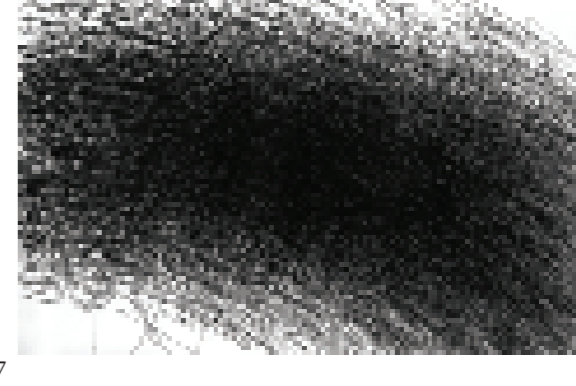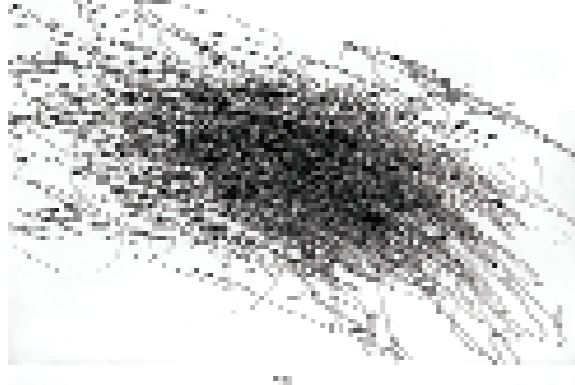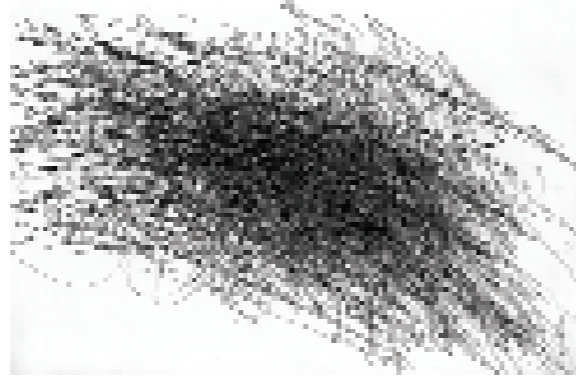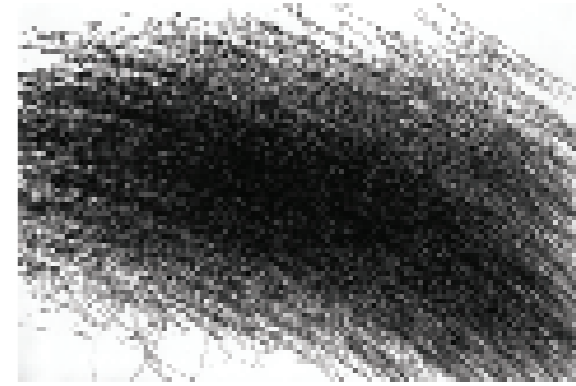
Marius von Brasch

Digital Economy and Memory

In connection to digital economy and the need for 'new forms of visibility and transparency as a part of a design agenda that includes post-interface, intimate, pervasive, ambient computing' I thought to what remains hidden in the net-memory pool as digitalised 'shadows' of an economy of desire. Those shadows would create a virtual presence of force within a 'digital unconscious' - described by Monk as 'disembodied, distributed, collectively constructed and substantive' (Monk, J. 1998: 40).

Digital economy, mirroring the inherent economies of desire, refers to 'future' as durations of transformation of memory complexes, pressured into new states and conditions of becoming. Such psychological transformations have been depicted traditionally in alchemical imagery (Jung 1969; 1980), with great care in Splendor Solis (1532/35), a series of emblematic book illuminations.

What happens to the intimacy and context of such 'hermetic' imagery, uniquely created for initiates and in possession of 'aura' (Benjamin 2002) when they are exposed to and transposed into contemporary contexts and then digitally dispersed on the net?

Although specifically non-verbal communications, such fragmented (and remembered) images have to submit themselves to the mechanistic 'discourse' of html codes, before they can communicate their visuality on the net. Might these files, exposed to arbitrary mechanisms of economy like filed individuals (names) and possibly generating auto-biographies, become 'cryptic electronic effigies' (Monk 1998, 40)?

References

BENJAMIN, W. 2002 'The Work of Art in the Age of Its Reproducibility' in: *Selected Writings* 3. Cambridge, Mass. and London: The Belknap Press of Harvard University Press

JUNG, C.G. 1969 'The Structure and Dynamics of the Psyche' CW Vol. 8. London: Routledge.

JUNG, C.G. 1980 'Psychology and Alchemy' CW Vol. 12. London: Routledge.

MONK, J. 1998 'The Digital Unconscious' in: Wood, J. (ed) *The Virtual Embodied: Presence/ Practice/Technology*. London, New York: Routledge.

SPLENDOR SOLIS [1532/35] 1972 Facsimile of the copy at Staatsbibliothek, Preussischer Kulturbesitz, Handschriftenabteilung. Berlin. Wiesbaden: Verlag für Wirtschaftsschrifttum.

361_369.jpg
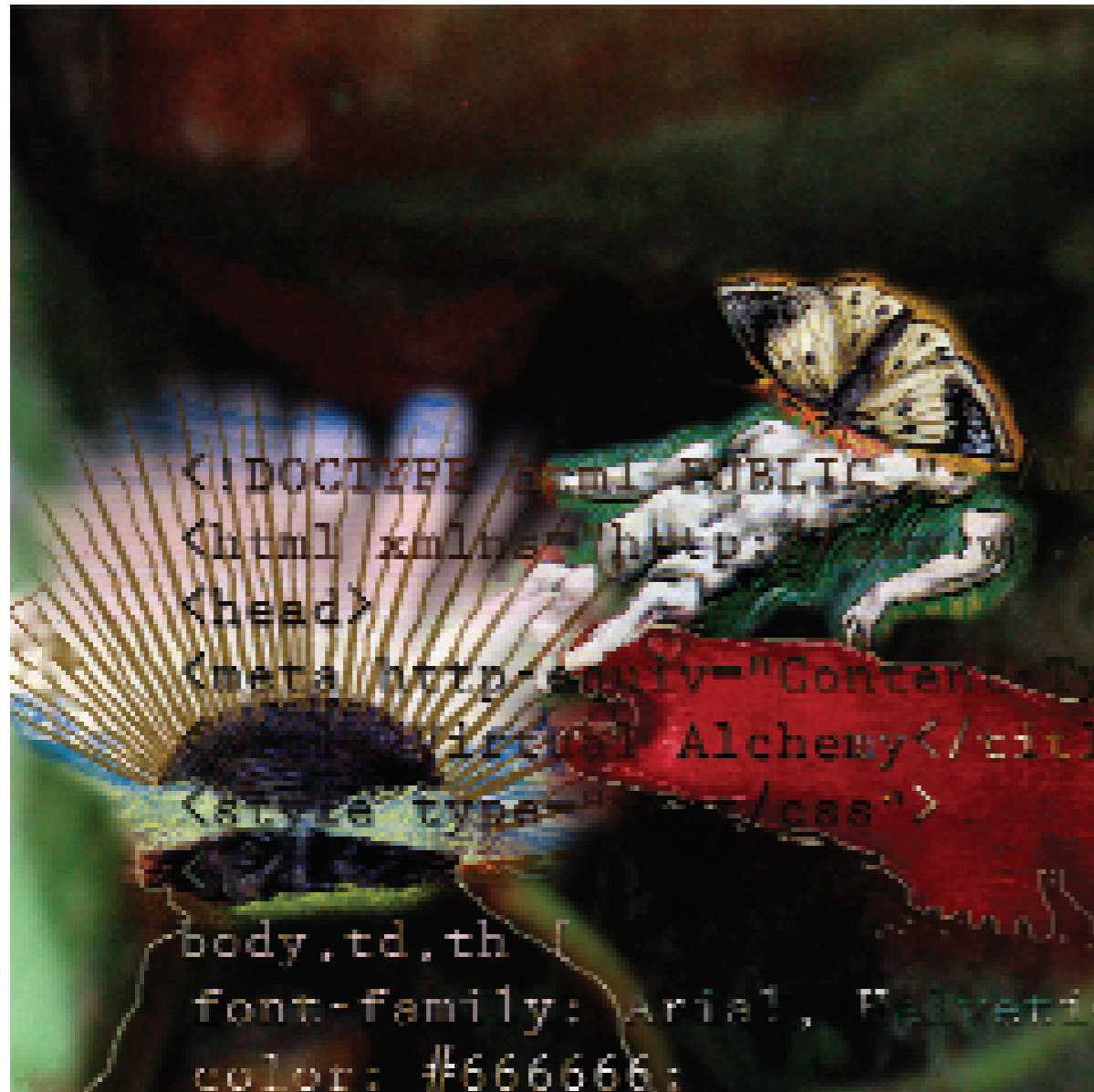
body_td_th.jpg
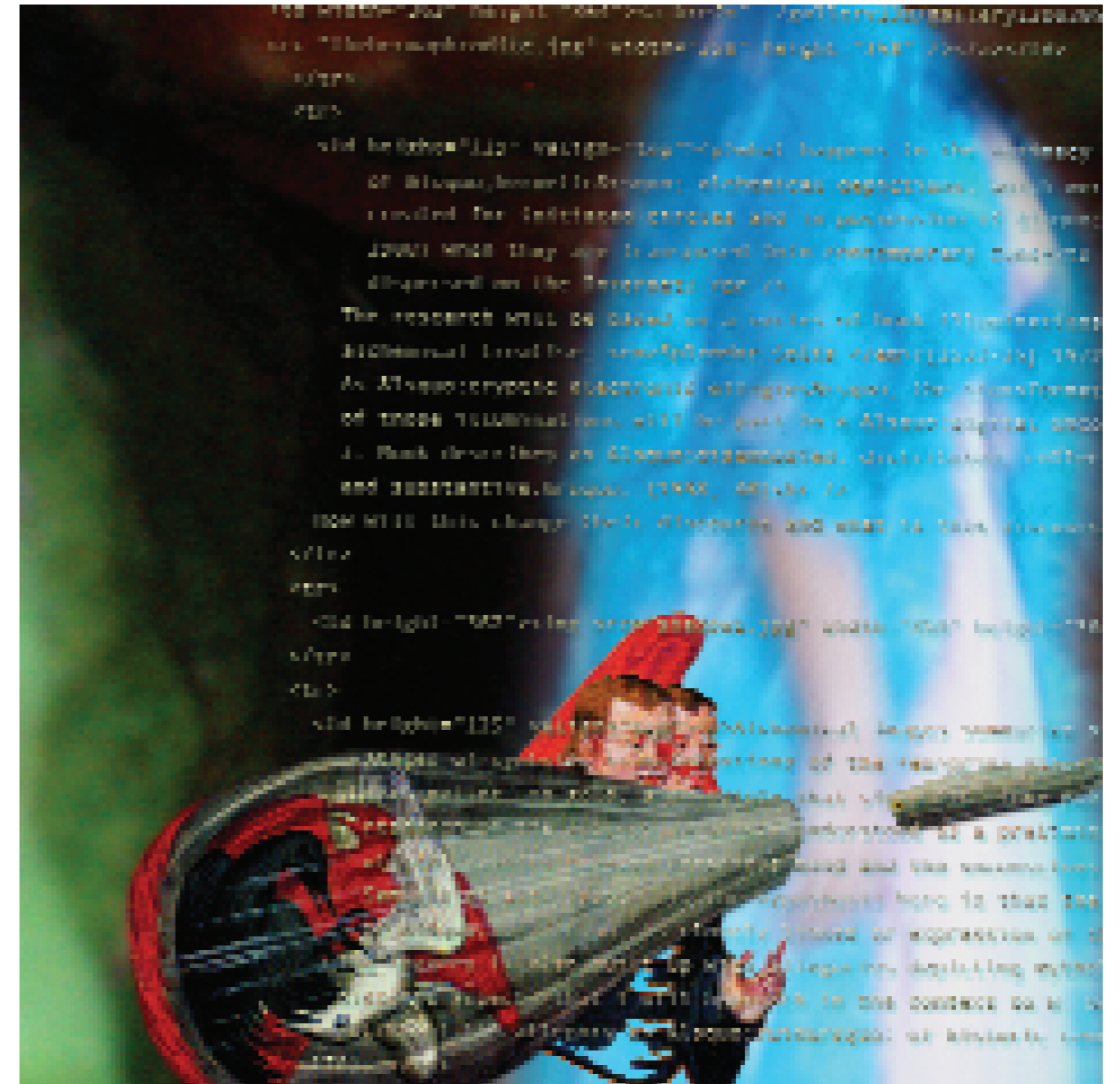
closelylinked.jpg

me.jpg

theframe.jpg

Rae-Sarah
Weedon

These images seek to make the invisible visible through a process of creative projection: Technology, in the context of these images, has moved on to a point where a fictitious image-making machine can been used to collect the visual information currently invisible to the human eye. Here, in these landscapes, the attention is drawn to traditional methods of mass production and transportation, but the analogue and digital converge – the digital and tangible becomes analogous.

The weightlessness of the information economy also depends on a particular perspective: Lightness 'here' hides heaviness 'there'. The weight of hardware, the pollutants used in manufacture, the cost of transportation, the burden of the flow of components, products, and software coders, and others engaged in delivering human capital to the information economy, can't be felt in the handheld device in your pocket and don't register on the screen. It isn't even clear what information 'is': When everything moves, physical 'packets' as well as informational ones, the distinction between material goods and symbolic ones threatens to dissolve, to become motion blur, screen-captured, but not understood as material. (Bassett, C. 2008)

David Owen

Global Uncertainties and Security

The topic of global threats to security sharply raises the question of the nature and scope of security. Recent use of this term goes beyond the traditional focus on military power of states in relation to the military security of states, to encompass other forms of power (economic, political, ideological, etc.) exercised by state and non-state actors in relation to the security of states, peoples, groups and individuals. Consequently, consideration of global threats to security immediately raises the question of whose security is at stake. I will adopt the stance of taking global threats to be threats to the security of human beings in general. From this point of view, the major global threats to human security are three: global warming, nuclear proliferation and radical global inequality. Can the international system of sovereign states – which International Relations theorists characterise as an anarchic system, since there is no powerful global government authority regulating sovereign states - effectively respond to these threats?

Focusing on 'the intensifying dangers of international anarchy', Campbell Craig has expressed the issue cogently:

Certainly, one of the most evident failures of the nation-state system in recent years has been its inability to deal successfully with problems that endanger much or most of the world's population. As the world has become more globalised – economically integrated and culturally interconnected – individual countries have become increasingly averse to dealing with international problems that are not caused by any single state and cannot be fixed even by the focused efforts of individual governments. (Craig, 2008: 135)

Such threats raise what are known as collective action problems: conditions in which states, collectively, have a compelling interest in the threat being defused and, yet, states, individually, each have a clear interest in minimizing their own costs in such an enterprise and, ideally, in 'free riding' on the efforts of others. A clear instance of how such problems can structure the behaviour of states is provided by the examples of the current failure of states to meet the threats of global warming and nuclear proliferation.

In the case of global warming, all states recognize that they have a collective interest in meeting the threat to the planet but each state aims to reduce the impact on their own economies and populations. The failure of the USA to sign up to the Kyoto Agreement – itself a weak and ineffective set of measures – on the grounds that compliance would threaten the American Way of Life or, to give another example, China's reluctance to sacrifice the pace of its own current economic development, are indicative of the problem posed to our 'anarchic' international order. In the case of nuclear proliferation and the permanent threat of thermonuclear war, it remains the case that while states collectively recognize the overwhelming danger of nuclear proliferation, the benefits for each individual state of membership of 'the nuclear club' may appear highly attractive.

While not posing the same threat of human extinction (or something close to it), the third global threat – that of radical global inequality – functions not only as a threat in its own right, generating weak states, proxy wars, populations unable to protect themselves against famines and epidemics, large scale refugee and migration flows, regional destabilisation, etc., but also as a catalyst to the two threats already considered. In a world in which states are formally equal but radically different in terms of power, a world in which the populations of states enjoy vastly different standards of living, resistance to the sacrifices demanded by sustainable ecological forms of development is likely to come from the weak and poor as well as the strong and rich. Similarly, nuclear weapons technology represent one route through which weak states can significantly alter their standing and power in the game of global politics, while strong states seek to protect their own advantage.

These considerations suggest that if the current system of international anarchy is unable to meet the threats that humanity now faces, because this system of plural sovereign states generates collective action problems in trying to confront these types of threat, then our current global political order is itself a threat to humankind. We need to move to a form of global politics in which there are effective, powerful global institutions of government that have the authority to impose environmental measures, to control nuclear proliferation, and to engage in the redistribution of global wealth, resources and opportunities through transnational taxation, welfare and education systems.

One model for the development of such a form of global government is provided by the history of the European Union; yet given the demands that will be made of rich and poor alike in confronting the threat of global warming, it seems likely that the realisation of such a political project will require that human beings develop cosmopolitan allegiances, forms of affective identification with their fellow human beings as human beings that can sustain an effective practical commitment to the liberty and well-being of distant strangers.

That such a problem is not insuperable is illustrated by the fact that it is the same type of problem that confronted the development of nationalism which Benedict Anderson has famously termed an 'imagined community' precisely because it involved moving beyond face-to-face and family kinship forms of community to a mode of community that linked individuals in the depths of Hampshire to distant strangers in the wilds of Northumbria. It is also, incidentally, the same type of problem that has been confronted and largely solved by the Catholic Church, the Muslim Umma and other global religious communities. And in all of these cases, art – including architecture and design – have played crucial roles both in giving expression to, and shaping, the imagination of these forms of community and in helping to sustain the bonds of their distant members.

I do not mean to speak of art as propaganda (though this too has played a role) but of the way in which the artist as citizen has given expression to ideas of nationhood, of political community, and of civic life; or the way the artist as believer has given expression to ideas of God, of human suffering and redemption. The issue that this raises is that of what one might call the artist as cosmopolitan actor or global citizen – of the forms of artistic expression, the techniques and media, the topics and styles that are appropriate to, or can be mobilised by, contemporary artists in addressing the dilemmas and projects of our time.

The point here is not simply that art can give expression to our current condition of insecurity in a way that enables us to recognize ourselves and others in ourselves, but that art can give expression to, and enable us to enter imaginatively into, a world that is not yet – and perhaps may never be – but that is possible for us. In doing so, art can enable us to feel what inhabiting such a world might be like.

References

CRAIG, C. 'The Resurgent Idea of World Government', *Ethics and International Affairs*, 22: 2 pp.133-42

ANDERSON, B. *Imagined Communities: Reflections on the Origins and Spread of Nationalism*, London: Verso Books, 2nd edition, 1991.

image: Mia Taylor

Ian Dawson

In *Global Uncertainties and Security*, David Owen looks at the threats posed to all humans. He identifies them as three: Global warming, nuclear proliferation and radical global inequality. Owen then highlights a pervasive condition, a collective action problem, whereby the anarchic international nation state system is unable to cope with big issues. He then recognises that if there is to be any success in dealing with the three threats to human beings we will have to develop new allegiances and new forms of identification.

As a response to this I have produced a work based on the Cabinet of Curiosity. Historically the *Kunstkammer* was regarded as a theatre of the world, and this project uses that notion as a vehicle to explore the idea of the collective action problem.

Early *Kunstkammers* conveyed the patron's control of the world through the symbolism of juxtaposition and the idea of cabinet as microcosm. In the 20th Century Surrealists such as Kurt Schwitters continued to explore the potency of this genre in the light of huge political and social upheaval. Similarly this project explores the genre in relation to issues raised by Owen's text, such as that of the artist as citizen giving expression to ideas of identity and his call for artists to create a world we can enter imaginatively in order to help with the ideological upheavals ahead of us.

Pamela Evans

Absorbing the textuality of our current global predicament results in an inner landscape produced from the essences of daily media intake. Notions of political instability coupled with the misuse of the advancement of science and technology build on the vision of what planet earth might become. Archetypal images emerge in a waking dream of heated wastelands.

Conversely there are artists who Katherine Raine refers to as a few great imaginative minds who can create a world which seems to possess a coherence, a climate and atmosphere of its own. Shakespeare, Dante, Durer, Blake, Fra Angelica, Claude, Michaelangelo and more. They offer fragments of worlds whose bounds extend beyond any portion their work embodies.

Aspirations of building such a Utopia by co-operative nationalism can be imagined by reference to the worlds these artists inhabit, visualised in alternative words and imagery; we can see the 'imagined communities' that may replace the inevitable landscape, if we can see beyond the texts offered to us.

RAINE,K. 1970 *William Blake* Thames and Hudson
p 7

ANDERSON, B. 1991 *Imagined Communities: Reflections on the Origin and Spread of Nationalism.* Revised Edition, Verso, London and New York
pp 5-7

Jacqueline Knee

I have responded to David Owen's discussion about our system of international anarchy and its failure to address threats to humanity through the envisioning of a hybrid network of relations. The network is a combination of words and forms; where words could denote structure and structure denote words. I have explored how the blur or dissolve between the symbolic form of language and the symbolic forms of space may be suggestive of a new architecture of international co-operation and security.

I experiment with the universal symbol of house or room-spaces as representative of ideas of nationhood and security. Notions of architectural space infer many ideas around boundaries and identity. I am interested in where boundaries breakdown – in the possibilities of the dissolving and merging of words and forms so that thresholds become difficult to distinguish. I begin by examining the possibilities of the Mandlebrot Set as an example of a network of forms that is hierarchical and yet harmonious.

Within the context of global security issues, the hybrid network or structure that evolves will be an imagined metaphor for a new structure of global relations or a new institution of government, evoking individual nation states in an equable network of co-operation.
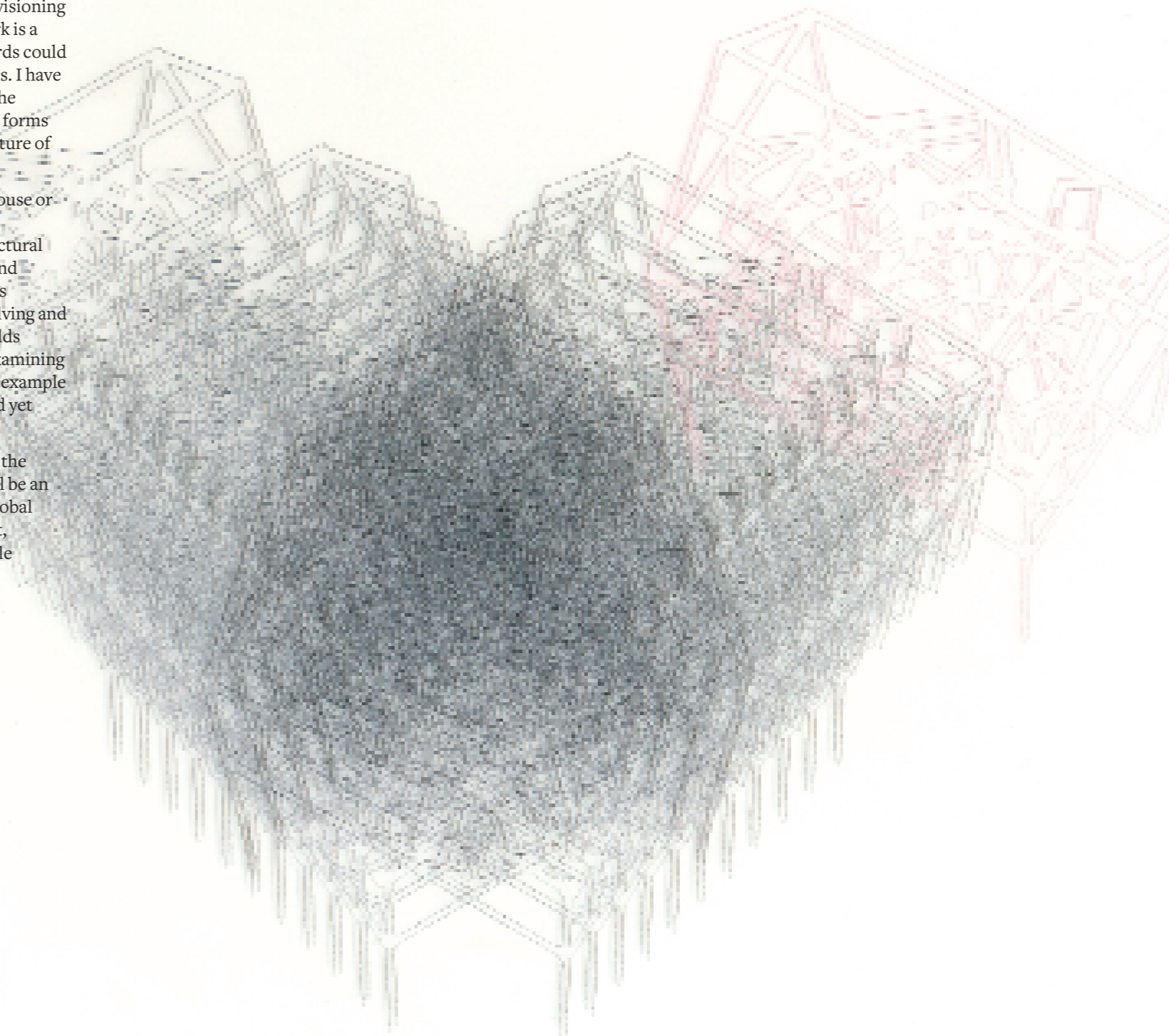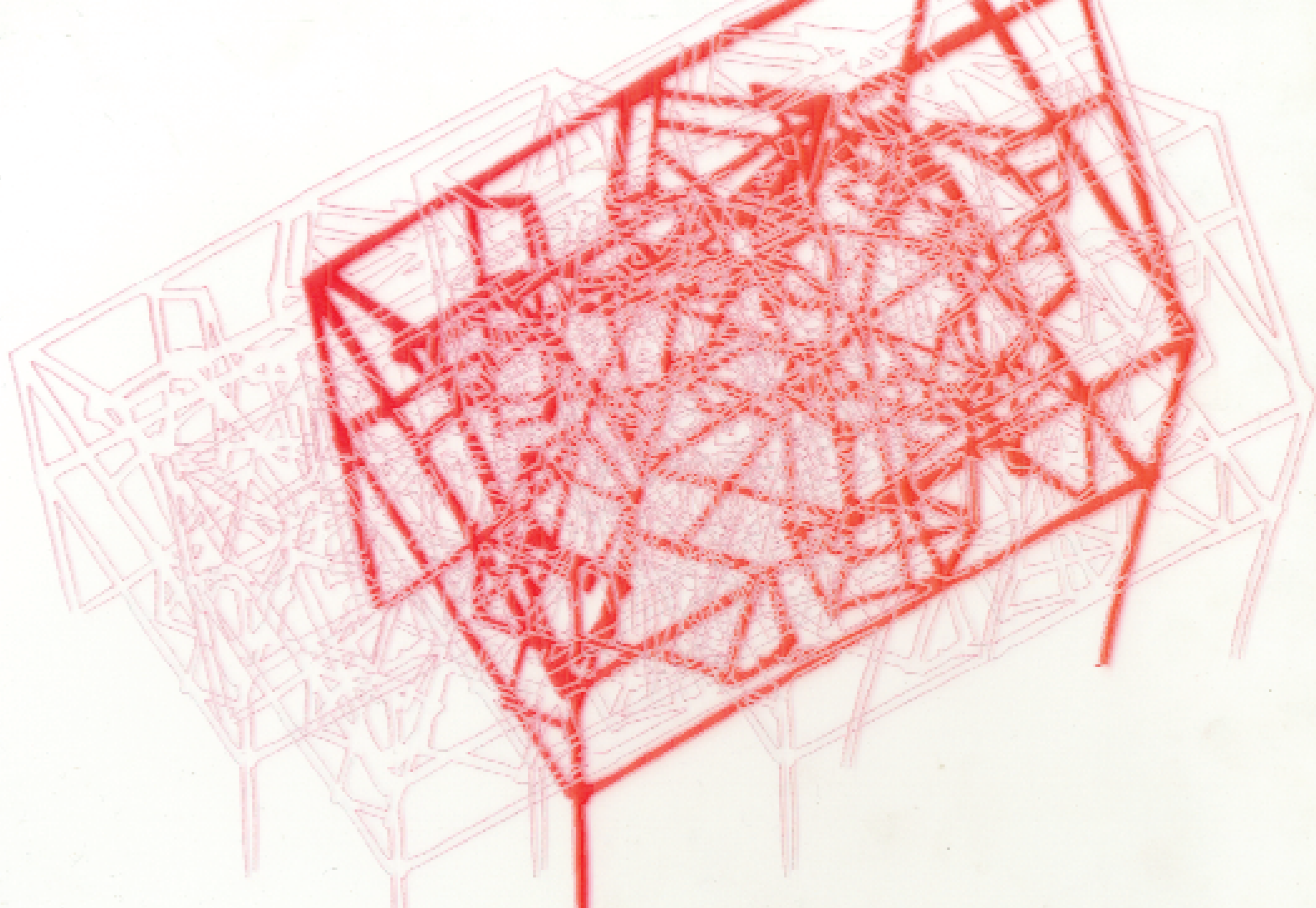
Professor Bashir Makhoul & Gordon Hon

Enter Ghost. Exit Ghost.

This is a collaborative work in progress in which ideas that emerged from Bashir Makhoul's exhibition *Return* and Gordon Hon's accompanying essay *Return and the Spectres of Occupation* are being developed to explore the idea of spectral spaces. It will mainly be based on extending Makhoul's use of lenticulars in *Return*, in which images of Jerusalem from the British Mandate period in Palestine were interwoven with contemporary images of the same places. Although the specificity of place was central in this work, it began from the archival imagery, and the main conceptual focus, around the idea of Return, was temporal. In this project the focus will be spatial.

The dialogues that led to this project involved the theatrical aspects of installation art and the relationship between movement and narrative. The title was taken from the stage directions of the opening scene in *Hamlet*.

Lenticular images are a fairly old commercial optical technology familiar to most people from novelty postcards. It is made by sliced and interwoven images being viewed through lenticular lenses that allow complete images to be visible from particular angles. As the viewer moves so the image changes. The optical effect is similar in some ways to the much older optical effect of anamorphic imagery, the most well known example being the skull in Holbein's Ambassadors. Lenticulars are usually employed to create a 3-D effect or movement in a static medium and the recent developments in digital processing and improvements in the lenses has allowed larger, more elaborate and accurate images to be produced. This has had led to a resurgence in the use of the medium, particularly in advertising.

It was the prosaic status of the technology as a novelty more often found as a free gift in a box of cereal or a poster for a Hollywood monster movie, rather than on a gallery wall, that gave it some of its initial attraction. It was relatively free of the aesthetic expectations and preconceptions of more conventional image-based media. It also falls between media and has the very particular quality of a still image that appears to move. It has an unstable pictorial space that, if pushed, can become very complex and sometimes disturbing. These were all

used and evident in the *Return* exhibition. Many of the images that Makhoul had collected were of walls and doorways – this went back some time to a wallpaper piece (*Points of View*, 1996) with a pattern made from bullet holes in walls. Hon has been interested for some time in the idea of the ruin and its relationship to narrative and the moving image. It occurred to us that if the lenticular images were mainly of walls, doorways and architectural elements on a more or less 1:1 scale and were used as the surfaces of the walls in constructed installations, it would be possible to create a destabilised space in which the structure would appear to shift as the viewer walked through it. At the same time, indistinct movements could appear in the viewer's peripheral vision that would follow and echo their movement through the space. The installation would be activated by the viewer's passage through the space.

There are some kinds of constructed, temporary spaces that we have in mind as partial models. There are actual architectural spaces of transition such as stations, airports, foyers etc. that are designed with the movement of people in mind – to ease and direct flow or, in the case of border crossings, to interrupt and restrict movement. The static structures of conventional architecture are effectively animated by the movement of their inhabitants; museum exhibition layouts are designed to tell stories or impart information as viewers make their way through, or, as Mieke Bal puts it, the "space of a museum presupposes a walking tour, an order in which the dioramas, exhibits, and panels are viewed and read. Thus it addresses an implied viewer – in narratological terms, a focalizer – whose tour produces the story of knowledge taken in and taken home."[1] Film sets use elaborate arrangements of "wild walls" to allow the point of view of the audience, through the movement of the actors and cameras, to pass, impossibly, although apparently naturally, through architectural space. Armies build simulated streets and towns to practice urban warfare in which conventional movement through urban space is utterly subverted. We also have in mind the spectral spaces of surveillance and transition that form parallel territories in late capitalist societies as well as the kinds of extra-territorial political grey-zones such as Guantanamo
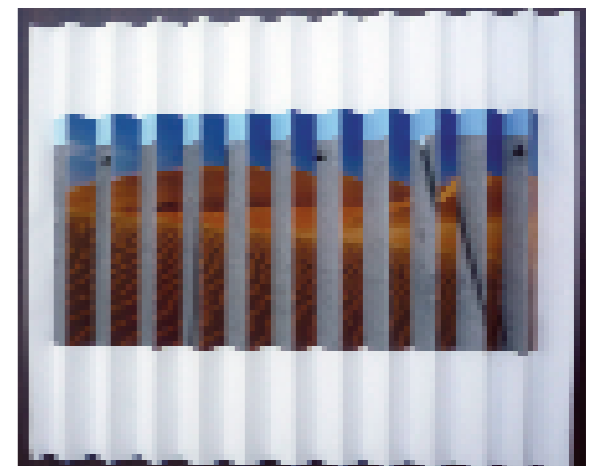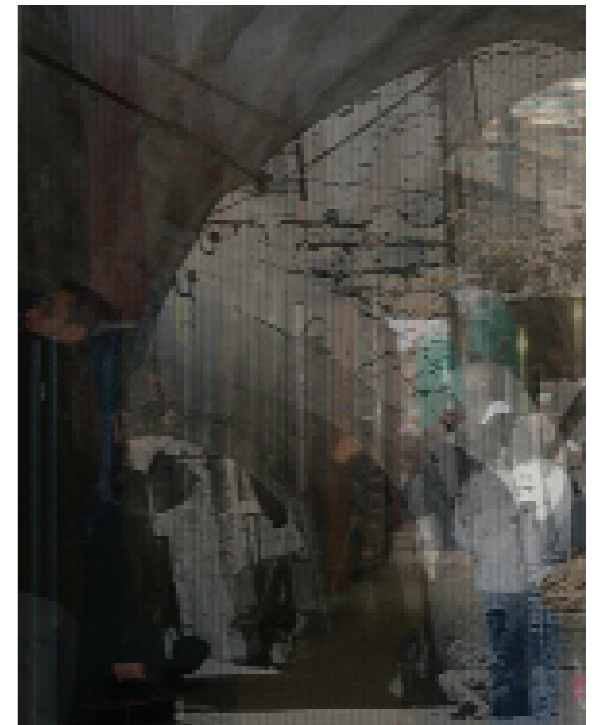
Bay and permanent refugee camps. We are interested in what becomes of us when we construct or enter these spectral spaces, in what kind of subjects are produced by them. In particular the extent to which we become spectral; as disembodied observers or the disembodied observed; the ghosts in the institutional machines.

•

"I put a picture up on a wall. Then I forget there is a wall. I no longer know what there is behind this wall, I no longer know there is a wall, I know longer know this wall is a wall. I know longer know what a wall is." [2]

"Fighting took place within half-demolished living rooms, bedrooms and corridors. It was not the given order of space that governed patterns of movement but movement itself that produced space around it. This three-dimensional movement through walls, ceilings and floors through the bulk of the city reinterpreted, short-circuited and recomposed both architectural and urban syntax. The tactics of 'walking through walls' involved a conception of the city as not just the site, but as the very medium of warfare – a flexible, almost liquid matter that is forever contingent and in flux." [3]

Ghosts walk through walls. They transgress boundaries, beginning with the most impermeable and least substantial boundary between being and non-being. In the haunted text of *Hamlet,* the boundary is marked by the tiny conjunction "or" between *to be* and *not to be*. Meanwhile, in the stage directions the ghost appears on a platform, which is supposed to be both outside and part of the ramparts of the castle walls. It is a vague, unremarkable instruction but what comes to mind is a kind of stage within a stage. The platform becomes another stage specifically designated for the apparition - set apart from the illusion of life within the dramatic frame to signify another order of illusion. The staging of ghosts presented particular technical problems for dramatists who would need to use what we would now call special effects, and Shakespeare's phantoms must have been written with the technologies of renaissance theatre in mind. Perhaps they were partly written because of the technologies. To begin with, the presence of the ghost in the text of Hamlet is only in the form of

stage directions - a coming and going on the platform (Enter Ghost. Exit Ghost. Enter Ghost again. Exit Ghost). It is partly this restless, repetitive movement in and out of the scene that disturbs the guards, and when Horatio attempts to arrest the coming and going he addresses it directly as an illusion, "Stay illusion." But to 16th Century ears illusion was also another word for a ghost. This obsolete meaning perhaps haunted the invention, in the 18th Century, of the term optical illusion - a term intended, in the spirit of the enlightenment, to demystify but nevertheless carrying supernatural baggage.

The rationalist project of the enlightenment also saw the rise of optical technologies – the apparatus that would allow the enlightened gaze access to previously invisible realms. These new technologies were also to open up a whole new realm for the phantasmal illusions that were meant to have been exorcised from the age of reason. These were the Phantasmagoria, the Magic Lanterns, Photography, Zoetropes and eventually the Cinema. For Marina Warner what linked the optics of reason with the optics of illusion was the pre-existing model of the inner eye, "the organ of envisioning" and therefore the technologies "also reproduced mental imagery, and projected phantasms, dreams and memories from the dark chamber of the mind into the light of day."[4]

Terri Castle gives us the opposite: the age of reason explained away ghosts at large in the world only to find them reappearing via the human science of psychology inside our enlightened minds. "We continue to speak [...] of being "haunted" by our thoughts and pursued by "ghosts" inside our heads. We fear (and legislate against) the madness of the phantom-world within. Until it is possible to speak of the ghost inhabiting, as it were, the mind of rationalism itself, this sense of being haunted is likely to remain – far more than any nervous fear of the police – the distinctive paranoia of modern life".[5]

Here again it seems the ghost is oscillating between two worlds: the outer world as a real ghost or projection; and the inner world of the haunted psyche. Perhaps between these realms there is another space inhabited by this dithering spectre. Perhaps the fear of the police and the fear of our own minds converge in this space, where it may be

possible to glimpse "the ghost inhabiting the mind of rationalism itself".

Ghosts need a location. They haunt places – even if only our minds. But perhaps we could think of the places themselves as being the spectres, or perhaps the places produce the spectres, and ghosts do not walk through walls but emerge out of them, are born by them, or, better still, we are the spectres produced by the spaces we create and inhabit. We are not haunted but haunting. This kind of reversal is, of course, a Hollywood ghost movie twist. In The Sixth Sense (1999) and The Others (2001) the haunted living protagonists turn out to be the haunting dead. We are given the questionable thrill of having to realise that we have been identifying with the dead for the past 90 minutes. But of course, in a sense, we have been ghosts for the duration as we are suspended in the liminal space produced by whatever media device or platform we have used.

Castle sets the paranoia induced by authority against the persecutory dread of our own inner demons, suggesting that the irrational belief in ghosts was cast out of objective reality by post-enlightenment empiricism, only to survive in a mutated form in the formations of modern subjectivities. Psychoanalytic theory was instrumental in the formation of the haunted subject, and Freud, with his committed scientism and taste for German romanticism, ensured a place in the 20th Century for the homeless ghosts of pre-modernity.

This fusion of scientism and romanticism is echoed in the relationship between ocular technologies and the occult and can be traced from the 18th Century phantasmagoria shows, through the invention of photography and its ability to capture shades, cinema's fascination throughout its history with the supernatural, to the vast netherworlds of MMORPGs (Massively Multiplayer Online Role-Playing Games). They all produce their own kinds of phantoms specific to the media, but it is in the last example that we see a significant change in the contract between the medium and its audience. In these games there is no audience; instead, there are users who enter as avatars and determine, in their interactions, the course of events. These vast worlds and their millions of avatars are utterly without substance, but real things happen, real money

changes hands, and the users can be more passionately absorbed in what takes place in these virtual events than what is happening in the home or workplace. The old technologies of representation are changing and their new critics and theorists are presenting the possibilities of new post-human subjects. It may be that the real difference is in the creation of a new of space which is producing new ghosts who materialise as the users enter the games and vanish when they exit.

Meanwhile, in the non-virtual world, new spaces are also being produced. Some of these have been described and designated by Augé (1995) as non-places – the "supermodern" spaces of airports, motorways, shopping malls, corporate plazas and so on, which are bereft of the specificities of places, and the forms of exchange and creative interactions and clashes that take place within them. If added up, these spaces of transit and transition through which we are processed rather than travel are indeed vast enough to imagine as a kind of parallel territory.

These kinds of spaces are usually the most subject to surveillance and as we pass through them our spectral likenesses are briefly delayed in the memories of CCTV recordings before being erased - another vast parallel world of moving images which we are endlessly entering and exiting. Surveillance too has its roots in the haunted reason of the enlightenment in Bentham's Panopticon. The objectors to surveillance are often and easily accused of paranoia with its implication of haunted psyches rather than the more obviously paranoid, omnipotent fantasy to 'see all', expressed through the ubiquity of CCTV. These millions of cameras running 24 hours a day are producing an incalculable amount of footage that will never be seen.

Predictably, there are plenty of examples on Youtube of "ghosts" captured by these cameras, but it is the places that have become spectral. The true "non-place" is not the airport or shopping mall but the vast, grainy phantasmagoria of surveillance producing a place that makes ghosts of us all as we pass through it. It does not matter that nobody will actually watch the footage; the technology is watching for us as we modify our behaviour under this relentless non-human gaze. This gaze is also internalised in the institutional or corporate subject

of late capitalism through the use of self-surveillance. A CCTV camera has also been installed in the haunted space of the post-Freudian psyche.

A different order of spectral non-place has been produced in Israel/Palestine in the form of checkpoints, terminals, separating walls and elevated roads throughout the occupied territories. In-between spaces of transition and crossings, overseen by disembodied power. They bristle with elaborate forms of surveillance that are designed to allow an omnipresent watch, as well as exercising as much control as possible, as remotely as possible. They also function as a system to allow the movement of Israelis, including the many thousands of illegal settlers, while interrupting and restricting the movement of Palestinians.

Israelis are to spend as little time in these places as possible, which increasingly includes members of the Israeli security forces who are replaced wherever possible by mechanical and electronic devices of delay and surveillance, or by proxy guards from the Palestinian Authority. However, Palestinians spend a great deal of time in these spaces, as though the road-blocks and checkpoints are designed partly to produce the spectacle of waiting. In these dispiriting and pointless queues, it is almost impossible not to become part of the show – a *tableau vivant* of the dispossessed, forever waiting to enter or exit the world from which they have been usurped.

Meanwhile, in the Negev desert in the Tze'elim army base, there is a simulation of a typical Palestinian town in which IDF soldiers can rehearse moving through the walls of the houses or learn to use new combat imaging technologies that have "the ability to produce three-dimensional renderings of biological life concealed behind barriers. Human bodies appear as fuzzy 'heat marks' floating (like foetuses) within an abstract blurred medium wherein everything solid – walls, furniture, objects – has melted into the digital screen."[6]

References

1. BAL, M. 'Telling, Showing, Showing Off'. *A Mieke Bal Reader* University of Chicago Press (2006) pp 173

2. PEREC, G. *Species of Spaces*, Penguin Books (1997) London pp39

3. WEIZMAN, E. *Hollow Land: Israel's Architecture of Occupation*, Verso (2007) London pp 186

4. WARNER, M. *Phantasmagoria*. Oxford University Press (2006) pp136

5. CASTLE, T. *The Female Thermometer: 18th Century Culture and the Invention of the Uncanny*. Oxford University Press (1995) pp186

6. WEIZMAN, E. *Hollow Land: Israel's Architecture of Occupation*, Verso (2007) London pp 208
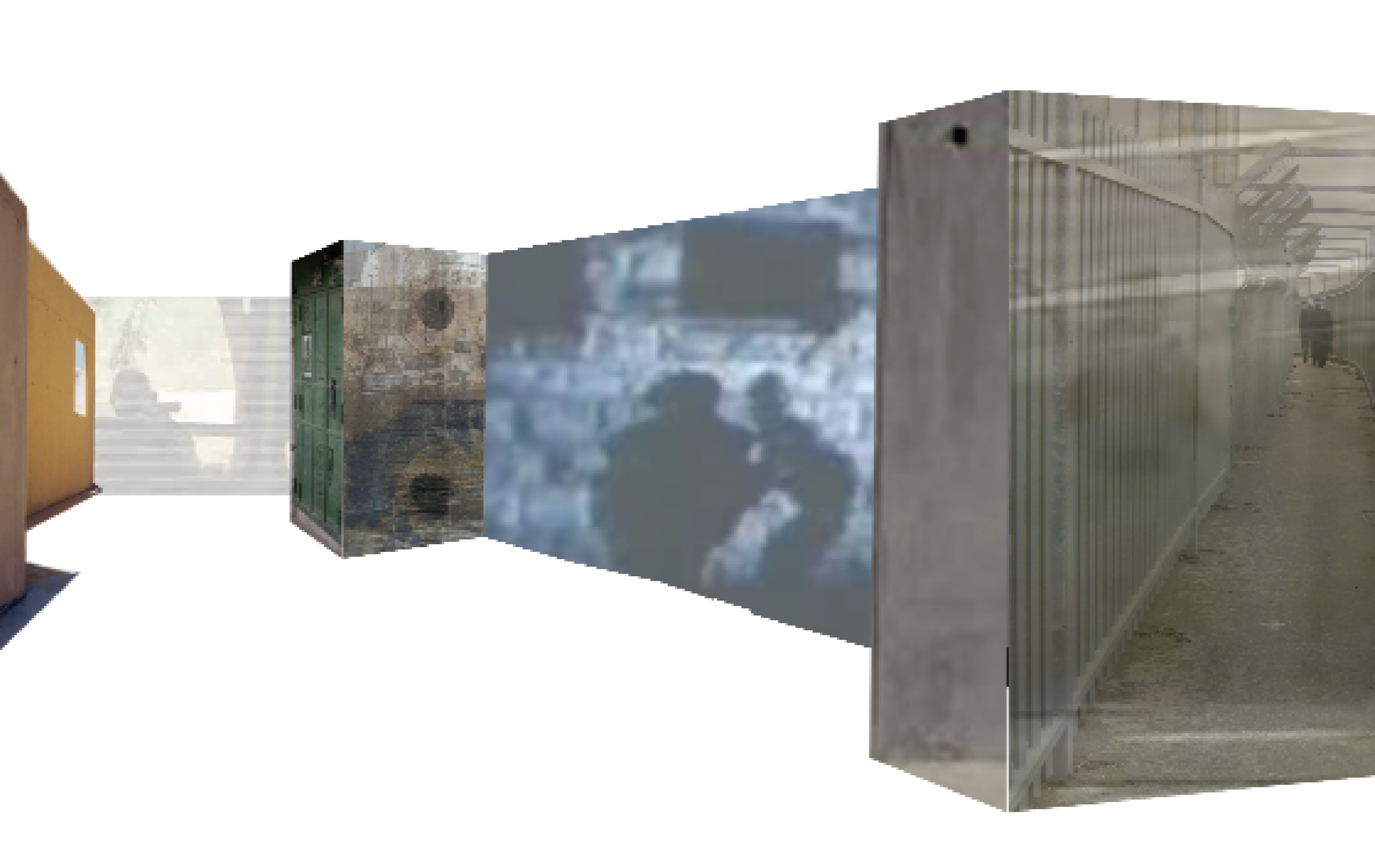
Mia Taylor

Art is not simply to give expression to our current insecurity but can enable us to enter imaginatively into a world that is not yet and may never be but is possible. Art can make us feel what inhabiting such a world can be.
David Owen

The work responds to the notion that art can enable us to enter imaginatively into different possible worlds. It addresses the idea of a unifying visual language and asks whether this could represent the world's multi-layered history, interrogating utopian visions by assembling them in a blurred and fragmented manner.
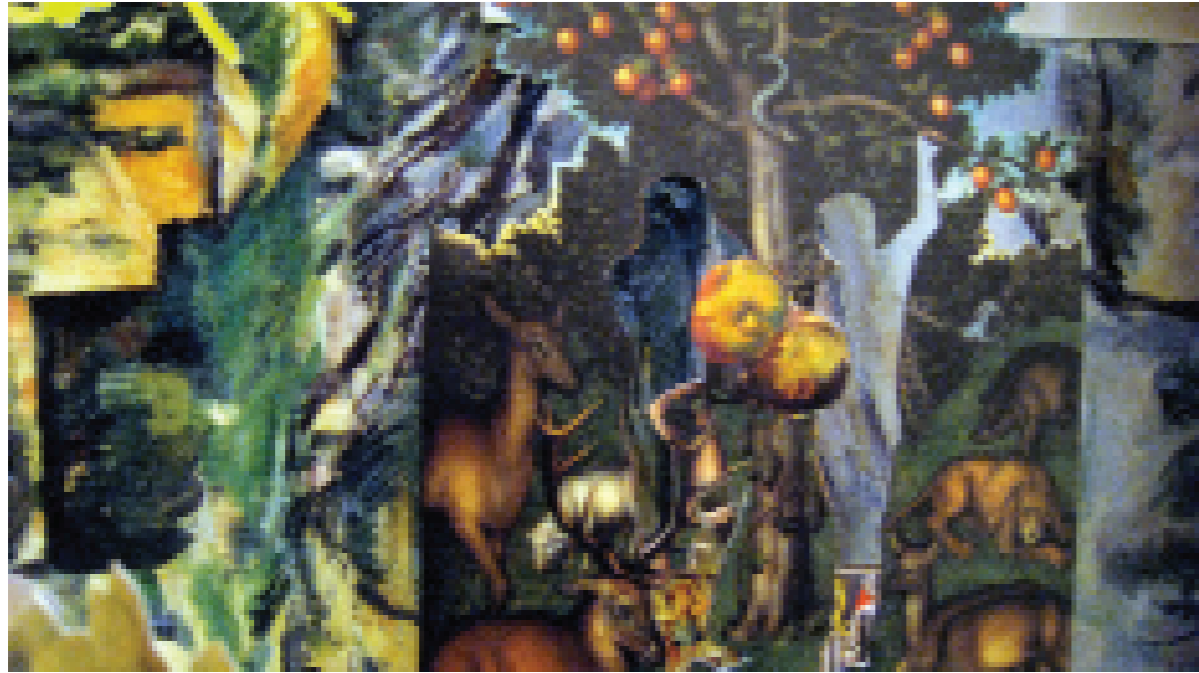
Walter van Rijn

It's not about me; it's about you

A response to Caroline Bassett's essay
To Compute the Meaning of Words: the Digital Economy,
and David Owen's *Global Uncertainties and Security*

David Owen's analysis and rather optimistic assertion that "we need ... to move to a form of global politics ... effective, powerful global institutions of government that have the authority to impose" measures on a global scale, is in effect what we already have and comes down to do more of the same. There is for instance the International Criminal Court (ICC) in The Hague, established "to help end impunity for the perpetrators of the most serious crimes of concern to the international community." (ICC 2008) It addresses genocide, crimes against humanity and war crimes, so who would not sign up? Only 108 states have ratified it, not the US nor China. Is the underlying problem not the widening gap between the top and bottom of our society? Governments, democratic or otherwise, not acting in the interest of people but following their own agenda? David Owen talks of "imposing" which literally comes down to keeping the status quo.

Caroline Bassett describes paradoxes which might arise from the semantic web. Future developments that change the internet from structure to agent. It means more knowledge about network users available and used in the network, but it also means an exploitation of this knowledge and of the users. Bassett rightly asks what is its counter-weight.

I see my response not as a counter-weight but by standing in the middle of it I aim to stir and complicate, open a few doors, imagine a new landscape. My artists' practice, which could be described as between Relational and Distributed Aesthetics (Bourriaud 2002; Lovink and Scholz 2007), explores the dynamic network of audience, art and artist.

For this project I focussed on the media format of the press conference and video messages posted on websites with the aim to become a news item, because they present a situation where the global intersects with the personal on many levels. The news media and the audience interaction are a prime example of a network that affects exhibition audiences. The notions of the press conference format, the public, audience and the relation to art needs to be clarified, but in this context I would like to limit it to a few remarks.

The contrast between a small network connected to an artwork and a complex network of a presidential

Images: Walter van Rijn (2009) *Presidential Address* 10-02-2009, Multi-media installation

Videos of a trial are available on Youtube : http://www.youtube.com/Nostudiovideos

Many thanks to participants: Dave Gibbons, Yonat Nitzan-Green, Steven Sanderson and the three anonymous presidents.

address could not be bigger. On the other hand viewers can decide, media networks can distribute, artists can imagine and produce, with the result that these two networks connect. The point is many factors influence it but nobody (or nothing?) really controls it. I agree with Galloway and Thacker that networks are not inherently egalitarian. They ask the question if we can assume that a network is not controlled by humans in any total way, and "if humans are only part of a network, than how can we assume that the ultimate aim of the network is a set of human-centered goals ?" (Galloway and Thacker 2007, p.154)

The elements that produce the press conference format (presenters and the stage with flags or other props, lectern, microphones and camera's) have not much variation and are calculated to fit in a particular context. Compare a news reader with a so called suicide video, and a presidential address to the nation. A presenter sitting behind a desk, with images and props around to make it easy for the audience to link audio with vision, content with context. The various public addresses could be a continuation of each other, and I suggest that that is the point. My exhibition proposal should be seen as a continuation and as a step aside from the public address aesthetic.

The notion of 'the public' is evolving as the information society is evolving. In Convergence Culture Jenkins suggests "a shift from individualized and personalized media consumption toward consumption as a networked practice". "[P]erhaps we should be talking about communal media–media that become part of our lives as members of communities" (Jenkins 2006, p.244-5). What does this shift mean for the art world? The Arts Council for instance "works to get great art to everyone" (ACE 2009). It implies a passive audience and the institution as mediator. What does this shift mean for the artist? A network practice? (Burke and Tierney 2007).

My response to the essays of Bassett and Owen is a visual research in the form of an installation. It questions how the format of the public address constitutes a network practice and an artists' practice. It aims to create knowledge about the artist-audience relationships, and the 'making

public' of art, by setting up participatory situations, creating shortcuts across art-world and society. Luhmann has described art as a system within the social system that has developed "a symbolization of fundamental social problems of modern society that relies neither on an imitation of society's 'nature' nor on a critique of its effects" (Luhmann 2000, p.243). The artistaudience friction in the 'making public' of art might then 'symbolize' the friction between participation and exploitation of consumers in general.

What if the friction between participation and exploitation is made visible through the medium of an exhibited installation in the form of a film studio with several sets where the roles of actor, politician, artist and public of various significance are fluid and exchangeable. A place for enactment and experimentation of different roles one normally only experiences mediated through the media i.e. TV, newspapers, internet. One set for example could be a press conference by a US president and the participants can play his role. Other sets could be: a press release on video from freedom fighters; family or police asking the public to come forward with information, a press conference announcing a successful negotiation, a peace deal or declaration of war. A full exhibition would contain all these studio sets creating an audience that is caught in between.

References

ACE 2009 "Arts Council England : About us." [online] http://www.artscouncil.org.uk/aboutus/index.php. [accessed 12-02-2009]

BOURRIAUD, N. 2002 *Relational aesthetics*. Dijon: Les presses du réel.

BURKE, A. and TIERNEY, T. Eds. 2007 *Network Practices, New Strategies in Architecture and Design*. New York: Princeton Architectural Press.

GALLOWAY, A. R and Thacker, E 2007 *The exploit: a theory of networks*. Minneapolis, Minn. ; London: University of Minnesota Press.

ICC 2008 "International Criminal Court." [online] http://www.icccpi.int/Menus/ICC/About+the+Court [accessed 15-01-2009]

JENKINS, H. 2006 Convergence Culture: Where Old and New Media Collide. New York: New York University Press.

LOVINK, G. and SCHOLZ, T. Eds. 2007 *The Art of Free Cooperation*. New York: Autonomedia.

LUHMANN, N. 2000 *Art as a Social System*. Stanford, Calif.: Stanford University Press.

Professor Maria Evandrou

Britain's Ageing Population: Cause for Concern or Celebration?

In 2008 for the first time the UK's population contained more people aged 65 and over than children under 16. Moreover the number of older people in the population is predicted to continue to rise and the large cohorts born during the 1960s enter retirement in 2020 and beyond. Is the fact that there will be more older people a cause for concern or a cause for celebration?

The greying of the population is due to a complex mix of demographic reasons, including both past trends in fertility and improvements in mortality. The fact that more people live longer is surely one of the triumphs of the twentieth century. Amongst those born in 1901 only half could expect to survive to age 65, leading Trotsky to write in his diary that 'old age is the most unexpected of events to happen to a man' (Trotsky, 1935 Mexico Diaries). Today, a boy born in 2007 can expect to live on average to 88 years and a girl to 90 years (Government Actuary Department, 2008).

Mortality has declined even amongst the oldest-old, leading to an increase in centenarians, such as Jeanne Calment, the oldest centenarian of all time. She was French and died at the age of 122 years and 164 days (in 1997).

Jeanne Calment met Vincent Van Gogh when she was 14 years old and commented that she thought he was dirty and badly dressed. She outlived her husband, daughter and her grandson. Jeanne lived on her own until the age of 110 years and then went into a nursing home. She had an extremely active life, including taking up fencing at 85 years and she rode a bicycle until the age of 100 years. When asked by journalists what was the secret to her long life, she replied that she would have a glass of red wine every evening with her supper and of course she gave up smoking on her 117th birthday. At the age of 90 years she sold her apartment to her solicitor, Francois Raffray, in return for a monthly income of $500 until her death. At the time, the value of the flat was worth about 10 years of payments. Unfortunately for Raffray, who thought he was getting a good deal, not only did she survive for more than another 30 years, but he died first and his widow had to continue the payments.

The majority of older people in the UK are fit and healthy; indeed one third of informal care of older people is provided by other older people – challenging the idea that old age is only characterised by frailty and dependency. However, there are concerns over whether society will be able to afford to pay pensions for a growing number of pensioners, at the same time as the working age population declines. This concern lies behind the increasing state pension age to 68 years for both men and women, between the years 2024 and 2046.

The ageing of the 1960s baby boomers will have implications for economy and society. It is unlikely that they will have the same expectations as their parents' or grandparents' generations. Our expectations are shaped by our life course experiences. Those born in the 1960s grew up in a different economic and technological environment to their parents, and those born in the 1990s will have a different set of experiences again. We all carry with us the 'imprint of time' and are influenced by both today's circumstances and by our former selves. What type of retirement do you want?

Resources

Interactive population pyramids :

For the UK
http://www.statistics.gov.uk/populationestimates/svg_pyramid/default.htm

For the rest of the world
http://www.census.gov/ipc/www/idb/pyramids.html

Centre for Research on Ageing
http://www.southampton.ac.uk/socsci/ageing/

Jane Green

What do we see in our family? How often do we hear someone say 'I am glad I am past that birthday because my mother died just before that age'? We cannot see the family likenesses anymore, only the mannerism; a long forgotten laugh, the 'bon mot'.

There are two issues to lifelong health: mental and physical. Twenty years ago our greatest fear was cancer or heart decease. As our parents get older which do we fear the most now- dementia?

Once, I remember, a friend took up flying in his forties. From where I was then (25) I thought he was doing pretty well "at his age". From where I am now (64) seventy seems young, so I know ageism exists. However, it is comforting that this is prejudice which can ultimately impact anyone.... unless they die young. We can celebrate our older citizens, but is this not just patronising?
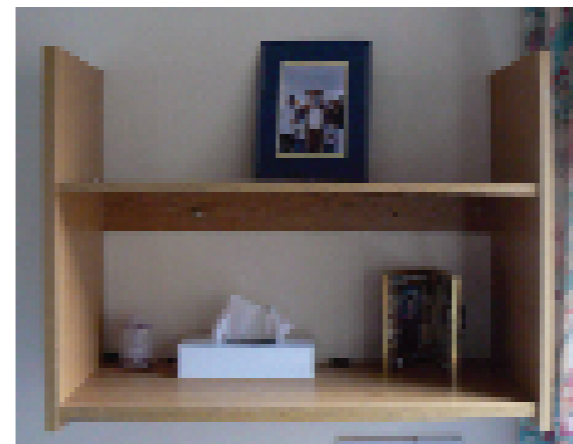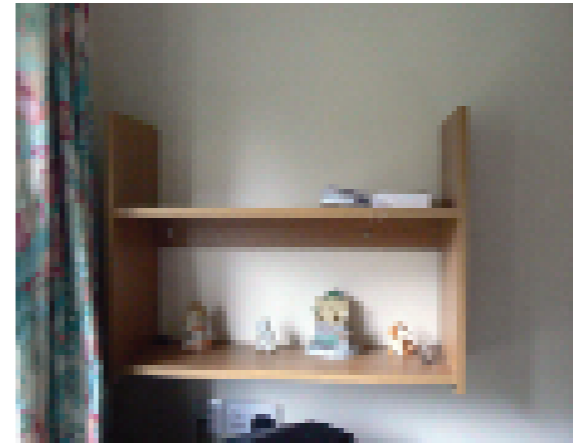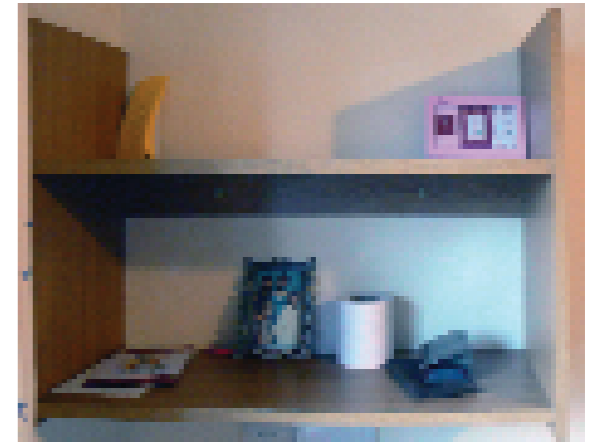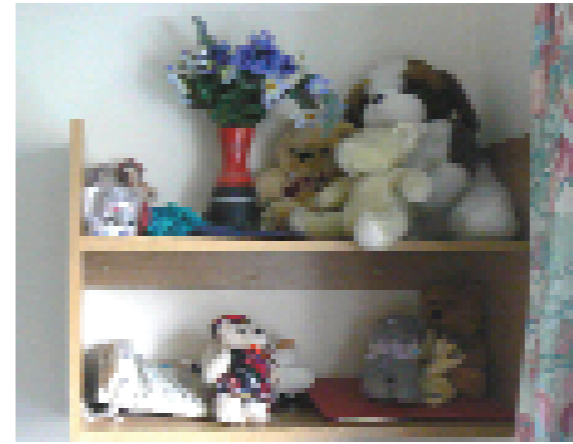

Daken House

29 January 2009

Charles 91 and Patience 89

Married for 63 years

Patience has Dementia

Charles & Patience

William

Fernando

Gerald

Doris

Katherine

Simon Morley

I asked my parents to comment on a photograph they selected of themselves when they were young. The goal was to elicit a sense of the complex dynamics of remembrance and forgetting, of the ways in which we narrate our own lives, and how the ageing process impacts on these narratives – how the 'imprint of time' (Evandrou) is represented in the space between representation and text.

Background

My work has long been involved with questions of memory, both personal and collective, especially in relation to 'Englishness'. I have employed book covers and title-pages, found postcards, even cemetery headstones. I work across various media, though mostly in painting, but I have also used photography and video, and produced book-based projects.

I was born in Eastbourne, the heart of the so-called 'costa geriatrica', and so have long and personal acquaintance with the complex social implications of an ageing population. Furthermore, now my own parents are both in their eighties.

Theoretical Considerations

My goal is to demonstrate how the relationship between past and present has been radically transformed through visual technological media, and how older people embody this transformation through the ways in which they construct and articulate their own personal narratives in relation to photographs.

Underpinning the kinds of questions I pose in this project are ideas discussed by Roland Bathes in relation to the photograph and memory (semiotic methodology), Paul Ricoeur in relation to the importance of narrative (hermeneutic methodology), Michel de Certeau on the practices of every-day life (sociological methodology), and the Freudian school's theories of memory (psychological methodology).

Presumably, the photograph was taken at St Michael's Church School (Elementary), Headingley Leeds, which is where I was a pupil. I think the year would be 1936 when I was 10. The following year I moved on to the Grammar School. I have no memories of the photograph being taken. My younger brother also had a solo picture (ie no group) of the same vintage, so it is likely the whole school was individually photographed that year. I have no recollection of the procedure but the photographs were clearly appreciated as they were kept in our parents' ditty box!

I must have felt an empathy for the face in the photo as I kept hold of it later on. I definitely remember an example of sibling rivalry with Neil (my younger brother), because at some point I scribbled teasing slur-words on his photograph (something like "I am a silly idiot'), but the actual photograph has been lost to me – maybe Marion, his widow, has retained it. No one else would have written such graffiti, and I always felt guilty in later years about it.

I enjoy very much looking at the photograph. I have an immediate recall of myself living in the thirties surrounded by family and by layers of association with the wider environment. My emotions on looking at it are essentially sympathetic. I have to declare special interest, as there are clear divisions between pre-war and wartime experience in the offing. Within a few years I am to lose both mother and eldest brother in a bombing raid, with traumatic consequences (1942). I suppose the photograph takes me back to an age of innocence, but there were plenty of moral struggles on at the time. We were a family of four boys and emotionally my recollections get entangled with the organic growth of our close relationships. We were protected by the loving care of mother and father. As I gaze at this photograph I feel aware of a ten-year-old boy's comfortable security and self-confidence, which still retains a cautious watchfulness. At the same time, I am drawn to the limp scruffy collar and bent tie as an indication of the boy's indifference to neat appearances. How do you explain the ragged edge of the fringe? He is not a 'spoilt' person, it seems to me.

The boy in the photograph faces the camera confidently and quizzically. He accepts the situation and responds cooperatively. He's friendly. He grins in a slightly impish way – ready to share a joke, but thoughtful and contained. I think he could be trusted (and perhaps is a little too trusting). This boy is outward looking and appears to be quite enthusiastic, but the eyes are somewhat narrowed, providing a steady gaze which might be critical. He seems to be quite relaxed – happy (or interested) to be himself. He seems cheerful and glad to be alive.

I seem to be imposing my adult features upon the child. The cares and worries that face the boy growing into manhood are not yet registered in the photograph, but I can see the potential for some kind of fulfilment. He doesn't seem afraid, in fact he might be over-confident. I like this photograph. Was this me? If so, I like me. I think he would recognise aspects of himself in my present-day appearance, though the war-years might well have knocked the stuffing out of him. Now in my eighties, I don't think I have let him down, though I am not proud of everything that has happened. I think I have made a sensible compromise between active and passive, between keeping control of my destiny and accepting what fate doles out. Maybe I have been too easy-going on 'adventure', but I wear a few feathers in my cap. And I think the grin would remain on his face, affectionate and appreciative, as he looked at me now. In fact, I thought I just saw him wink at me.

MICHAEL MORLEY. My father. Aged 82.
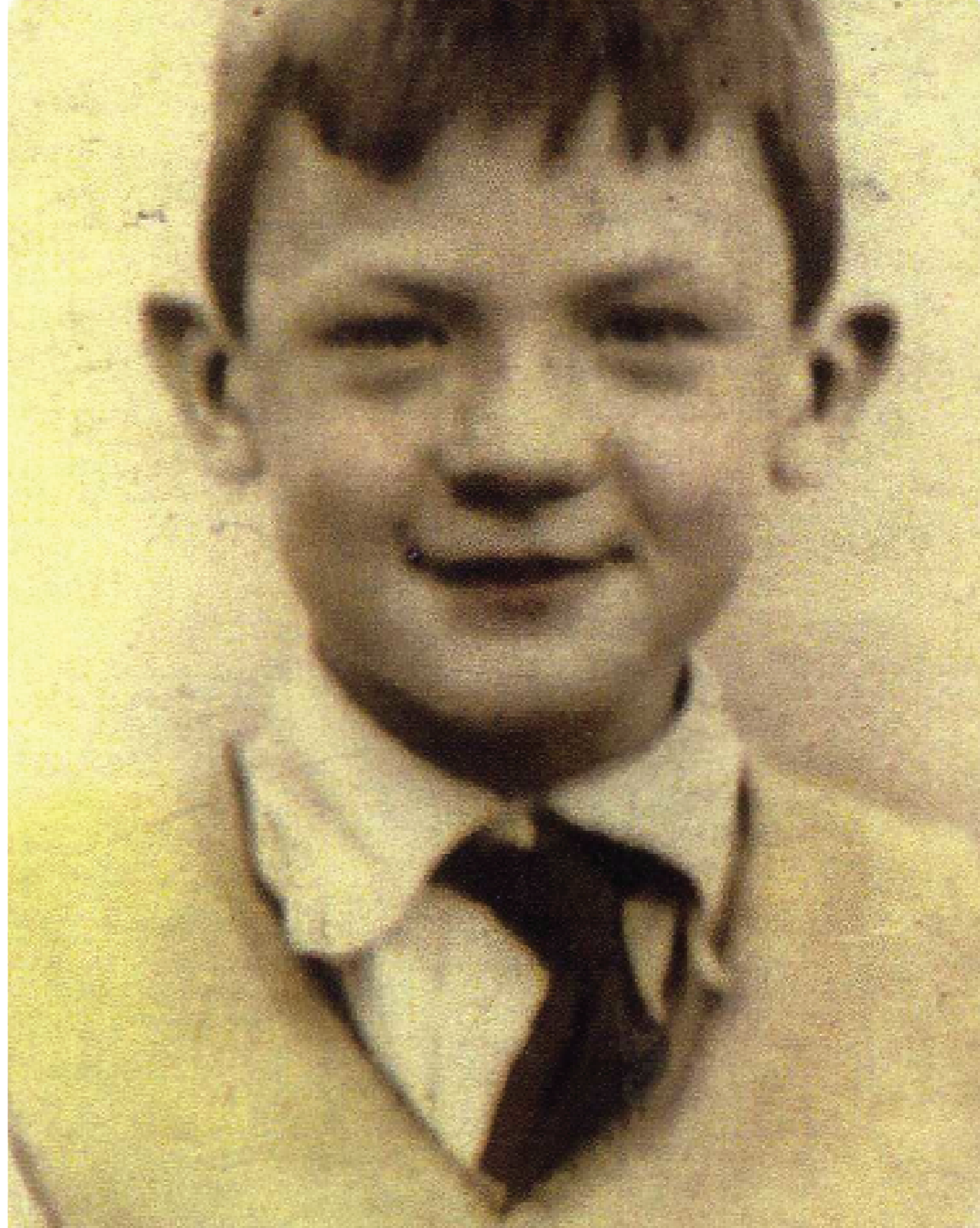
As far as I can judge I think the photo was taken in 1929/30 when I was 2_/3 years old. It would have been taken in a photographer's studio in New Brighton (in the Wirrral, Cheshire). We had moved from Liverpool when I was only six months old.

The photo is cropped. The original (which sadly is missing) is of me standing, very proudly, with hands on the handle of a spanking new doll's pram, with a beautiful baby doll in it. So probably this had been a Christmas present (Christmas '29 maybe). You can't see the pretty dress my mother had bought me for the photo session – but I was obviously as proud of that as the pram and dolly! I remember now that, although the pram was soon 'passed on' to cousins in Liverpool, the doll stayed with me well into my teens.

Looking at the very contented expression, all seems to have been very right with my little world. I was an 'only child' – a brother had died soon after his birth when I was only one year old. But I knew nothing about 'Little Laurie' until I was very much older, as I was sent to stay with a 'Dutch Auntie' during my mother's very traumatic home childbirth. I knew nothing about all of this until I was in my teens. My mother never talked about it, but it must explain her at times sad remoteness. So I grew up, I suppose, a very indulged ('spoilt') little girl. My father was (as far as he had time away from his hard-working life as manager of the pub where we lived) my 'playmate', storyteller and very loving daddy. Grandma, who lived with us and her old friend 'Auntie Polly' were frequently 'Baby Sitters'. I think I was contented; generous – but without siblings to play with - sometimes lonely. Books and gramophone records (both my parents loved music) fed the imagination.

In retrospect, I am immensely grateful for the safe, comfortable home my parents gave me. But, as with most 'only children', I think the 'aloneness' has made me something of a loner. And the fact that I had no real family life had a long-term effect: in my relations with my own children. I never really learned to play. Although our little Welsh maid (half-a-crown a week to 'live in') would take me to the beach just opposite our pub to make sandcastles, I would seldom get together with other children, as my mother gave Gwen strict instructions that I was not to fraternise with the local children! I had one little friend – Leslie Carney – whose father used to take us both for walks every Sunday and tell us wonderful stories (he was Irish!). But it wasn't until I went to kindergarten at the age of 4 that I made other friends.

If my self then could speak to my self now I think they would say: "Regret the fact that you never really allowed your devoted father know how much you really loved him. He sacrificed a lot to give you every chance – private education, help in forging your career. He had great potential as a musician and was embarrassingly proud of you as a pianist and actress, but you never showed your appreciation of his interest. It was good that you were able to be with him just before he died – and you must treasure the letter he sent you from hospital as he was dying from lung cancer at the age of 76. You can see what a happy little girl you were in your photo. Be grateful for the protected childhood both parents gave you. Understand now that the warmth you have always felt missing in your relationship with your mother came from the loss of that much longed-for second child. Also, that her involvement in 'the business' meant little time was left for 'playing'. And remember too that she had her own mother living with you (she was probably in her 90's when the photo was taken). Also 'Auntie Polly' (Grandma's friend) was living with you too. So your mother had her hands well and truly full. Be glad your mother spent her last years with you, dying at 94 in Eastbourne. Now you are in your 80's try to learn from the 'lacks' you find in your childhood.....Keep that happy smile that's in the photo. Enjoy old age. Be fulfilled and generous with family and friends!'

VERA McKECHNIE. My Mother. Aged 81.

Ian Towson

Isolation within a Prosperous Society

Many concerns within the area of ageing fall under the umbrella of mental health problems and dementia which are still largely ignored by national government and left to charitable organizations and local communities to tackle. The problem of dementia is well known and being addressed but less known is the problem of isolation.

Within lower socio-economic groups and many ethnic minority groups isolation is not so great due to the close geographic opportunities for interaction together with localized community and family support linked to existing social care structures.

In more prosperous areas though, such as Winchester, older people are becoming asset-rich but cash-poor and are clinging to property that is isolated. They become cut off from neighbours and interaction opportunities and families tend to be more disparate. Support is also less due to their children having the time pressures of twin income families. Large houses cost more to keep, heat and are not geographically close to facilities or neighbours.

There are ways in which the digital age can help to combat this isolation, but is digital contact a cure for isolation?

David Strahan

Imagining a Post-Petroleum World

References

www.lastoilshock.com
www.odac-info.org
www.peakoiltaskforce.net
www.masdaruae.com

It is widely agreed that humanity faces one overwhelmingly important threat: climate change. But it's worse than that. We face two: climate change and 'peak oil', the moment when the global oil supply goes into terminal decline, with potentially devastating consequences.

There is a growing consensus that this crisis will break within the next few years, and with the crude price soaring to $147 per barrel in 2008, some experts believe it already has. In any event, the worst impacts of peak oil are likely to arrive far sooner than the worst impacts of climate change. So the challenge for humanity is not simply to cut carbon emissions, but to kick the oil habit altogether – and fast. This is an enormous task, and few aspects of life will remain untouched.

Oil is fundamental to our economy and civilization. It supplies 95% of all transport energy, it is the feedstock for most synthetic materials, and it is crucial for agriculture.

Every calorie you consume takes 10 calories of fossil energy to produce. The cost of crude also more or less determines the price of natural gas and electricity.

And that means an expanding oil supply is fundamental to economic growth. You don't tend to get one without the other, and spikes in the price of oil have precipitated all the major recessions since WWII. It's not hard to see why: when the price of oil soars, the oil sheikhs get more of the world's money, so everybody else has to have less. Companies go bust, people lose their jobs, as we have seen since 2008.

But peak oil is different from the oil shocks of the 1970s. The causes are not so much political or economic as geological. After 150 years of oil production, in which the industry exploited the biggest and best oil fields first, there will come a point when the remaining oil resources simply cannot sustain our relentlessly increasing consumption, and instead of growing every year, output will start to shrink - for ever. That's why I called my book The Last Oil Shock.

There is good evidence to suggest peak oil is imminent. Discovery of oil has been falling for over 40 years, while consumption has risen exponentially.

Annual production is already falling in over 60 of the world's 98 oil producing countries. Global production has remained essentially stagnant since 2005, suggesting some kind of geological limits, despite soaring demand in China and India. That's what forced the price up to almost $150 dollars, forcing the 'West' to consume much less, and that in turn has plunged the world into recession, with an extra shove from the credit crunch. We seem at least to have arrived in the foothills.

What makes the crisis so intractable is that all the immediately available alternatives to oil are either inadequate, or come with severe drawbacks attached, or both. Biofuels not only push up the price of food and cause deforestation, but could never remotely replace oil because there is not enough land. Even using so-called 'second generation' biofuels made from non-food crops, to replace the world's transport fuel would take a land area greater than China. Synthetic fuels could be made from coal, but the carbon emissions would be twice as high as those made from conventional crude oil. As for the so-called hydrogen economy, to create hydrogen cleanly you have to electrolyse water using non-CO2-emitting forms of generation, and because the process is very inefficient, the number of additional wind turbines you would need would be prodigious.

The good news however is there is absolutely no shortage of energy. The sunlight that hits the earth in an hour contains enough energy to run the global economy for a year. We don't yet have the infrastructure to collect it, but any sensible response to peak oil will mean the widespread electrification of ground transport, in the form of light rail systems, trolley buses, and perhaps electric cars (which are three times more efficient than hydrogen fuel cell cars). Meanwhile heavy road vehicles such as lorries and buses could run on biogas - methane generated from crop and food waste. In Britain, it has been estimated that the organic waste resource could satisfy 16% of our current transport energy demand, whereas the entire public transport network consumes less 5%.

So because of climate change we have to eliminate emissions from power generation – the biggest single source. And because of peak oil we also have

to supply large amounts of electricity for transport. Together this means building huge numbers of wind turbines, solar panels, tidal and wave power generators. It will probably also involve creating huge new inter-continental electricity grids, to help smooth out the intermittency of renewable generation. The wind blows hardest in the North Sea during the winter, and in Egypt and Morocco during the summer, for instance, and the bigger the grid, the more reliable is the renewable electricity supply.

Because this is such a massive task, we have probably left it too late to make the transition smoothly, and we are likely to suffer energy shortages perhaps for decades to come. Unfettered personal mobility - in the sense of being able to jump into a car or plane almost on a whim – is likely to survive in the interim. Suburban landscapes, where homes, work, recreation and shopping are widely scattered and not linked by public transport, may become unsustainable. And a system of fossil energy rationing such as personal carbon trading – reportedly favoured by Energy Secretary Ed Miliband - will almost certainly be essential to encourage the necessary changes in consumption behaviour and investment.

All of this will have a dramatic impact on the built environment and social organization. We may eventually be connected by bigger energy and public transport grids, but meanwhile be forced to live and work more locally. Home working via the internet may finally come of age, while those in manufacturing may need accommodation much closer to their workplace. New developments may perhaps follow the approach of Masdar City in Abu Dhabi, while in existing towns and cities, building use may be radically reconfigured: new wine in old bottles. Rural life will present its own challenges.

What seems certain is that if we are to survive peak oil, the future energy supply, social organization and built environment will look dramatically different from what we know today. This will not be achieved by timid, incremental steps, only by bold strategic thinking. First we have to imagine a world that functions without oil, and then work out how to get there.

Di Peisley

I am drawn to the two paragraphs in David Strahan's essay commencing The good news however is...' Subsequently I began to research further the suggested alternatives to oil as a form of energy, and the challenge of this to humanity. The Masdar City project being constructed in the Middle East is facing many of these challenges and I find it particularly interesting that the project is being carried out in an area whose main revenue is oil.

Imagining a post petroleum world is a subject full of questions, creating exciting possibilities, innovative ideas and answers. Whilst realising this is an urgent matter for all mankind the benefits will really only be felt by future generations. With this premise in mind I have responded visually, creating a collage imagining a miniature future world through the eyes and simplicity of a child.

Nick Stewart

Last Call ...
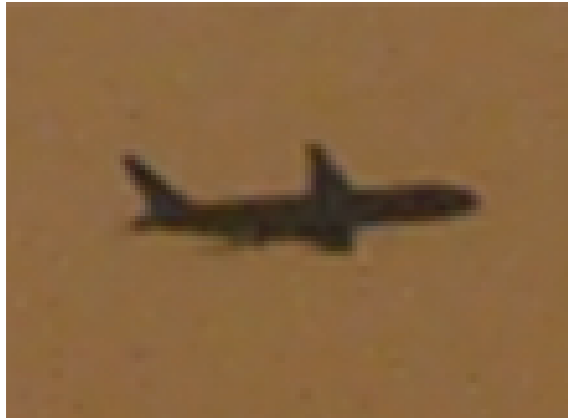
I dreamt I was in an airport.

From Waterloo in central London, where I live, I can watch the planes line up on the long flight path into Heathrow. At peak times they are only about thirty seconds apart. They come from almost every country in the world now but you can always tell the ones from the poorer places. Their planes are older and more polluting. They leave long trails of smoky exhaust as they power down over West London. By contrast, American planes are big and shiny, futuristic looking. They seem to glide effortlessly, arrogantly almost, across the sky. But I remember how strange it was on 9/11, before I'd even heard the news I noticed the empty skies over central London. It remained like that for several days.

•

It's hard for us to imagine this as a permanent condition. We don't even raise our eyes as another jumbo jet crosses our horizon. Air travel has become synonymous with modern life though, of course, only a tiny minority of the world actually have the means to travel like this. But air travel is the canary in the coal mine for Peak Oil. Its reliance on specialist fuels that can only be refined from the highest quality, the sweetest crude oil, means it is especially vulnerable to price spikes and shortages, doubly so as there is really nothing that can replace high-octane jet fuel. Planes can't fly on used chip fat, bio-fuels or whatever. So, the collapse of airlines and the contraction of the global flight network will be one of the first big changes in the post peak oil world. The first ripple from this storm occurred in the summer of 2008 when, on the back of a price spike of $147per barrel, some eighty airlines worldwide went out of business. Prices will continue to spike but at ever-higher levels and, sooner rather than later, the airlines will not be able to sustain their business. From then on air travel will once more become the prerogative of the well-off and, for a while, it may be that the forgotten style of the 1960's "jet-set" will return. Beyond that, only the super rich, the government and the military will be able to indulge the privilege of international flight. The great airports of the late twentieth century will be amongst the most important monuments we will leave to the age of oil.

There is an Arab saying: "My grandfather rode a camel. My father drove a Cadillac. My son flies a Lear jet. His son will ride a camel".

•

In Ireland, in the 1950s and 60s, we grew most of our own food. My father's garden produced all manner of vegetables and fruit: beans, peas, greens, potatoes, carrots, parsnips, berries, plums, apples and pears. We kept chickens and fished for salmon and sea trout in the clean mountain rivers. There were no supermarkets. It was the late 60s before they arrived.

As the years rolled on, and my father retired, the garden produced less and less. Why bother when all you needed to do was jump in the car, drive to the supermarket and fill the boot up with whatever you wanted from all over the world. We never gave it a second thought. We, like everyone else, had come to rely on the globalised system of JIT: just-in-time delivery. In this brave new world the beans my father had grown were now cultivated in Kenya. The delicate soft fruits we harvested each summer were now available 24/7 from across the world. There were also apples from New Zealand, avocados from Peru, mange-tout from Egypt, and all the rest of the odd shaped and exotically named fruits and vegetables that have since become so familiar to us. The globalised market, which for perishable fruit and vegetables means air transport, ensures that those beans are on our supermarket shelves within forty-eight hours of being picked in Kenya. The only sign of this reality is found in the occasional nugget of exotic dirt you might discover nestling in the leaves of whatever fruit or vegetable you've just bought. For a few lucky individuals, that nugget of dirt might turn out to be a deadly spider, or some other unfortunate creature, that unwittingly took a one-way trip to the UK.

Eventually, my parents forsook their productive garden altogether and built a retirement bungalow on the vegetable patch. They saw out their years watching TV while the garden was reduced to decorative window dressing: flowers and shrubs to view from a picture window, a manicured lawn where once a great, ancient cherry tree stood.

•

Recently, visiting my ageing mother at home in Ireland, she told me how her dinner is now delivered daily, by courier. It is prepared and cooked somewhere in England and flown to Belfast from where it is distributed, by lorry and van, across the province. The company that runs this business is successful because of the ease and accessibility of international travel. It may take ten calories of fossil fuel to provide every calorie of food consumed but, at current energy prices, this is not just possible but also profitable.

Globalisation has also created the globalised family. I am not at home looking after my mother and neither are my brothers and sisters. Early in life we convinced ourselves that travel and migration to new countries was our birthright, our destiny almost. It was the conventional family ambition to export children to the far corners of the world, sure in the knowledge that modern air travel would easily facilitate regular visits. The age of cheap oil fostered our escape from the confines of small-town rural life.

Today, in Europe, there is a growing culture that lives in the far-off corners of the continent, but commutes to work in London, Paris and other major cities. There are regular programmes on TV offering advice on how to relocate and buy into this new life of friction-free identity and travel. The world has been stereotyped as an endless series of consumer choices. For many affluent people in the industrialised West, a return flight to New York for a bit of shopping is no more unusual than a weekend in Brighton or Blackpool would have been for an earlier generation.

•

Of course, people have always travelled and moved from place to place, but the scale and speed of it in the age of oil is what is different. Think of a journey across the Atlantic by boat, back when the settlement of America was only just beginning: long and perilous, with storms under endless skies. People lived and died, had children, talked of the future, speculated about the uncharted world coming a little closer with each passing day. It would have been a once-in-a-lifetime experience, a rite of passage, a final parting from family and friends and a dying of all that had gone before. For those that survived, it was a journey to a place for which they

could have no physical or mental map, a strange new land, borderless, like the ocean they had just crossed.

So what value is our freedom to fly across that same ocean when all we manage to achieve is to reduce such profound experience to the level of banality? We blithely get on a jumbo jet and complain of our boredom if the in-flight entertainment isn't up to scratch. What worth is our progress when we experience so little wonder, so little awe at the miracle of flight? Flying today is only profound in the face of technical failure and catastrophe.

•

In the 1980s Belfast was an intense city in near civil war. I lived there but would catch regular flights to London, and elsewhere in the UK, to make exhibitions. It fascinated me that you could get on a plane and fly over the city in about the time it took the stewardess to serve you a drink. Each time I took this flight I'd look down and think how strange it was that all those divisions, all those walls, all that fighting and pain, could be so simply passed over in a few seconds.

I remember the films I've watched of cities in war zones, usually shot from a low flying aircraft sweeping across streets and houses. From the endless vistas of destruction in Germany at the end of the Second World War to the present day virtual reality flying of unmanned drones across the desert landscapes of Iraq and Afghanistan. Over the past one hundred yearsour vision of conflict has grown increasingly removed from actual flesh and blood.

•

Back in the 1960s and 70s, my father bought a new car every couple of years or so. Mostly British made: Wolseleys, Austins, Rovers. Later, they were all Japanese, in spite of his misgivings about that country from his experience in the Second World War. Long drives in his latest model, with all of us crammed into hot leather seats on sunny summer afternoons, was a regular feature of my childhood. He never gave a thought to fuel efficiency. Why would he? Oil was cheap and in never-ending supply.

He found a new love in air-travel after my brother emigrated to Canada. Somehow, on transatlantic flights, he always managed to inveigle his way onto the flight deck. Once, he claimed, the pilot let him

take the controls for a moment. My mother swears she felt the plane lurch from one side to the other. It's hard to imagine in a post 9/11 world.

He loved to talk technicalities of modern aircraft with my brother. They were both 'petrol-heads'. Neither would accept any criticism of car- or air-travel. It was natural to them, an integral part of their identity and something to be unconditionally celebrated. I imagine most people think the same way and for them the end of commercial flight, and the curtailment of private car ownership, will come as a tremendous shock.

What will the plane spotters do?

•

I clearly remember my father one day explaining to me what a vapour trail was, how it was created by a high flying jet and how I could see this through his old, Second World War binoculars which now rest by the window where I sit and type this text. 'Vapour trail' sounded so innocent, so delicate and ephemeral. It was only many years later, while on a transatlantic flight, that I was able to see through this illusion.

Jumbo Jets have a single window, at the very back of the passenger cabin, that, due to the curvature of the fuselage, is at a slight angle to the direction of flight: it faces back towards the tail. By leaning your face against this you can see behind the plane and, incidentally, catch sight of the vapour trail as it forms. What I saw was smoky, dirt brown, exhaust fumes being ejected from each of the immensely powerful engines that kept this 400-ton monster in the sky. This odd little window at the back of the plane was the only one through which the phenomenon could be observed. In the contrast between the scene inside the plane, one of sleepy, satiated lassitude, and this vision of oil-fuelled technological power lies the contradiction at the heart of industrialised society. We claim our right to individual freedom of choice even as we are diligently engaged in the destruction of those same future choices.

•

I tried to get a job once on a North Sea oilrig off the coast of Aberdeen. I hitched from Belfast and spent a week traipsing around the various oil industry servicing companies. I was secretly terrified at the

prospect, though the lure of the pay was enough to overcome the fear. They obviously spotted that I wasn't really cut out for it as no one offered me any work.

In the 1980s and 90s the UK economy was saved by North Sea oil. The discovery of large fields under its relatively shallow waters was the catalyst for one last great binge of consumerist development: shopping malls, apartment blocks, motorways and all the accoutrements of the new service economy. The government made the most of it, selling oil to the highest bidder in the global markets without a thought for tomorrow. The standard economic analysis of the time barely mentions the fact that cheap energy was behind this boom, but in future it will become increasingly clear that the wealth of late twentieth century Britain was little to do with business and everything to do with the relatively free ride that the North Sea provided.

•

If I had succeeded in building a career out there on the North Sea I would by now most likely be facing redundancy. Oil production, in its largest fields, has crashed to as little as 20% of peak production in the late 1990s. Soon it will be gone and to keep the wheels oiled we will be forced to seek compensation in those same global markets. Except that now so many other countries are being forced to do the same and there are no guarantees that we will be able to afford the bidding as the price escalates. The time is fast approaching when Britain will rue the day that it so heedlessly squandered such a one-time opportunity to secure its future. James Howard Kunstler, talking about the USA, might just as easily have been referring to the UK when he wrote that the twentieth century saw: "... the greatest misallocation of resources in the history of the world". James Howard Kunstler, The Long Emergency, 2005

•

My daughter is four years old now. When I was her age the first rockets were just being launched and all the talk was of jetpacks, artificial food and trips to the moon. There was a real excitement about this wonderful new future where everything seemed possible. No one talked about the cost of such dreams, or indeed, how much energy they might require. It was no coincidence that this excess of

optimism gripped the imagination of the wider public at just the moment when the greatest oil field discoveries were being made. Vast reservoirs had been found in Saudi Arabia, Mexico, the Soviet Union and elsewhere. The amounts seemed limitless. Almost no one considered the possibility of depletion. It was inconceivable.

There are some today who still believe such fantasies of limitless progress. They search for abiotic oil, oil that is magically created in the earth's hot core. They want to save us from climate change by terraforming the world, which is, of course, exactly what we have been doing all through the industrial age without really considering the consequences. They imagine hypersonic planes whisking us to the four corners of the earth as if nothing has changed since the 1960s.

•

This will be little more than history for my daughter to study when she grows up. She will live in a world grappling with an energy crisis that, by the time she reaches her early teens, will be permanently transforming the conditions of everyday life across the continents. What will she think of it? Will her generation hate us for what we have done? Will they resent our greedy consumption of the world without a thought for the future? Will they envy the ease with which we flitted from one continent to another? Or perhaps they will feel sorry for us, burdened as we are with so many useless possessions that contribute so little to our health and happiness.

•

I dreamt I was in an airport. All around, layers of glass, neither walls nor windows, promised views but offered only intangible other spaces framed by the same layers of glass. I suddenly realised I'd forgotten my bag. Then I was sitting on the floor in the middle of the departure lounge, surrounded by people hurrying to and fro. I was looking through the contents of the bag that had, somehow, been returned to me: old photos of friends and family, many taken on sunny holidays in far off places, spilled out across the floor. Suddenly I found myself outside looking in through those same layers of glass, now broken and stained. Behind me lay the rusting hulk of a great passenger jet plane, long abandoned to the elements. I could see that the building was dark and derelict but I was still there, on my own: an old man fiddling with the images and objects of a lost life.

Inass Yassin

Abu Dhabi Louvre Art Museum: possible association between past, present and future

On January 12 2007, the Herald Tribune Culture reported news of a 'desert Louvre' for Abu Dhabi, stating that an agreement had been signed between Abu Dhabi and France to hire the name of the Louvre for a new Museum in Abu Dhabi, along with art treasures to be shown in it. The Museum will be one of five planned for a multi-billion dollar tourist development on Saadiyat Island off Abu Dhabi. The Abu Dhabi Louvre is also French-designed, the work of architect Jean Nouvel. It will open in 2012. (Riding.2007)

Work is proceeding despite the objection of many French traditionalists, including 4 ,700 signatories of an online petition accusing France of "selling its soul". The "replica" of the prominent museum is intended to create a cultural ambience to make Abu Dhabi a top tourist destination.

The agreement is supported by an order for 40 Airbus 380 aircraft that the United Arab Emirates has placed, and the purchase of about $10.4 billion worth of armaments from France during the last decade. (Riding.2007).

Paying $800 million to $1 billion just for use of the Louvre name and management of the place for 20 years is only feasible for one of the richest cities on the earth, boasting nearly 10 percent of the world's oil and the 94 per cent of the UAE's oil. UAE is OPEC's third largest oil producer . (Hornsby.2008). Oil was discovered in AUE only in 1958. From that date an immense transformation overtook the country at every level.

After 50 years of oil production in UAE, the oil and gas production will start to shrink and forever, not particularly in Abu Dhabi but all over the world; oil production will not meet consumption. It is estimated that UAE oil depletion will commence in the year 2012, assuming production and consumption at current levels. (Strahan.2008). Given this, it is reasonable to ask how the Louvre agreement will be implemented at a time of shrinking oil resources, and what are the prospects of survival for the Louvre, Abu Dhabi, opening as it will in 2012?

The price of oil will increase, which will no doubt affect the global airline industry and all development projects dependent on tourism, of which Abu Dhabi Louvre Museum is an example. With shrinking oil resources, we may expect distortion of the main goal of the project: to attract large numbers of tourists and to become "a world-class destination bridging global cultures", as Khalifa Bin Zayed Al Nahyan ruler of Abu Dhabi declared. (sfgate.2009).

Can the Abu Dhabi Louvre serve as a global cultural bridge for 20 years, the duration of the signed agreement between Abu Dhabi and France to run the museum?*2. What would be the role of this magnificent piece of architecture when it was accessible only to the local community?

The design model of the new Louvre has the emptiness that is a typical feature of all computer-generated images, the usual silent condition of construction models. It is tempting to predict that this state of vacuum and blankness will become an actuality when global tourism has unavoidably to shrink. Although different factors might speed or delay the pace of the drama, the truth is that the crisis will take place within the coming decade, on one scale or another.

The oil boom which transformed the country will end at some point, and waking up to this reality and reviewing other potential resources to cope may be no bad thing, the opportunity for the community to develop a new self-reliance, with a full assessment of the methods, tools, and targets for sustainability.

A reassessment of the function of the new Louvre might assist with this awakening, and symbolize a new direction for the country.

Viewed from above, the design of Abu Dhabi Louvre presents a white, round shape against the dark waters of the coastline, reminiscent of a pearl. A new direction for the building, as a transition project in anticipation of oil reserve depletion, might take advantage of the history and tradition of natural pearl diving in the Arabian Gulf , and the legacy of the world's largest pearl collection stored in the national bank of Dubai.

Before the discovery of oil in 1958, pearl diving provided 95 % of the national income and thousands of jobs in Abu Dhabi and what later became UAE, along with fishing, dhow trading in coastal areas, and the inland farming of dates. Pearling in Abu Dhabi has been famous since the fifth millennium BC, thanks to the large pearl beds located in the so-called Great Pearl Bank, marked on many nineteenth century maps of the area.(UAE Interact.2009) Pearl diving went on until 1950. It was a very popular and competitive profession, and offered the prospect of real wealth. When the right pearl is found, it is sold for thousands of pounds. (Landais, 2007). Besides wealth, pearling had great impact on building the social structure, traditions, and specific rituals among the coastal village communities. Pearl diving was abandoned in Abu Dhabi not only because of the oil industry, but also because of the Japanese development of the cultured pearl, which made pearls available at lower prices.

The word "Loulo" in Arabic means pearls. Could the Louvre Museum in its transition to a new era become the "Loulo" Museum? In the Arabian Gulf there are many pearl diving sites and the best pearls sites are in oil fields, which limits access. But they might be released in the coming years. This idea could inspire a reframing of the function of the Louvre Museum in the post–petroleum era.

Not all the answers to the challenge of oil depletion are available now, but posing the questions could pave the road for transition initiatives. Transition initiatives all over the world make no claim to have all the answers, but they try to find solutions "by building on the wisdom of the past and accessing the pool of ingenuity, depending on localized sources and resilient local economies". (Transition Maine).

References

RIDING,A. 2007 'desert Louvre' for Abu Dhabi. International Herald Tribune,Culture,The Global Edition of The New York Times Online: http://www.iht.com/articles/2007/01/12/features/louvre.php), visited on 11th February.

STRAHAN, D. 2007 The Last Oil Shock, A survival Guide to the Imminent Extinction of Petroleum Man

STRAHAN, D. 2008,Deplition Atlas, Last Oil Shock, Online; visited on 11th February,2009. http://www.lastoilshock.com/

RIDING,A. 2007 "Abu Dhabi closes deal with France for a new 'Louvre', International Herald Tribune, Europe, The Global Edition of The New York, Online, visited on 11th February. http://www.iht.com/articles/2007/03/06/news/louvre.php

HORNSBY, A.2008 The Sheikhs Mean Business, Emerging Markets Abu Dhabi,AJ,30.10.2008.

SFGate.com 2009 A Louvre for Abu Dhabi? It's a done deal, World View a digest of international news and culture ,Online, visited on 15th February 2009

http://www.sfgate.com/cgi-bin/ blogs/sfgate/detail?blogid=15&entry_id=14365

http://www.paulchefurka.ca/ Oil%20Price%20Projections.html

LANDAIS. E 2007 Mapping dive sites in Gulf, Online, visited on 13thFebruary, 2009: http://www.gulfnews.com/uae/ about_uae/sub_story/10121501.html

UAE Interact, 2009 A Walk Through Time, 2,000 - 200 years ago,Pearling, Online visited on 15th February 2009. http://www.uaeinteract.com/history/e_walk/con_3/con3_51. asp

Inass Yassin
Transformation Dubai (2008)

Inass Yassin
Absent Horses (2008)