UNFORSEEN OUTCOMES: THE ROLE OF ALEATORY AND RHIZOMIC PROCESSES IN SCULPTURAL FORM AND TEXT EQUIVALENTS

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Abstract

Unforeseen Outcomes: The Role of Aleatory and Rhizomic Processes in Sculptural Form and Written Equivalents

The research questions are:

- What means and materials can be used to balance the relinquishing of authorial control in sculptural production with outcomes which retain formal and semantic coherence?
- Is it possible to devise a written equivalent both to elucidate this aim and reflect subjective creative processes in sculptural practice?

Aleatory, generative and research-based approaches were applied to contemporary art practice to articulate an experience of abjection. A review of writing developed an argument for abjection as a state of ambiguity or being overwhelmed. A review of artworks suggested clay, physical text and natural processes of change as appropriate to answering question one. Three distinct but connected bodies of artwork are submitted:

- Four terracotta sculptures of script, submerged in seawater, as substrates for living marine organisms to determine the final form of the works.
- Eight large sculptures, an accompanying etching and two videos whereby monologue was rendered in extruded clay and shaped by gravity to express the vulnerability of its speaker.
- Six digital prints in which interventions by colonies of ants on ineffectual imperative slogans are juxtaposed with photographs of 1930s Italian architecture for children.

In line with aleatory strategies, five booklets without a predetermined

sequence present research relevant to the sculpture. These reflexive discourses draw on the prose style of Sebald. Deleuze and Guattari's concept of the rhizome provides a non-hierarchical structural model, which establishes connectivity between disparate ideas.

The production and contribution of the above works are described and discussed in relation to the contextual review and themes. Chance strategies and generative processes are best deployed to embrace abjection when allowed to overwhelm the work. The more artistic control is relinquished to aleatory practice, the more innovative such strategies are in articulating this idea of abjection. Directions for future research are suggested.

Abstract

Unforeseen Outcomes: The Role of Aleatory and Rhizomic Processes in Sculptural Form and Written Equivalents

The aims of this research are subsumed under two main questions:

- What means and materials can be used to balance the relinquishing of authorial control in sculptural production with outcomes which retain formal and semantic coherence?
- Is it possible to devise a written equivalent both to elucidate this aim and reflect subjective creative processes in sculptural practice?

The research aimed to apply aleatory, generative and research-based approaches to contemporary art practice in order to articulate an experience of abjection. A review of relevant writing on these themes developed an argument for abjection to be understood as a state of ambiguity or being overwhelmed. A review of relevant artworks suggested clay, physical text and natural processes of change as materials and methods appropriate to answering the first research question. The work submitted in response to this comprises three distinct but connected bodies of art work:

- Four terracotta sculptures of script, submerged in seawater, as substrates for living marine organisms to determine the final form of the works.
- Eight large sculptures, an accompanying etching and two videos whereby monologue was rendered in extruded clay and shaped by gravity to express the vulnerability of its speaker.
- Six digital prints in which interventions by colonies of ants on ineffectual imperative slogans are juxtaposed with photographs of 1930s Italian architecture for children.

In response to the second research question, and in line with the aleatory strategies of writers and artists influential on this project, five separate booklets without a predetermined sequence present background research relevant to particular aspects of this practical work. The writing of these reflexive discourses draws on the prose style of Sebald, a writer whose work is analogous to the creative processes of contemporary visual artists. Deleuze and Guattari's concept of the rhizome provides a non hierarchical model for such practice as a structure which establishes connectivity between apparently disparate ideas.

In the thesis, the production of the above works are described and discussed in relation to the contextual review and thematic concerns. The contributions of the research are outlined. The adoption of chance strategies and generative processes enables a fresh understanding of abjection to be expressed in contemporary sculpture; these are best deployed when the artist embraces abjection by allowing these processes to overwhelm their work. The more artistic control is relinquished to aleatory practice, the more innovative such strategies are in articulating this idea of abjection. Directions for future research building on these conclusions are suggested.

Chapter 1. Introduction

1.i Research Aims

The primary aims of this research are subsumed under two main questions:

- **What means and materials can be used to balance the relinquishing of authorial control in sculptural production with outcomes which retain formal and semantic coherence?**
- **Is it possible to devise a written equivalent both to elucidate this aim *and* reflect subjective creative processes in sculptural practice?**

The research aims to reconcile values which occupy ostensibly polarised positions, or which represent qualitatively different aspects of practice. For many practitioners of contemporary sculpture, the abnegation of authorial control and the adoption of aleatory processes is matched by an anti-aesthetic or anti-form attitude. However, to embrace chance factors in order to comment intelligibly on the implications of chance itself, requires a compensatory attention to formal considerations. This apparent paradox is one of the key concerns which this research sets out to examine. Finding appropriate materials and processes to accommodate both the operation of chance *and* the intention to produce legible sculptural form, is also central to addressing the research question. Furthermore, it risks being a purely gestural reaction against intentionality in material outcomes unless relinquishing of control is related to appropriate themes outside the discourse of sculptural practice.

The research therefore sets out to develop and test an effective relationship between the following: Chance; Control; Material Factors; Thematic Factors.

However, identifying these as separate considerations fails to take account of the experiential aspects of creative practice and the reasons why loss of control should be an issue in the first place. For this reason, the subjective preoccupations informing the creative process seemed impossible to separate from the more rational working through of a 'research question' and indeed doing so may diminish the potential contribution of the research. Such subjective considerations may appear inimical to the evidence based objectivity of PhD research valorised in the positivist tradition but are intrinsic to much creative practice, and form the basis of the critique of positivist approaches fundamental to, for instance, qualitative research.

The importance of these subjective concerns to the conflicting values of aleatory and formally resolved aspects of practice, suggested that the research required another level of analysis and exposition. This requirement was directly linked with the need to identify appropriate texts to support the wider thematic implications of loss of control to external forces. In relation to my own practice, I see the abdication of authorial control – to differing degrees – as relating to ideas of 'abjection'. In turn, the particular nature of that abjection relates to a crisis in thinking, a sense of being overwhelmed by conflicting, multiplying masses of information, materials and potentialities. These considerations informed, not only the need to link the practical works to specific textual sources related to loss of control over stabilising aspects of self - such as belief or rationality – but the realisation that the research itself called for a text-based outcome distinct from the objective conventions of the PhD thesis. This involved the framing of a second, complementary question, asking what manner of text - in terms of form, content and presentation - could present a viable equivalent to the project's sculptural outcomes, and itself be seen as a legitimate constituent of contemporary sculptural practice.

Taken together, the research questions recognise a disparity between the nexus of disparate ideas and irrational or intuitive connections which characterise creative processes, and the appearance of sculptural works which *seem* to embody the final stage in a clear, linear progression from conception to completion. On a theoretical level, the ideas of rhizomic

interaction as propounded by Deleuze and Guattari were adopted as a justification for foregrounding the subjective or hidden aspects of practice in terms of the way diverse connections are generated and function when woven together (see 1.iii below). On a practical level, the research aimed to parallel these concerns in the way it adopted new and unpredictable materials and processes, which interrupted the assumption of sculptural form as the external manifestation of a fixed concept representing authorial control. To this end, the research aimed to adopt a broader set of unorthodox 'collaborations' with living organisms and physical forces which have their own systems of working and generating form.

1.ii Research Background

Before undertaking this research in late 2005 I had already started to identify and adopt new materials for sculpture borrowed from other disciplines. To this end I had collaborated with non-artists who shared specialised knowledge or skills, which informed the production of sculptural objects or key elements within larger sculptural projects. This collaborative strategy focused on ways in which the final form of the work could have a chance element or relinquish some aspect of control. The outcomes indicated the possibilities of negotiation with others or with the materials and techniques associated with their particular expertise.

Prior to this my work had been essentially formalist in character, predominantly concerned with the manipulation of materials using the traditional techniques of construction, carving and casting, to produce self contained objects presented in compositions or 'series'. The underlying concept of 'truth to materials' has endured throughout, although strategies to enable materials themselves to determine both form and conceptual considerations have emerged more recently.

From formalist sculptural beginnings, my work had also become increasingly engaged with issues of both subjective and theoretical meaning – elements which played an increasingly important role in the ideas and motivations

behind the work but which were seldom evident in the material outcome. This background research was rarely disseminated except as short artist's statements or in proposals, which implied a series of isolated projects, rather than a wider, more sustained material investigation. Therefore, to undertake PhD research presented an opportunity to integrate and rationalise every level of my practice and to reconcile subjective motivation with more objective imperatives.

Aspects of my previous work are consistent with areas of contemporary sculptural practice that can be seen to encompass an ever-expanding field of material manipulations, collaborative processes and reflexive examinations of its own recent history. Undertaking research at PhD level presented an appropriate context to examine ways in which the different strands of my practice could be located within this discourse. It also required a closer attention to relevant areas of theory and invited a critical interrogation of my own work and that of others (see chapter 2).

Finally, although 'background' remains exactly that in the context of most PhD theses, the decision to include a substantial section (chapter 3) discussing work prior to the current research, is consistent with the underlying emphasis on rhizomic realities rather than the artificial isolation of bodies of work that have in fact evolved and intersected over time.

1.iii Rhizome Theory

> *Principles of connection and heterogeneity: any point of a rhizome can be connected to anything and must be...A rhizome ceaselessly establishes connections between semiotic chains, organisations of power, and circumstances relevant to the arts, sciences and social struggles.*[1]

[1] Gilles Deleuze & Félix Guattari (1988) A Thousand Plateaus. Quoted in O'Sullivan, S. (2006) Art Encounters Deleuze and Guattari: Thought Beyond Representation. Basingstoke; Palgrave MacMillan. p. 17

The starting point for any inquiry is a theoretical proposition. As briefly alluded to above (1.i) Deleuze and Guattari's ideas concerning the rhizome provide a pertinent theoretical explanation for a manner of working which embraces the aleatory and establishes connectivity between disparate ideas. In O'Sullivan's examination of Deleuze and Guattari's theories he states:

> *Indeed, we might say that an effective art practice, paradoxically, often relies on not knowing in advance what effect the practice might have (and that effect may be so small as to be almost imperceptible, a tiny affective deviation that nevertheless begins a landslide and the production of a new world).*[2]

Sketchbooks amass groups of connected ideas but do not map out linear developments concluding in final isolated artworks; they do not provide exact solutions to aesthetic equations. It can be difficult to track the development of an artwork when themes or forms recur in different idioms, creating new connections. Photographs and cuttings hoarded for one project provide an essential link to the outcome of another. The process of developing work must be a constant feeding of an open-ended machine with information. The machine is at its most useful when it connects up with a concern or interest that had been captivating for a while but was for some reason deferred. This thought process is analogous to what Deleuze and Guattari, in *A Thousand Plateaus* (1988), term a 'rhizome'. In their writing, a rhizome is immediately recognisable as the non-hierarchic imbrication of areas of interest, independent ideas that are cooperating with each other. This succinct articulation of processes felt very familiar to me. It is a renewed notion of structure, made familiar to us by web links wherein there is no centrality or hierarchy, and ideas or 'continuums of intensity' can amalgamate in virulent new ways. Chance confluences draw apparently dissonant fields together. A golden glove woven from the silky anchor of mussels, a brief account in the *Metro* newspaper of an octopus surfacing whilst holding a priceless vase, Bernard Palissy's majolica rockpools - all are, in this sense, rhizomic

[2] Simon O'Sullivan (2006) op cit. p. 23

connections between my preoccupations with, say, silkworms, marine life, ceramics, churned up by endless flukes. As an artist, my approach to the research was to generate other connections.

Figure 1. Bernard Palissy, *Oval basin* (circa 1565-70)

> *This is how it should be done: Lodge yourself on a stratum, experiment with the opportunities it offers, find an advantageous point on it, find potential movements of deterritorialization, possible lines of flight, experience them, produce flow conjunctions here and there, try out continuums of intensity segment by segment, have a small plot of land at all times. It is through a meticulous relation with the strata that one succeeds in freeing lines of flight.*[3]

The theory of the rhizome therefore, offered a further validation of the explorations and aims of this research, underpinning them with the proposition that seemingly confused, inchoate, or anomalous creative impulses can connect to form clear and innovative outcomes. Applied to contemporary art practice, the rhizome concept suggests that processes independent of authorial control can lead to coherent artwork, and thus has the potential to address the first research question. Chapter 2 discusses examples of rhizomic approaches evident in practice-based research in fine art (see 2.v).

[3] Simon O'Sullivan (2006) op cit. p 32

1.iv Methodology

Testing how the theory summarised above might answer the research questions required a relevant methodology for both artistic practice and the development of a written component to echo that process. The methods relating to the practical aspect of this research is largely empirical, involving the identification and application of suitable materials and technical procedures to produce sculpture that would record the process of its production. I have outlined the materials and methods used below (see 1.v). However, as outlined above, Deleuze and Guattari's rhizome theory offered an apt methodology for examining aleatory processes; rejecting authorial control equates to a disruption of the familiar hierarchical model of artist as master of his/her media. Another key aspect of this theory is the conjunction of apparently unconnected creative impulses or ideas in order to foster connections between nodes of intensity; for example, John Ruskin's writings on nature, Italian summer camps and the triumphal prints of Maximilian I, all became grist to the mill in this research. Following Sullivan's dictum above I lodged myself on various strata: for instance that of an artist surrounded by fresh materials and equipment; that of a newcomer to the North East absorbing unfamiliar views and stories; and that of researcher encountering other people's expertise. From this position I surveyed possible connections or 'lines of flight'. For instance, I realised that Ruskin's writings were contemporary with the founding of a local marine laboratory, and paralleled the debates on intelligent design that were rekindled by the 150th anniversary of the publication of *On the Origins of Species*. I produced experimental work that arose from such interstices; one example was modelling and casting marine organisms in clay. Ultimately, the fixed outcomes of the casting process centralised myself as the producer/author of predefined objects and so disrupted the continual flow of further connections. Realising these works were trapped on familiar strata I occupied as a creator with specific learned skills, I searched for aleatory processes that might continually produce new forms and meanings. Dropping an unfired sculpture resulted in an unintended but intriguing form that inscribed its own expression onto the material and thereby a 'new line of flight' was freed. Thus the methodology for the practical

work was rhizomic: discrete areas of interest were embraced while production methods that I controlled totally were abandoned.

In keeping with this rhizomic approach I intended that the written component of the PhD submission should incorporate a reflexive and speculative body of writing, one that bore an active symbiotic relationship to the practical work. Such a strategy is consistent with the rhizomic ideal of a decentralised engine for meaning generation. Achieving this required me to identify modes of embodying and presenting the research that would both reflect and extend the connective and aleatory characteristics of my sculptural production. The methodology for this involved evaluating literary and visual models which disrupted a fixed linear form and allowed the reader/viewer to construct random connections and sequences. W. G. Sebald's innovative approach to writing has been influential to this thesis since it presents imbricated layers of personal accounts and historical research to the creativity of the reader. However, works such as *The Rings of Saturn*[4] are contained within a delimited narrative arc. Duchamp's *Green Box* (1934) and BS Johnson's *The Unfortunates* (1969) - also known as the 'book in a box' - offered a more radical starting point in that they comprise a series of unbound elements that can be taken up in any order to instigate multiple narratives or interpretations. This offered an appropriate strategy for my text equivalent to the aleatory sculpture, resulting in the 'five individual booklets' enclosed here (see chapter 4, also 2.ii).

While the artwork represents the outcome of a rhizomic methodology, the five booklets document the sources, nodes of interest and connections that have generated this artwork.

1.v Material methods

In order to exploit the connective potentials outlined above, the research used two main materials to graft these interests: clay and text or script. In this

[4] W.G. Sebald. (2002) *The Rings of Saturn.* London: Vintage.

context I regard text/script as a material. Since clay emerged as a material offering the flexibility (in raw and fired forms) to achieve this end, many of the practical methods entailed the development of new technical skills to exploit this potential; these are elaborated on in chapter 5. Clay is adopted because of its malleability, its ability to create an impression of almost anything from human flesh to a sense of gravity or the passage of time by capturing the impression of ancient actions, calculations or footprints. Techniques used in the production of these works include modelling, slip casting and extrusion through custom-made templates, while some works involved a combination of these.

The manipulability of text also allows it to create an impression of anything from human emotion, a sense of abjection, to the articulation of a moment in time. Hijacking a phrase from one context and situating it elsewhere generates new meanings, or the words will seed new connections in the mind of the viewer. In the progress of the research I have fused the written and practical elements: writing about sculptures and sculpting in text. These aspects aim to complement and illuminate each other.

Acting in conjunction with these materials**,** were others, belonging not to modes of communication or meaning but to an independent level of existence.

The role of abjection in this research relates to the fact I have always found a mass of natural things unsettling, a feeling that is the basis of my artistic interest in natural and social conglomerations and patterns. I am interested in what this entails as an abject response to examples of natural order outwith human control, created in the realm of insects, bacteria and molecules. A perfect circle of transparent, curved eggs secreted on a window like Richard Deacon’s viral collages of the sky, or innumerable identical barnacles claiming the crevices of a rock like a chalky rash; organisms that do not perceive our borders, positions and rules. These properties of tenacious growth and rapacious uberty transform them from a mass of individuals into a crowd, a texture, and therefore a material.

Figure 2. Richard Deacon, *London # 5* (1998)[5]

The research involved introducing living organisms to a number of works. In addition, other materials and techniques (submersion, colonisation, dropping) were explored and developed for certain works, particularly those involving living organisms (see chapter 5, also 2.vi.i-iii). Techniques used in the production of printed works were embossed etching and digital printing. Video and sound recordings were also produced. Any particular adaptations to conventional processes are discussed in chapter 5 under the title of each artwork. These also constituted a 'material' which behaved according to inherent processes. Although knowledge of how such organisms function meant that, to an extent, their collective behaviour could be predicted, how this impacted on individual works could not be foreseen. A significant aspect of the research, therefore, was the balance between how these organisms could be expected to behave, and the idea of relinquishing authorial control. How effectively can such organisms perform as aleatory components signifying abjection?

1.vi Outcomes

The questions, concepts, and concerns outlined in the above sections resulted in three distinct but connected bodies of practical work:

[5] Illustrated in Richard Deacon (1999) *New World Order*. London: Tate Publishing. Unpaginated.

- Terracotta sculptures that form the substrates for living marine organisms to determine the final form of the work.
- Monologue rendered in clay to express the vulnerability of its speaker.
- Interventions by colonies of ants or bees to disrupt examples of human social order concretized as architecture.

The development of the individual works in these three main categories, factors affecting their production, materials, processes and technical details are discussed in chapter 5.

In addition to the practical works, a further outcome was the written component in which I have compiled a reflexive account of the research, and of the chance encounters and cross references that influenced the body of sculptural work. This exists as five booklets, three of which, *The Dove and 1000 Tides*, *Hell is Other People* and *Colonies*, relate directly to the practical outcomes indicated above. Two other booklets, *Grey Book* and *Moths* discuss other projects and transferable experiences from my earlier practice. There are however, many interconnecting and recurring elements that prevent these booklets from being seen as discrete 'chapters' following a linear or chronological progression. The booklets have no preordained order and can be seen to reflect the composition of a rhizomic structure. This non-hierarchal presentation, intends to position the reader as an active interpreter, similar to a viewer at an exhibition of sculpture.

The separately bound booklets allow the reader to choose the order in which they are read, and so to establish their own interpretations of the connectivity of the work. Written as a 'narrative sketchbook' they aim to illuminate the process of inspiration, the way facts are absorbed, parallel concepts revealed and information transformed into a final artwork. These booklets occupy a space in the thesis designated as chapter 4, and return the reader to the nexus of connections and conditions informing the production of the practical work in the following chapter.

Finally chapter 6 discusses the successes and limitations of this project in answering its questions, and the contribution to contemporary sculptural practice and understandings of art.

Chapter 2. Contextual and Literature Review

This chapter examines key aspects of theory, practice and thematic concerns, which constitute the wider context of the research. It locates the research in relation to direct influences, and how it develops or differs in intention and implementation, from cognate areas of contemporary art practice. The chapter therefore seeks to demonstrate a critical awareness of relevant theory and practice in order to clarify the specific values of the research and its contribution to the field. Given the multi-faceted nature of the conceptual and practical concerns of the research, this survey does not purport to be exhaustive. Instead, it focuses on artists, materials and ideas, which help clarify the significance of the work produced and the intentions behind it.

Each of the following sections offers:

- A brief evaluation of a key concern - strategy, material, or process - its origins and relevance in contemporary practice. The way in which such concerns and associated terms or processes are understood or interpreted in relation to the research will be clarified where appropriate.
- An appraisal of the literature, focusing on influential theoretical and critical texts.
- A review of selected artworks which represent significant engagement with these concerns and which are discussed in terms of their effectiveness and the degree to which they relate to the present research.

Inevitably, some artists are discussed in several different sections, just as some concerns, while treated separately (eg abjection, anti-form, aleatory art), are inter-linked tendencies in postmodernist art. Similarly, appraisals of materials and processes often refer to artists and concerns discussed under other rubrics, again indicating underlying, ‘rhizomic’ threads which also bind

the different aspects of the research project into a unified entity.

2.i Abjection

In chapter 1 I identified an experience of abjection in relation to natural forms as a thematic concern for this research. When abjection is spoken of in relation to contemporary art, it is most commonly associated with a range of materials embraced in the sculpture and performance of the 1970s. Abject materials are widely understood as those that would be discarded or rejected, that are regarded as worthless or unclean; they are adopted for precisely these charged connotations. Their use in art is closely linked to the theories on abjection of French writers and philosophers such as George Bataille. Bataille identifies diametrically opposed processes of seduction through fixation on either the ideal or the base aspects of the human condition, citing fetishism of the foot as an example of the latter:

> *The hideously cadaverous and at the same time loud and proud appearance of the big toe corresponds to this derision and gives a very shrill expression to the disorder of the human body, that product of the violent discord of the organs.*[1]

Helene Cixous, writing in the 1970s, articulated a feminist perspective on the abject state of women writers and artists within a pervasive phallocentric worldview:

> *The philosophical constructs itself starting with the abasement of woman. Subordination of the feminine to the masculine order which appears to be the condition for the functioning of the machine.* [2]

Cixous argues that women writers and artists could overturn the abject phallocentric state of humanity through art and writing proceeding from the

[1] Georges Bataille (1985) 'The Big Toe'. In A. Stoekl (Ed.) *Visions of Excess: Selected Writings 1927-1939*. Minneapolis: University of Minnesota Press. pp 20-23.
[2] Helene Cixous (1975) 'Sorties'. In David Lodge (ed) (1988) *Modern criticism and theory: A reader*. Harlow: Longman. p. 289.

fundamental biological experience. For her, questioning and inscribing the bodily experience of women could effect radical and pervasive change:

> *...another thinking as yet not thinkable will transform the functioning of all society.* [3]

Bois & Krauss assert an explicitly social and radical concept in the writing of Bataille. They see him as influential in locating the idea of abjection as a central experience in society and therefore a central issue to which art must address itself. Krauss refers to Bataille's *Abjection and the forms of the miserable* thus:

> *… these texts identify social abjection with a violent exclusionary force operating within the modern state- a force that strips the labouring masses of their human dignity and reproduces them as dehumanised social waste (its dregs, its refuse).*[4]

This reading of Bataille takes the idea of abjection away from the specific biological focus of body art and extends it to a wider social rejection: abjection is associated with a sense of necessary dislocation from prevailing order precipitated by something that forces confrontation with some essence or substance, whether social or biological. While Bois is careful to distinguish Bataille's thought from Marxist tendencies,[5] such a vision, like that of Cixous, is redolent of utopian intent.

Abjection is also a central theme in the writing of Julia Kristeva; yet she offers a less affirming view of the potential of abjection than Cixous or Bataille, writing of it as a 'nurturing horror'[6] beneath a veneer of civilisation:

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[3] Ibid p. 289
[4] Rosalind Krauss. 'The Destiny of the Informe'. In Yve-Alain Bois & Rosalind Krauss (1999) *Formless: A User's Guide*. New York: Zone Books. p. 236
[5] Yve-Alain Bois (1999) 'Abattoir'. In Yve-Alain Bois & Rosalind Krauss (eds) op cit p. 48
[6] Julia Kristeva (1982) *Powers of Horror: An essay on Abjection*. New York: Columbia University Press p. 210

> *…who, I ask you, would agree to call himself abject, subject of or subject to abjection?*[7]

She defines abjection as:

> *...what disturbs identity, system, order. What does not respect borders, positions, rules. The in-between, the ambiguous, the composite.*[8]

Therefore, abjection is specifically located in the interstice of the base/noble opposition that Bataille and Cixous write about. It is bound to an experience of ambiguity:

> *To be attracted and repulsed indicates the presence of the abject, for ambiguity is a state which does not answer to system or rules.*[9]

Andrea Duncan discusses the work of a number of artists as engaging with issues of abjection through their use of bodily materials.[10] But extending this to discuss her own work in hospitals, she associates the physical experience of illness as encountering ambiguity between body and mind:

> *[In the hospital] I have encountered people who have addressed extraordinary boundary shifts of body/self in the treatment of their disease and have felt all the abject nature and the rich strangeness of an unfamiliar dialogue with the body.*[11]

Duncan explicitly associates this abject experience with the idea of dissolution, of being faced with the prospect of multitude or infinity. She cites Dickens' account of Esther's feverishness in *Bleak House* as a dream of a

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[7] Ibid p209
[8] Julia Kristeva (1982) op cit p. 4
[9] Ibid.
[10] For further discussion see: Andrea Duncan 'Inside-Outside-Permutation: Science and the Body in Contemporary Art.' in Sian Ede (Ed.) (2000), *Strange and Charmed: Science and the Contemporary Visual Arts*: London: Calouste Gulbenkian Foundation. p. 144.
[11] Ibid. p 158

fiery celestial necklace in a *great black space*, and herself a bead upon it, and quotes Edmund Burke's reflections on contemplating the infinite as a recognition of this state:

> *When we attend to the infinite divisibility of matter...the imagination is lost as well as the sense, we become amazed and confounded at the wonders of minuteness, nor can we distinguish in its effect this extreme of littleness from the vast itself.*[12]

Looking at these various writings, abjection emerges not just as a melding of the ideal and the bodily. The idea of abject states encompasses the confrontation of exclusions not only from the physical but from social realms; confrontations with horrifying ambiguity resulting from the loss of linguistic certainty or blurred boundaries; or a discomforting experience of dissolution or being overwhelmed. Abjection is linked with the concept of the 'other', that is, all the things we say we are not.

It is difficult to express unease, unnerve. Repulsion and phobia are in a sense too definite, too black and white.

> *the opposing reactions of repulsion and desire are also indicative of the state of abjection, the state of the ambiguous where all 'meaning collapses'.*[13]

Artists, then, might be best placed to explore and articulate this abjection. Writing of the psychoanalytic work of Hanna Segal, Pajaczkowska argues a similar potential for art *to broach experiences… that are not usually encountered in daily life* since artists have a *particular sensitivity* to *the psychic reality of states of mind, emotions, thoughts, moods etc.* She invokes Lacan's theorisation of the mirror phase to set image as a counterweight to the kind of experience Kristeva singles out:

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[12] Edmund Burke, quoted in ibid. p. 160
[13] Lucy Lippard 'Eccentric Abstraction.' in: Schwartz, S. Editor (1993) *Abject Art: Repulsion and Desire in American Art*, New York: Whitney Museum of American Art. p. 43

> *… the structure of the image is inherently connected to the subject's desperate quest for imaginary unity, to counteract the feeling of fragmentation and powerlessness that precedes the mastery of the ego.*[14]

Art work deploying abject materials that are the product of base physicality draw on contradictory strategies of attraction and repulsion: the aesthetic appeal of a material is revealed to be something repellent, shuddery or even phobic. Such associations had a particular resonance for feminist artists in the 1960s and 70s such as Carolee Schneemann and Ana Mendieta. The essentialism of 1970s feminist artists dovetailed with the wider practice of body art that embraced anything occluded from the 'masculine' modernist aesthetic akin to industrial production; and subverted and re-presented those natural but abject materials (bodily excretions) as a rejection of what could be considered 'good' in the dominant culture. Women artists utilising and reclaiming base materials thus attacked and undermined prevailing dualistic power structures; they fulfilled the function of Cixous' *species of mole not yet recognised*[15]. The transgressive work of artists such as Paul McCarthy[16] and Mike Kelley[17] can also be seen as aligned with this legacy of embracing bodily materials. Without performances such as Schneemann's[18] we might not have seen theirs. Yet their scatological braggadocio has the character of an ironic counter-insurgency against women's body art, playing with dirty stuff at the expense of a more nuanced or broader reading of the parameters and consequence of abjection.

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[14] Claire Pajaczkowska (1997) 'The ecstatic solace of culture: self, not-self and other; a psychoanalytic view.' pp101-112. In Juliet Steyn (Ed.) *Other Than Identity: The subject, politics and art*. Manchester: Manchester University Press. p. 207

[15] *We are living through this period when the conceptual foundation of a millennial culture is in the process of being undermined by millions of a species of mole as yet not recognized.* Helene Cixous (1975) 'Sorties'. In David Lodge (Ed.) (1988) op cit p 289

[16] *Shit face painting* (1974);*Santa's Chocolate Shop* (1997), illustrated in Paul McCarthy (2000) *Paul McCarthy*. New York: New Museum of Contemporary Art. P. 194

[17] *Nostalgic Depiction of the Innocence of Childhood* (1990) Mike Kelley illustrated in Steve Baker (2000) *The Postmodern Animal*. London: Reaktion Books. p. 91

[18] See *Eye Body: 36 transformative actions* (1963), *Meat Joy* (1964) *Evaporation-Noon* (1974) in Uta Grosenick (Ed.) (2005) *Women Artists in the 20th and 21st Century*. London: Taschen. p 294.

Helen Chadwick, an influential latter-day exponent of this strategy used various objects and substances that could be described as abject, and her iconography closely parallels the ideas of Bataille. This is evident in the sinuous interlacings of human hair and pig guts in *Loop my loop* (1991)[19] or the cascading heap of severed tongues in *Glossalia* (1993).

Figure 3. Helen Chadwick, *Piss Flowers* (1992).

Of particular interest is the way Chadwick developed various techniques to capture transient actions and transform them into permanent artworks. Her *Piss Flowers* (1992),[20] twelve bronze sculptures, were cast from cavities melted in the snow where Chadwick and her male companion had urinated (fig. 3). This blurred the distinction between baseness and beauty, using the type of bodily expulsion commonly associated with the abject. Her *Viral Landscapes* (1988-9) harnessed the chaotic action of waves by throwing ink in the sea and capturing the turbulent image directly onto canvas, allowing nature to document itself. She then took this imagery and copied the marks using her own cellular tissue – from her mouth, blood, cervix and kidney - as a pigment, finally overlaying this on panoramic photographs of stormy sea shores, blurring the delineated territories of artist and subject, culture and

[19] Helen Chadwick (1997) *Stilled Lives*. Edinburgh: Stills Gallery, Odense: Kunsthallen Brandts Klædefabrik. Unpaginated.
[20] Illustrated in ibid, unpaginated.

nature. *I cannot distinguish anything as separate from myself so perhaps after all, I am the anything I observe.*[21]

For her installation *Of Mutability* (1986)[22] at the ICA, London, Chadwick emphasised the binary nature of her practice. She filled one room *The Oval Court* with a constellation of baroque imagery: draped nudes, cascading fruits, leaping animals and fish. In the other room she set up its counterpoint, called *Carcass*, a vertical vitrine filled with the rotting remnants of the project's construction (fig. 4). This proved to be so foul it was removed from the exhibition, to Chadwick's great consternation. [23]

Figure 4. Helen Chadwick, *Of Mutability* (1986).

[21] Helen Chadwick (1994) *Effluvia: Helen Chadwick*. Museum Folkwang, Serpentine Gallery, Fundacio 'la Caixa'; Essen, London, Barcelona. p. 10.
[22] Illustrated in Helen Chadwick (1997) Op cit. Unpaginated.
[23] Marina Warner. 'In Extremis: Helen Chadwick and the wound of difference', in Helen Chadwick (1997) *Stilled Lives*. Edinburgh: Stills Gallery and Odense: Kunsthallen Brandts Klædefabrik.

This is a characteristic example of Chadwick's concern with linking the uncontrollable aspect of the abject with its rational scientific counterpart to achieve a synthesised aesthetic outcome. In this way, her work represents a category of abject art with which the current research shares certain affinities. This is most apparent in the relinquishing of hierarchical distinction between the human and animal or elemental, and the importance of finding effective solutions for transforming transient or uncontrolled actions into permanent art forms. However, that common understanding of abjection, (particularly associated with women artists) which emphasises bodily functions and fluids and which Chadwick frequently utilises, is not the focus of this research or its outcomes. Rather, the work produced during this research subsumes the human presence into the implicit understanding that the particular materials and processes have been brought about by human agency, and seeks sculptural expression of abjection as an experience of powerlessness or dissolution in the face of uncertainty or ambiguity.

In further contrast to Chadwick's emphasis on physicality, the current research has also engaged with uncontrolled or abject states of mind (for the series of sculptures *Hell is Other People* and *Ruskin Quote,*[24] see 5. ii-iii), the psychological disturbance created by swarms or multiplicities of organisms and the precarious nature of self-control. Relevant in this latter respect, Rod Dickenson's work considers abject states of mind, including reconstructions of several scenes that relate to a significant or tragic outcome of mass compliance.

In the aftermath of WWII psychologists tried to throw light on how people came to commit genocide or acts of 'unfathomable brutality'. In 1963 Stanley Milgram tested the limits of obedience in individuals in his now infamous 'electric shock' experiments, demonstrating that we are capable of short-

[24] Quote is: '*If you fasten a hairbrush to a millwheel, with the handle forward, so as to develop itself into a neck by moving always in the same direction, within continual hearing of a steam whistle, after a certain number of revolutions the hairbrush will fall in love with the whistle; they will marry, lay an egg, and the produce will be a nightingale' in* E. T Cook. & A Wedderburn (1912) *The Works of John Ruskin. Library Edition*. London: Allan. Vol 25, p 36.

circuiting our moral convictions under particular pressure. Dickenson recreated Milgram's laboratory for his exhibition *The Tenth Level*[25] at Glasgow's CCA in 2002 to reiterate this scientific demonstration of our propensity to abdicate control of our actions, and indeed the ethical crisis that the original subjects experienced as a consequence of their overwhelmed response. It is not the physicality of this artwork that communicates the emotive significance of its material, but the supplementary documentation or background knowledge of the viewer. The installation is presented like a stage emptied of performers and action and so focuses on the clean scientific aesthetic of rationality and control (fig. 5).

Dickenson describes the ambiguous intent of his work as essential to how they are received within different contexts:

> *One of the things I am always keen to do is try to deflect the absolutely specific reading of the pieces of work...because in many ways those kind of ideas and narratives are actually running...the whole time through culture and it's very easy to map them at any place or any time.*[26]

[25] Illustrated in Claire Doherty (Ed.) (2004) *Contemporary Art: from studio to situation*. London: Black Dog Publishing. p. 55.
[26] Ibid. p. 53.

Figure 5. Rod Dickenson, *The Tenth Level* (2002)

2.ii Aleatoricism and Aleatory Art

If art is to deal with abjection, it must encompass or represent the experience of loss of control. A central aspect of abjection is the relinquishing of control to other agencies, bodily impulsions, involuntary emissions, elemental or psychological forces, with a concomitant degree of unpredictability or chance in the outcome. In this respect, aspects of the abject relate to the wider category of aleatory processes and aesthetics both in literature and the visual arts.

There is early evidence of artists finding aesthetic effects and values in chance marks and matter, which are often (coincidentally) abject in their origins or location. A notable example is Leonardo's argument that a blob of spittle, or an old wall covered in dirt could prompt admirable inventions for the artist. This idea (in his *Treatise on Painting*, first published in 1631) influenced the eighteenth century draughtsman Alexander Cozens who developed accidental blots on paper into landscapes. In the twentieth century, the surrealist Max Ernst did something similar with his *frottages* – rubbings of floorboards worked into landscapes and figurative imagery. In such cases, chance effects were subsumed into the requirements for legible images.

Figure 6. Alexander Cozens, *A Blot of the first kind of composition of landscape* (1785)[27]

The imposition of control onto chance is further apparent in the tendency to codify the aleatory, seen not only in Cozens' publication of his treatise *A New Method of Assisting the Invention in Drawing Original Compositions of Landscape* (1785) (fig. 6) but, most significantly, in André Breton's *Surrealist Manifesto* (1924) and his other writings. For the surrealists the production of automatic drawings, such as those by Masson, or of randomly juxtaposed, discordant imagery, were important outcomes of tapping into the unconscious and suspending rational control to generate unpredictable results. Although the content of such works resulted from chance, the conventional media that is drawing or painting, are less relevant to this research than the literary origins of aleatoricism. (The influence of surrealist automatism on later art is considered in 2.iii)

Surrealism was originally a literary movement, taking ideas from earlier writers such as Mallarmé whose 1897 poem *Un Coup de dés jamais n'abolira le hazard* (*A throw of the dice will never abolish chance*) was a seminal influence. Mallarmé's poetry experimented with syntax and the placement and size of words on the page to disrupt expectations of predictable order. Joyce's *Finnegan's Wake* (1939) abandoned linearity for a narrative which,

[27] Illustrated in Alexander Cozens (1977) *A New Method of Landscape*. London: Paddington Press. Unpaginated.

theoretically, could be entered or left at any point. Like Mallarmé's work, this openness was to enhance a semantic plurality, further developed by William Burroughs in the 1950s and 60s with his 'cut-up' and 'fold-in' novels. While these appeared to eschew authorial control, it was Burroughs who fixed the final form of these randomly arranged texts. By 1969 however, B.S. Johnson had published his novel *The Unfortunates*, a box with loose chapters the reader could assemble in any way they liked. Such aleatory literary techniques (notably by Burroughs) often linked abject content with forms, at least partially, created by chance.[28]

Such cases relate to the present research in its engagement with literary sources, particularly the manipulation of textual forms to indicate loss of rational expression (see 5. ii-iii, *Ruskin Quote* and *Hell is Other People)* and in the exploration of the demands of intentionality and the aleatory in these works. However, as a central component of the research reflects on the creative process using text, the most relevant source is Duchamp's *Green Box* (1934), a compilation of his thought processes during the conception and execution of the *The Bride Stripped Bare by her Bachelors, Even* (1915-23)[29] also referred to as the *Large Glass* (see booklet titled *Grey Book*). Several aspects of the *Large Glass* were created using ritualized chance events to create graphic marks. However I have also sought to limit the touch of the 'hand of the artist' in my own work, by handing over the determination of the final form to natural phenomena; but in contrast to Duchamp I intend this to reveal the mutability or vulnerability of material, or to display intangible emotions.

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[28] For further discussion of these techniques see:
Dario Gamboni (2005) 'Stumbling Over/Upon Art' Cabinet Magazine Issue 19 *Chance*. New York: Cabinet.
Ursula Marx, Gudrun Schwarz, Michael Schwarz and Erdmut Wizisla (Eds.) (2007) *Walter Benjamin's Archive*. London Verso. p. 32.
Tristan Tzara 'To make a Dadaist Poem' from *Manifesto of Feeble Love and Bitter Love* (1920) and Breton and Soupault 'Les Champs magnétiques (Magnetic Fields) (1919) available at www.ubu.com
William S Burroughs, 'The Cut-Up Method of Brion Gysin' accessed at www.ubu.com/papers/burroughs_gysin.html.
Craig Charles Dworkin, 'The ubuweb Anthology of Conceptual Writing' accessed at www.ubu.com/concept.

[29] Illustrated in Matthew Gale (1997) *Dada and Surrealism*. London: Phaidon. P 86.

Figure 7. Marcel Duchamp, *The Bride Stripped Bare by her Bachelors, Even* (1915-23) or the *Large Glass*.

If the *Large Glass* (fig. 7) was the visual rendition of Duchamp's ideas, the *Green Box* was its textual complement. My own adaptation of this technique differs in including texts relating to all the works made, emphasising the rhizomic connections between them. It is an acknowledgement of being overwhelmed by the entanglement of multitudinous influences, associations and potential outcomes. My version of the *Green Box*, that is this thesis, also contains loose booklets to be read in any order, but has a somewhat different function to Duchamp's. While relinquishing control over the order in which pages of his box were viewed, they nevertheless assumed coherence by relating to one primary work. He also exercised obsessive control by reproducing each edition by hand.[30]

Presented along with this systematically ordered thesis, the booklets encapsulate the reality of practice, where order and meaning are imposed *a posteriori*. Duchamp's *Large Glass* was exhaustively planned and executed,

[30] Ecke Bonk (1989) *Marcel Duchamp the Portable Museum: The making of the Boite-en-valise*. London: Thames and Hudson. p. 20.

my own work has harnessed processes with unpredictable visual outcomes, and my box of booklets further accentuates this aleatory dimension.

Figure 8. Jean Hans Arp, *Collage Made According to the Laws of Chance* (1916).

As one of the founders of the avant-garde Dada group in Zurich, Jean Hans Arp developed experimental and anarchic practices, which resulted in work such as the series collectively entitled *Collage Made According to the Laws of Chance* (1916)[31] (fig. 8). These were produced at a time when Europe was mired in conflict and turmoil, and artists were attempting to comprehend this brutal chaos. Influenced by Eastern spiritualism, particularly descriptions of Taoist divination practices that suggest chance alignments could reflect a universal order, Arp derived the technique of casting torn papers in the air and fixing them where they landed. Gale comments that:

> *By letting chance intervene so directly, the artist's role was startlingly reduced in a way that commented on the state of the world in which fate had overtaken the determination of human plans.*[32]

[31] Illustrated in ibid p. 63
[32] Matthew Gale (1997) op cit p. 63.

2.iii Anti-form and Formlessness

These chance techniques were subsequently assimilated into a wider artistic vocabulary. Since the 1960s artists have explored issues of control in more fundamental ways, by relinquishing the entire outcome of a work to external forces and the behaviour of specific materials. As indicated above, aleatory techniques associated with surrealism still generated orthodox outcomes while removing conscious control. Their objective was to free the unconscious rather than challenging formal restrictions. Anti-form and formlessness in art engage directly with very different non-art materials and processes. This developed from surrealist automatism introduced to America in the 30s and 40s by artists like Masson and Gorky fleeing persecution in Europe. These artists influenced Abstract Expressionism, most notably Jackson Pollock's 'drip' paintings, heavily promoted by Greenberg whose modernist formalist criticism subsequently imposed a stranglehold on art well into the 1960s.[33]

One of the best-known rebuttals of Greenberg's inordinate influence on contemporary art resulted in an outcome, which combined a formless, abject substance, with a presentation that referenced Duchamp's quasi scientific *Green Box* – interconnections which are of interest to the present research. The work in question is John Latham's *Still and Chew: Art and Culture 1966-1969*[34]*.* While teaching at St Martin's College of Art, Latham organised a gathering of his students to chew the pages of the library's copy of an anthology of Greenberg's seminal texts, *Art and Culture* (1961). In a literal interpretation of Greenberg's proclamations on taste, the text was chewed over and spat out; then placed in a phial with yeast, to ferment, and so 'distil' a formless 'culture' from it. Latham then gathered the correspondence between the library and himself requesting and refusing the return of the

[33] Clement Greenberg (1940) 'Towards a Newer Laocoon'; (1948) 'The Decline of Cubism'; (1954) 'Abstract, Representational and so forth'; (1961) 'Modernist Painting'; (1962) 'After Abstract Expressionism'; (1967) 'Complaints of an Art Critic'
See: Clement Greenberg (1965) *Art and Culture: Critical Essays.* Boston: Beacon Press; and Clement Greenberg (1986) The Collected Essays and Criticism (4 vols.). Chicago and London: University of Chicago Press.
[34] Illustrated in Andrew Causey (1998) *Sculpture Since 1945*, Oxford University Press: Oxford, p. 166.

book, and then the documentation of his subsequent dismissal from his post at St Martin's. All this he presented in a leather case that is now in the Museum of Modern Art in New York, (fig. 9) echoing Duchamp's documentation in the *Green Box*. This work combined two evolving processes; the fermenting phial and the growing archive of response letters. Both were initiated by the artist but subsequently developed lives of their own.

Figure 9. John Latham, *Still and Chew: Art and Culture 1966-1969*

The wider reaction against Greenbergian formalist aesthetics manifested itself in particular through sculptural experimentation, as surveyed in Bois and Krauss's *L'Informe*[35] (see 2.i) and was represented by figures including Richard Serra, Eva Hesse and Robert Morris. According to Richard Williams:

> *The critical debate about sculpture in the 1960s is represented nowhere better than in Morris's work, whether his sculpture, his critical writings or his curatorial activity…Morris was making formless sculpture from 1967, representing them first as straightforward dialectical responses to Modernist formalism*.[36]

[35] Yve-Alain Bois and Rosalind Krauss (1999) op cit. pp 13,25,28,126.
[36] Richard J Williams (2000) *After Modern Sculpture: Art in the United States and Europe 1965-70*. Manchester: Manchester University Press. p.15

Morris developed what he termed his 'anti-form' sculptures, by rejecting the various paraphernalia that artists use to provide rigidity and structure to materials. He selected fabrics or pliant matter, then allowed gravity or viscosity to control the stuff of his sculptures, employing actions such as *random piling, loose stacking, hanging*[37] in place of carving, constructing and composing. It was the material's inherent properties, their composition and density that yielded to gravity and defined the outcome of these anti-form works. One such piece, *Untitled* (1967-8)[38], is thick black felt, cut into connected straps and hung from a hook on the gallery wall at eye level (fig. 10). The fabric cascades into a complex tangle of rents and loops on the floor below. The result can be seen as an act of controlled chance. Morris can determine the outcome to some extent, but the complexity and natural languor of the form could only be achieved by allowing the material to relinquish to gravity, a technique that has entered the vocabulary of presentations available to artists. Karmel suggests Morris's work adapted Barthes' assertion of the 'death of the author' to sculpture, by circumventing the individualizing 'hand of the artist'. [39] Duchamp's writing echoes this:

> *All in all the creative act is not performed by the artist alone; the spectator brings the work in contact with the external world by deciphering and interpreting its inner qualifications and thus adds his contribution to the creative act.*[40]

[37] Yve-Alain Bois and Rosalind Krauss (1999) op cit. p. 98.
[38] Illustrated in ibid p. 39.
[39] Pepe Karmel (1995) *Robert Morris: Formal disclosures*. New York: Art in America, June 1995.
[40] Marcel Duchamp (1957) in Ecke Bonk (1989) op cit. p. 179

Figure 10. Robert Morris, *Untitled* (1967-68)

The sculptural inquiry into possible outcomes pitched between chaos and control was furthered by Eva Hesse's work from the same period. Hesse used materials which often started in liquid or malleable form – latex, fibreglass, papier-mâché, muslin soaked in glue-size – and which were impermanent and variable rather than structurally stable and timeless. Of her tangle of fibreglass skeins, *Right After* (1969) she remarked: *This piece is very ordered. Maybe I'll make it more structured, maybe I'll leave it changeable. When it's completed its order could be chaos. Chaos can be structured as non-chaos – that we know from Jackson Pollock*.[41] Hesse saw herself as doing, with materials in space, what Pollock did with interlacings of paint on canvas.

[41] Illustrated in Rosalind Krauss (1979) 'Eva Hesse', in *Eva Hesse: Sculpture.* Whitechapel Art Gallery: London. Unpaginated.

Figure 11. Eva Hesse in her studio in 1970.

Many of Hesse's works involved repeated forms each of which differ according to the effect of gravity and the transformation of soft, liquid materials to hard or set solids. This is the case with the behaviour of soft fibreglass matting and liquid resin in *Repetition 19* (1968)[42](fig. 12) and the latex rubber units in *Sequel* (1968) where each collapses, buckles and bends in irregular, unpredictable ways. There is a visceral, biological quality in Hesse's work; tangled networks, bulbous forms and shiny or crumpled surfaces suggest intestines, internal organs, intertwined veins or nerves. Furthermore, the desiccated, 'mummified' nature of the materials suggests a sense of abjection that some critics saw as a projections of bodily malfunction and Hesse's visceral knowledge of her own impending death (in 1970).[43]

[42] Illustrated in Bill Barrette (1989) *Eva Hesse: Sculpture.* New York: Timken Press. P173
[43] See Andrew Causey (1998) *Sculpture Since 1945*. Oxford University Press: Oxford, pp. 138-9

Figure 12. Eva Hesse, *Repetition 19* (1968)

Anne Maria Maiolino utilises anti-form techniques to emphasize the human origins of her work but, more significantly for this research, she predominantly uses clay. Maiolino started producing large-scale installations using unfired clay in the late 1980s. These are frequently the accumulation of repetitive gestures, balls of clay that emphasize a subtle evolution of forms rather than a manufactured uniformity. The hand-wrought units were compared, by Lygia Clark to *the living structure of a biological and cellular architecture.*[44] For the installation *More than One Thousand* (1995)[45] Maiolino placed long rolls of clay in folded layers of loops around the walls and corridors of the gallery as high as they would go before they crushed themselves with their cumulative weight. The clay dried during the course of the exhibition; the more exposed front drying to a light grey with the rest graduating to damp darkness at the rear, and so blurred the juxtaposed modular forms. The entire piece embodied transience in its brittle loops, which would have little more structure than cigarette ash; indeed it is impossible to view them without contemplating their destruction. The sheer scale of the continual repetitious toil evident in these myriad, stacked forms is what prompts an emotional response in viewers such as Catherine de Zegler, who writes:

[44] Catherine de Zegler (2002) 'The Inside is the Outside: The Relational as the (Feminine) Space of the Radical'
Lygia Clark, 'L'art c'est le corps' Preuves, no 13, Paris, 1973, 143-145. In exh.cat Lygia Clark (Fundacio Antoni Tapiez: Barcelona, 1997) pp. 232-233.
[45] Location of installation is unspecified. Illustrated in Judith Collins (2007) *Sculpture Today*. London: Phaidon. p. 333

... the topological accumulation of these same/different forms, like the sight of a tilled field with its imprints of man and cultivation, is moving.[46]

Like Morris and Hesse, Maiolino uses the material unadulterated and with no armature, the limits of the final form are determined by the structural tolerance of the material. The clay records its own manufacture; the dents of fingertips or the flaws of the table on which it was made are preserved on its surface.

Figure 13. Anthony Caro, *Chair: after Van Gogh* (1997)

Although predominantly known for his abstract compositions of welded steel, Anthony Caro has also used anti-form elements in certain works to emphasise thematic, rather than purely formal, concerns. At the National Gallery in 1997[47] he produced a series of work in response a selection of works in the collection. His wry sculptural translations of the gallery's most familiar paintings resembled translations of stock phrases into another language. He constructed Van Gogh's chair from columns of clay and then imposed a

[46] Catherine de Zegler (2002) Op cit.
[47] Illustrated in John Golding (1998) *Caro at the National Gallery: Sculpture from Painting*. London: National Gallery Publications.

prosaic perspective on it by dunting it heavily on a surface, causing its legs to swell and pucker (fig. 13). The clay's inelasticity had absorbed gravity and preserved it in the crumpled form. The seat was not modelled but displayed a base functionality by preserving the imprint of buttocks.

Clay can be seen as the pre-eminent anti-form material, able to record aleatory processes on its surface which can then be fixed forever by the firing process, directly displaying our human compunction to make marks. Further examples of this significant property of clay are discussed in section 2 vi.i below.

2.iv Generative forms

In recent decades artists have turned their attention from the final object based product, instead placing more significance on the process used it its creation. This is relevant to the concerns of this research as another shift in the negotiation of control.[48]

In contrast to the aleatory practices seen in the works of the artists above (see 2.ii), where chance has been employed to determine some aspect of the completed work, the following artists relinquish control to physical and organic processes adapted from the natural world.

In 1963 Hans Haacke produced the first of several *Condensation Cubes*[49], which initially resemble the pristine manufactured aesthetic and geometric forms associated with Minimalism (fig. 14). However within each cube Haacke has established a cyclical process of evaporating and condensing water, which gathers in droplets inside the transparent walls until the water pools and drips, lending a mutability to the sculpture's appearance. This differs from the aleatory practices I have described above as here the artist has eliminated chance variants to achieve the desired outcome. Haacke's co-opting of a

[48] See for example, Claire Docherty (2004) *Contemporary Art: from studio to situation*. London: Black Dog Publications.
[49] Illustrated in Andrew Causey (1998) op cit. p. 213

natural process (evaporation) to the range of techniques at the disposal to sculptors was prescient of developments later that decade.

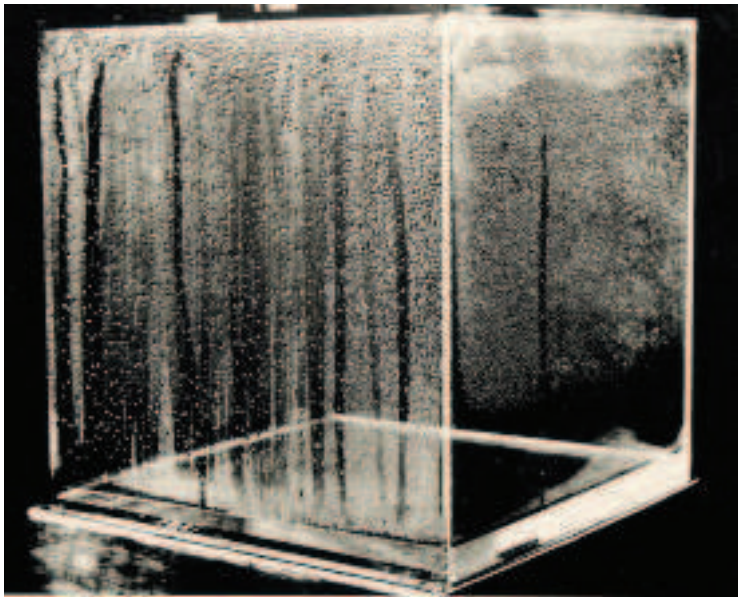

Figure 14. Hans Haacke, *Condensation Cube* (1963-5)

Artists in Europe in the 1960's were also exploring what Causey has identified as *a sensuous, inclusive, impure and dynamic alternative*[50] to Modernism. The Italian movement *Arte Povera* was identified in 1967 by the critic Germano Celant who initially presented six artists[51] in a seminal exhibition of that title. These artists all harnessed experimental strategies using a wide range of unprepossessing or discarded materials, often mutable and transient; these included elemental minerals, fire, and living organisms.

> *The artist-alchemist organises living and vegetable matter into magical things, working to discover the root of things, in order to re-find them and extol them... What interests him...is the discovery, the exposition, the insurrection of the magic and the marvellous value of natural elements.*[52]

[50] Ibid p. 147
[51] The artists who exhibited in the first exhibition *Arte Povera e IM Spazio* at Galleria La Bertesca, Genoa were Alighiero Boetti, Luciano Fabro, Jannis Kounellis, Guilio Paolini, Pino Pascali and Emilio Prini.
[52] Germano Celant (1969) 'Art Povera. Conceptual, Actual or Impossible Art?' In Charles Harrison & Paul Wood (Eds.) (2003) *Art and Theory 1900-2000: An anthology of changing ideas*. Oxford: Blackwell Publishing. p. 898

I want to focus on several works that involve live organisms as being relevant to work I have developed during this thesis (see 5.ii and 5.v).

Figure 15. Giovanni Anselmo, *Untitled (Structure that eats salad)* (1968)

Giovanni Anselmo's work *Untitled (Structure that eats salad)* (1968)[53] juxtaposes live organic matter with materials more associated with traditional sculpture. Each day a lettuce is bound between a stone column and a smaller block in a form that alludes to a Corinthian acanthus-topped column. Tension on the wire-binding ebbs as the leaves dry and shrivel causing the block to loosen and drop to the floor (fig. 15). This transient work illustrates Celant's assertion that the *Art Povera* artist *draws from the substance of the natural event –that of the growth of a plant, the chemical reaction of a mineral…the fall of a weight.*[54] Using a combination of 'low' art materials, humour and Italy's rich cultural heritage, Anselmo demonstrates the dynamic changeability of life. Later I will discuss the work of another artist associated with *Arte Povera*, Jannis Kounellis, (see 2.vi.v) as his use of live animals in various

[53] Illustrated in Richard Flood & Frances Morris (Curators) (2001) *Zero to Infinity: Arte Povera 1962-1972*. London: Tate Gallery Publishing. p. 182
[54] Germano Celant (1969) op cit. p. 898

tableaux vivants from the inception of the movement also has bearing on my own works where living organisms are an integral factor of their presentation. But the Arte Povera artists use animals and live organisms as 'found objects', without utilising their potential as agents of change, capable of influencing the outcome of an artwork.

While European artists were expanding their vocabulary of materials and methodologies within the historic perspective of centuries of inherited culture, American artists were engaging with the vast unpopulated expanses and natural resources available to them in their own country. This focussed development is variously titled *Land Art* or *Earth Art* and its proponents were able to perceive works that developed along seasonal, climatic and even geological timescales. The most striking and ambitious example is Robert Smithson's *Spiral Jetty* (1969)[55]. This perpetually generative work is set in the shallow supersaturated water of Utah's Great Salt Lake (fig. 16). *Spiral Jetty* stretches 150 feet in an even coil 15 ft wide;[56] enough for a dumper truck to reverse out and deposit load after load, gradually building up a spiral as a whelk builds its shell. Therefore the shape is constructed using itself as the scaffold, with no additional superstructure beyond its own form; it is created by incremental additions and can be regarded as topologically generative. Crystals accumulate on its rock surface in the dry desert air, and in time dissolve again with changes in the weather or the level of the lake. Simultaneously solid and liquid, the reflective surface and colour of the water alters with the ebbing of salinity, minerals or bacteria, and for long periods of time it is entirely submerged. The consequence of the unusual geology that results in such corrosive salt deposits in the lake has affected the entire area, rotting almost all evidence of other human endeavour and therefore enhancing the illusion that *Spiral Jetty* is in itself a natural phenomena.

[55] Lynn Cooke (Ed.) (2005) *Robert Smithson, Spiral Jetty: True Fictions, False Realities*. Berkeley and London: University of California Press
[56] Illustrated in Robert Hughes (1997) *American Visions: The epic history of art in America*. London: Harvill Press. p. 572.

Figure 16. Robert Smithson, Spiral Jetty (1969)

Spiral Jetty expresses Smithson's explorations into geological phenomena. Whereas *Asphalt rundown* (1969)[57] is an act of finality, an anti-form exercise in preserving a gesture, in which Smithson orchestrated a lorry load of molten bitumen to be tipped down a hillside, whilst he documented this laval slick as it froze mid flow. *Spiral Jetty* in contrast demonstrates the endless flux of geological time, and continues to do so.

Bois sees artists such as Smithson as interested in entropy in the following terms:

> *Entropy attracted artists well before the 1960s, when Robert Smithson made it his motto. In the hands of these artists entropy operates in various ways by degradation, by redundancy, by accumulation, infinite profusion, by inversion, by tearing, by lack of elasticity, by the invasion of 'noise' into the message, by wear and tear, but also by under usage or non-consumption. Entropy is a sinking, a spoiling, but perhaps also an irrecoverable waste.*[58]

Smithson himself saw the processes he harnessed as universal: *Oxidation, hydration, carbonization and solution (the major processes of rock and*

[57] Illustrated in Yve-Alain Bois and Rosalind Krauss (1999) op cit. p. 23
[58] Ibid. p. 38

mineral disintegration) are four methods that could be turned towards the making of art.[59]

In contrast to the dynamic changes apparent on the crystalline surface of *Spiral Jetty* artists have employed similar processes but with notable differences in intention. Some contemporary practitioners continue to re-negotiate their role in their final product by subjecting their work to natural processes or phenomena. For example, Heather Ackroyd and Dan Harvey have utilised photosynthesis to 'develop' photographs onto grass. They produced imagery on living turf by covering it with large photographic negatives; as the chlorophyll leached out of the leaves where the light was obscured a pallid image formed.[60] This process is interesting but their outcomes are formulated and predicated; all the elements used aim to reproduce an image as accurately as possible using a natural process and by eliminating chance occurrences as far as possible. Similarly for the group exhibition at the Natural History Museum, *The Ship: The Art of Climate Change* (2007) these artists submerged the vast bones of a Minke whale in a salt solution until the surface was encrusted with a thick rime of cubic alum crystals. This work, *Stranded*,[61] presented the parched skeleton crusted with salt, implying a ferocious heat had evaporated the sea with only traces of it clinging to the animals remains. However the effect was less a vision of the earth's balance dangerously out of control than something jewel-like and desirable. The fixed state of the resultant work contrasts with Spiral Jetty's perpetually enduring and dynamic flux.

[59] Robert Smithson 'A Sedimentation of the Mind: Earth Projects' (1969) in Charles Harrison and Paul Wood (2003) op cit. p. 879.
[60] Illustrated in Siân Ede (Ed.) (2000) *Strange and Charmed: Science and the Contemporary Visual Arts*. London: Calouste Gulbenkian Foundation. p. 58
[61] www.nhm.ac.uk/about-us/news/2006/june/news_8296.html 12/01/07

Figure 17. Roger Hiorns, *Beachy Head* (2005)

Figure 18. David Medalla, *Cloud Canyon No. 2* (1967)

David Medalla, like Smithson, demonstrated how Smithson's contemporaries also explored ways of creating fluid work that changed and developed over time in order to challenge the concept of monumentality and permanence that was associated with sculpture and its materials. In the late 1960s he began to

produce bubble machines that spew out a steady column of foam (fig 18). These delicate wavering forms constantly evolve: fold, drop and disappear, an anti formalist process demonstrating continual rebirth[62]. In a homage to Medalla's work, Roger Hiorn's sculpture for the British Art Show 2006, *Beachy Head* (2005),[63]recreated several such foam machines (fig. 17). These industrial-looking ceramic vessels were suspended from the gallery roof, emitting a steady column of soap bubbles, which declared the interest in dynamic processes of fluctuation and change this artist shares with the previous generation. However, in another body of work Hiorns encrusts objects with crystals formed through the evaporation of salt solutions. He assembled groups of objects, some constructed, others found: flowers, cardboard models and BMW engines and then saturated them in a solution of copper sulphate and allows the vivid blue crystals to accrete on the surface. The resultant pieces are glistening and velvety but have ossified what was living or highly functional; chemical growths unify disparate surfaces with a smothering crust. His car engines such as *The Architect's Mother* (2003),[64] are seductive but defunct, the end point of a generative process that has ceased (fig. 19). His most recent installation *Seizure* (2009)[65]takes this process further; an entire flat was saturated with the same solution resulting in an atmosphere so overpowering and poisonous that it required protective clothing to view it. Searle writes that Hiorns is *an artist of emissions, of excesses, of the uncontrollable*[66] Charlesworth reiterates this interpretation of the process stating that:

> *With* Seizure*, Hiorns expands on a central theme of his work, that of the thing that makes itself, an object that self-produces rather than is produced by the agency of the artist.*[67]

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[62] Illustrated in Andrew Causey (1998) Op cit. P58
[63] Illustrated in Emma Dean & Michael Stanley (Eds.) (2006) *Roger Hiorns.* Milton Keynes: Milton Keynes Gallery. p. 150
[64] Ibid p. 23
[65] *Seizure* installation at 151-189 Harper Road, London SE1.
[66] Adrian Searle (2008) 'Adrian Searle on artist Roger Hiorns and his installation'. In Guardian Newspaper, Manchester. 04/09/08
[67] J.J. Charlesworth (2009) 'Big Picture: Seizure by Roger Hiorns' in AN magazine Sept 09, Newcastle: AN Publications. p. 21

Yet nothing about this installation had been left to chance; the only variable was the type of surfaces abandoned by the property's former tenant. Hiorns is too adept at this technique by now for there to be any real loss of control. Indeed, the limited time period before the building was demolished necessarily constrained any potential transformation or dissipation of the crystals as Hiorns himself indicated in the title of the work.

> *'Seizure' was most useful- it implies a loss of control, and that's simply what we're doing on a greater scale; we have no control over the work, and we planned the removal of our responsibility in its making from the beginning- it was the first thing we did, in fact. We became obsolete very early on.*[68]

Figure 19. Roger Hiorns, *The Architects Mother* (1993)

Where Hiorns appears to have abandoned chance occurrences for predictable effects, Glen Onwin has a fascination with materials that exist in an ambiguous state, form or category and therefore also has an interest in the

[68] Tom Morton (2008) '*Seizure* by Roger Hiorns' London: Frieze Magazine. Issue 118.

growth patterns of crystals. Several projects of his focus on allotropic substances, particularly naturally occurring salts. For his site-specific installation *As Above, So Below* (1991)[69] at Square Chapel, Halifax, Onwin reflected on a creative cycle in nature, the formation and dissolution of salt crystals. On the ground at the centre of the space, he placed a large tank containing black brine. Its huge expanse almost covered the floor of the chapel's main hall. In this tank molten wax islands floated freely across the surface and acted as a substrate for the salt crystals that formed daily on the evaporating brine. In the charged context of an abandoned church, the rational square architecture was echoed by the cubic form in which salt crystals develop. The dark surface of liquid reflected the scene and so the wax would appear to float like clouds past the Chapel's symmetrical windows and spartan roof; the salt continuously reforming itself is a metaphor for the cycle of reincarnation (figs. 20 & 21). Onwin's presentation of this fluctuating phenomenon, in this specific context discusses fundamental issues of human expertise and temporality, preservation and ossification, and the abiding persistence of nature. In contrast to Ackroyd and Harvey's work and that of Hiorns, it is the way in which Onwin relinquishes control of the work's completion to an ongoing natural process that is most relevant to central elements of this research.

[69] Illustrated in Glen Onwin (Ed) (1991) *As Above, So Below*. Leeds: The Henry Moore Sculpture Trust.

Figure 20 and 21. Glen Onwin, *As above, so below* (1991)

Eric Cameron began his series of *Thick Paintings* in 1979, where he repeatedly paints thin layers of gesso onto random household objects such as a bottle top, flower, skein of twine or bag of sugar. He employs a workmanlike, impersonal approach when selecting these objects and when he gives them an even coating of paint. However the inherent qualities of this dense liquid and the nature of each form cause rims and creases to build up with each successive layer. Cameron's actions are counterbalanced by the physicality of the materials, making each piece the symbiotic result of natural and man-made events, a human version of the sort of mineral accretions that cause phenomena such as stalactites and stalagmites. It is however the unpredictability of this repetitive and exacting task that is of particular interest to this research. Cameron describes how another wrinkled, rhythmic pattern of bumps gradually appears on the painted surfaces, which he cannot account for; it is as if the form is generating its own complexities beyond those caused

by his actions (fig. 22). *Springs Eternal* (2001)[70] displays the build-up of ridges of gesso, as the object is rotated each day after painting, just as chalky accretions show how a seashell has grown. In *The Blind Watchmaker* Richard Dawkins illustrates how such small adaptations in an organism's growth can radically affect the appearance of one species compared with another, and produce an infinite variety. This is illustrated by a table of seashells[71] which all grow in a spiral formation, but with widely differing results. The study of sculpture stimulates interest in the unique properties of its materials and how they set, decay or grow; why the chemical and physical properties of water crystals follow an internal logic and unite as 6-armed snowflakes and bees pack their honey in hexagonal cells. Or why more complex organic forms such as seashells take a spiral form, flat razor shells exaggerating this rule to an extent that it is no longer immediately evident. This process of inevitable change underlying apparent order, and our realisation that there is an obeisance of rules beyond our perception and our control even in apparently inert minerals, is unnerving and alienating.

Figure 22. Eric Cameron, *Chloe's Brown Sugar* (1997)[72]

In Anish Kapoor's 2010 exhibition at the Royal Academy (fig. 23) the artist demonstrated his approach to the issues that concern this research.[73]

[70] E-flux. (2009) Eric Cameron *Record of Work* at Canadian Cultural Centre. www.e-flux.com/shows/view/6841
[71] Richard Dawkins (1996) *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe without Design*. London: Penguin Books.
[72] Illustrated in Eric Cameron (2001) *English Roots*. Calgary; University Of Lethbridge. P. 19

Alongside his signature sculptures of mirror plated curves and voids, he has presented several works that explore dynamic form-making strategies. In one room a cannon regularly fires a large plug of pigmented wax into an ante room where it splatters with against the corner with cartoon violence. This aleatory action echoes Duchamp's use of a toy cannon that fired painted matchsticks, and thereby created one element of his *Large Glass* (see 2.ii) called *The Shots*; or as Adrian Searle suggests Kapoor is goading critics by reiterating Ruskin's libellous jibe about Whistler flinging a pot of paint in the public's face.[74] Yet, it is Kapoor's room of extruded works[75] that is of most significance to this study. This installation appears to be the result of hours of backbreaking manual labour, on a scale that would be barely conceivable using Maiolino's methodology (see 2.iii). However these grey and terracotta mounds, towers and walls are not manipulated clay, but concrete extruded by the repetitive actions controlled by a computer that has been programmed to repeat a task until the material collapses. The resulting earthy whorls, bulges and folds reveal a complexity of form that defies the control of the artist who created them; and their apparent limitless accretion evokes a growing sense of dread as if faced with an infestation, or some sort of catastrophic chain reaction. *They are generative, fecund gestures, as well as scatological[76],* here Searle alludes to the overwhelming aspect of these massive intrusions amongst Kapoor's usually calm, contemplative and contained object-making when he says:

> *This is joyous but also horrible, an end-world of stupid matter and accident... ponder[ing] the drama between form and formlessness, between energy and entropy.[77]*

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[73] *Anish Kapoor* exhibition at the Royal Academy, London Sept-Dec 2009.
[74] *I have seen, and heard, much of Cockney impudence before now; but never expected to hear a coxcomb ask two hundred guineas for flinging a pot of paint in the public's face*. John Ruskin, Fors Clavigera, letter lxxix in Geoffery Cumberlege (1953) *The Oxford Dictionary of Quotations*, London: Oxford University Press.
[75] Installation is entitled, *Greyman cries, Shaman Dies, Billowing Smoke, Beauty Evoked*.
[76] Adrian Searle, 'A Very Fine Mess'. Manchester: Guardian Newspaper. 22/09/09
[77] Adrian Searle Op cit.

Kapoor's explorations of generative, anti-formal strategies is indicative of broader interest amongst contemporary artists in the experimental, elemental sculpture of Morris, Smithson and others. Yet these works avoid narrative content, other than that of their own manufacture and position within the sculptural canon. Section 2.vi discusses art practice that does communicate other narratives in a most direct manner: by integrating text within the art works.

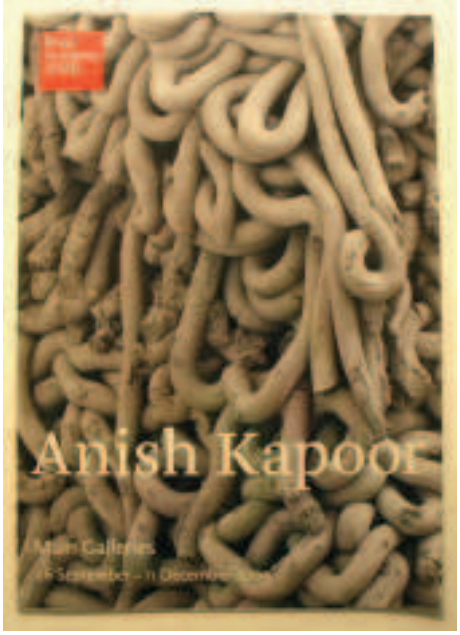

Figure 23. Anish Kapoor, 2010 Royal Academy exhibition leaflet showing detail of *Greyman cries, Shaman Dies, Billowing Smoke, Beauty Evoked*.

2.v Rhizomic Practices

In chapter 1 I argued that Deleuze and Guattari's concept of rhizomic connectivity between disparate ideas offered a model for the mode of creativity in contemporary art practice that is posited in the first research question. In this section I will consider the work of a number of currently practising artists with very disparate approaches, to argue that apprehending their work through the concept of rhizomic generation allows commonality to be seen in their practice, as well as shared concerns with some of the issues for the thesis.

Cristina Iglesias works predominantly with cast or imprinted surfaces to construct spaces that allow viewers to enter into a contained environment. Such works are assembled from large panels cast from plant forms into concrete or resins pigmented with powdered metal or stone. She chooses bamboo, ferns and fungi; vigorous vegetation that produces dense impenetrable surfaces. These plants are rhizomes in the original botanical sense. Once combined the cast panels produce meandering walls of intimate architectural spaces, which envelop the viewer and confront them with a mass of buds, shoots and stems. However by casting and capturing Iglesias uses manufacturing methods to reflect the multiplication of these regenerative organisms.

In several (untitled) installations[78] such panels are placed to curve away from the gallery wall and reveal their textured surface as a sheet of paper does when peeled from a print plate (fig. 24). Through repeated form and undisguised mould marks Iglesias evidences her production processes and alludes to these panels' potential for endless reconfiguration; form and counter form, image and imprint imply limitless proliferation. Newman discusses Iglesias' work as a concretisation of Deleuze and Guatarri's definition: *The rhizome involves the non-hierarchical generation of entities in all directions.*[79]

[78] See for example *Untitled* (1991) and *Untitled (V-VII)* (1993), illustrated in Iwona Blazwick (Ed.) (2002) *Cristina Iglesias*. Barcelona: Ediciones Poligrafa. pp 142,146.
[79] Giles Deleuze & Felix Guattari (1988) *A Thousand Plateaus*. Oxon: Routledge. P 8

Figure 24. Christine Iglesias, *Untitled* (1991)

Other artists do not use overtly rhizomic materials as Iglesias does, but their work engages similar processes. Matthew Barney's major project, the *Cremaster* films (1994-2002)[80], reveals a fundamentally rhizomic practice concerned with ever expanding themes and potentially endless proliferation of connections. Unpredictable generation of formal meaning is signified as a central mechanism in the series' title, which refers to a moment in the development of a human foetus when gender is not yet determined and has the potential to proceed in either way.[81] Barney's earlier exhaustive performances involving sculptural props coalesced in the five films in the Cremaster Cycle as a sustained contemplation of the human body's creative potential. They invite a dizzying plethora of connections through references to mythology, popular culture, natural phenomena and human rituals, along with a sculptor's sensibility for manipulated natural forms (corseted waists, body builders' musculature or ornamental animal breeds) and recurring symbols (geometric figures, logos). Spector emphasises the overarching ambition of

[80] Illustrated in Matthew Barney (2003) *The Cremaster Cycle*. New York: Nancy Spector, Guggenheim Museum.
[81] Nancy Spector 'Only the perverse fantasy can still save us' in ibid. P.4.

the work thus: *the cycle exposes this body into the particles of a contemporary creation myth.*[82] Spector continues:

> *Barney's visual language is protean: drawing and film unite to engender photography and sculpture, which in turn produce more drawing and film, in an incestuous intermingling of materials that defies any hierarchy of artistic mediums.*[83]

Each film has its own discrete narrative aspect yet the five films were created non-sequentially; that is *Cremaster 4* (1994) was produced first, then *Cremasters 1*,*5*,*2* then *3.*[84] This can be partially explained by issues of accessibility and the expense of later locations (the spiral gallery of New York's Guggenheim museum, the crystalline interior of the Chrysler building and the hexagonal basalt columns of the Hebridean island of Staffa). Indeed only the critical acclaim for the initial *Cremaster* films would enable Barney to gain access to, and funding for, such iconic locations. However the non-chronological execution of the earlier works has as much to do with generating cross-references, and establishing interconnectivity between his recurring interests. Because the chronology of their production and titling are not reconciled, the viewer of the cycle is driven to construct meanings in search of coherent narrative (figs. 25 & 26).

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[82] Ibid P.4.
[83] Ibid P.4.
[84] *Cremaster 4* (1994), *Cremaster 1* (1995), *Cremaster 5* (1997), *Cremaster 2* (1999) and *Cremaster 3* (2002).


Figures 25 and 26. Matthew Barney, film stills from *Cremaster 2* (1999)

Although each work contains a narrative framework, Barney maintains their overall ambiguity; the films' disrupted chronology, recurring forms, symbols and rituals emphasise that what is presented is an ever-expanding field and not a definitive outcome and can be seen as a non-hierarchic imbrication of Barney's preoccupations, each scene alludes to other meanings and further potentials. (see p. 8). Spector quantifies this:

> *The cycle has at least two sets of beginnings at least two endings, and many more points of entry. It is a polymorphous organism of an artwork, continuously shifting guises and following its own eccentric rules.*[85]

Indeed the completion of the five prenumbered films has not halted Barney's reconfiguration of objects and themes associated with Cremaster, as exhibitions, catalogues and publications continue to emerge.

[85] Ibid

Another artist whose practice foregrounds such prodigious connectivity is Cathy Wilkes, who composes installations using mundane and discarded objects such as mannequins, emptied jars or a defunct TV (fig 27). The materials themselves are the worthless detritus of ordinary lives yet their staged proximity evokes endless narrative interpretations. *She's pregnant again* (2005)[86] is an assemblage of bowls, baby carriage and other wearied detritus showing the marks and stains of human interactions. Here and there a mannequin ignores little indignities like the rags and frying pan that hang from her face while she sits poised on a detached toilet. Wilkes reuses and reconfigures the objects within her installations and diligently avoids any definitive narrative by prompting multiple readings:

> *Directly engaging such emotive subject matter runs the risk of introspection, yet it is testament to Wilkes' assiduous handling of objects and material that the resulting installations tend to open out in a chain reaction of interconnectivity rather than close down to a linear singular interpretation.*[87]

However, Wilkes' herself outlines other connections between such discourse and themes of abjection, or overwhelming uncertainty explored in the current research. Wilkes describes her working method as temporarily suspending abject feelings of isolation, or *separation [that] has remained unbridgeable*.[88]

Her rationale for working in this way is not to ignite endless possibilities, as with Barney, but to address the viewer's desire for universal connections from amid the possibilities evoked by these banal props:

> *Is there a perspective from which I could conceive of the continuity of everything? Minds make everything continuous and whole. As much as I fixate relentlessly- and that might be about object*

[86] Emma Dean and Michael Stanley (Eds.) (2009) Cathy Wilkes. Milton Keynes: Milton Keynes Gallery p. 44
[87] Ibid p.10.
[88] Ibid p.105

relations- I also conceive of wholeness which makes everything present in the same thought.[89]

Figure 27. Cathy Wilkes, *She's pregnant again* (2005)

Simon Starling's practice can be described as inherently rhizomic. Examples of his work are discussed more fully later in this thesis (see 2.vi and 2.vii) but it is his documentation of the origins and processes involved in the manufacturing process of an artwork rather than a final revised and concluded product that are interest here.

Kurjakovic highlights the prolific connections evident in Starling's practice describing these as:

> *Metonymy is ubiquitous in Starling's practice. His projects would not take shape as they do, were it not for his ability to respond to the 'metonymical passages' that resonate in the world of things.*
> *The installations...derive[s] from metonymy's characteristic predilection for pointing out the adjacency of logically unrelated things.*[90]

[89] Ibid p.105

Brown reiterates the significance of such associations in the catalogue for his show *Djungel* at the DCA in 2002:

> *[Starling's] projects bring diverse sources and elements together in configurations which undermine the latent hierarchy - of objects over process, end product over source material, design over craft. They are synthetic rather than analytic, with each present, tangible and concrete element insisting on an awareness of the disparate histories and journeys necessary to the creation of the whole.*[91]

In the work of all these artists (Iglesias, Barney, Wilkes, Starling) apparent meanings of profuse elements are undermined by their own potential to foment implications. All can be understood as producing the 'polymorphous organisms' Spector proposes: artworks as rhizomes that grow beyond our ability to predict or subjugate them.

2.vi Text and modularity in visual art

Kristeva identifies abjection as generative of culture, seeing it manifest in a struggle with the constraints of language

> *In abjection, revolt is completely within being. Within the being of language…the subject of abjection is eminently productive of culture. Its symptom is the rejection and reconstruction of languages.*[92]

This research also examines the use of text in contemporary art, as this influence will be evident in the sculpture produced. Prior to this research I have used sculptured words in many installations and site-specific works,

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[90] Daniel Kurjakovic 'Hide and Seek in Simon Starling's Scenarios' in Kaiser, P. (2005) *Simon Starling: Cuttings*. Ostfildern-Ruit: Hatje Cantz Verlag pp c32-33

[91] Katrina M. Brown (2002) *Simon Starling: Djungel*. Dundee: Dundee Contemporary Arts p 23.

[92] Julia Kristeva (1982) op cit. p. 45

predominantly as a material; forms used as a substrate for organic growth or disintegration ultimately obscuring their meaning (I describe several examples in chapter 3). In this section I will examine how words have been utilised by artists in other ways to create ambiguity or discordant 'readings'.

Words, according to Charles Sanders Pierce[93], are only symbolic of their meaning in that there is no real connection between what we see written on a page and the thing that it indicates. Morley states succinctly that Saussure identified a word as:

> *comprising three aspects: the signifier (the aural and written form of the word itself), the signified (the meaning ascribed to that form), and the referent (that element of reality that these components bring to mind when combined)*.[94]

Often artists have situated their work in the area of slippage between Saussure's three aspects. In identifying artists of particular relevance to this study, it can be noted that many of their text-based works resist literal meanings, the 'signifier' being employed metaphorically to reflect the wider context of that individual's work. This is evident in what text states literally, the context in which it is found and the events that befall its form.

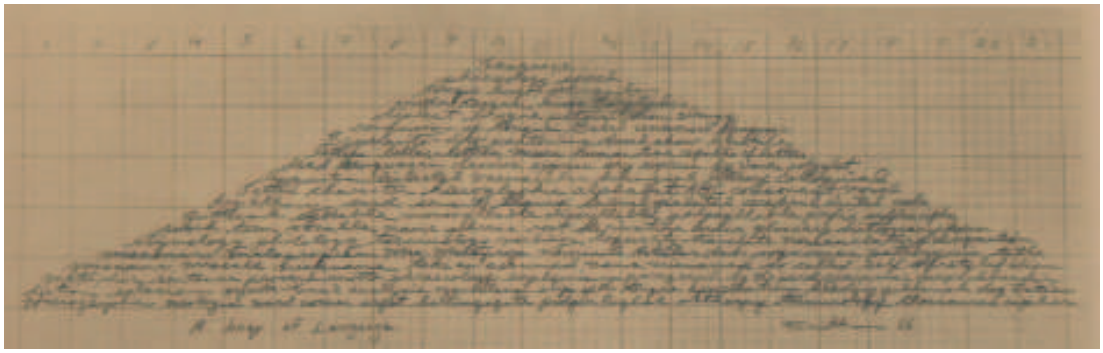

Figure 28. Robert Smithson, *A heap of language* (1966)

[93] Simon Morley (2003) *Writing on the Wall: Word and Image in Modern Art*. London: Thames and Hudson. p. 9
[94] Simon Morley (2003) Op cit. p. 10.

The modularity of written language interested Robert Smithson. He emphasised the similarity between the composition and form of written words and materials he worked with as a sculptor by using the same methods of *random piling, loose stacking, hanging* that have been identified with Morris's anti-form work (see 2.iii) *A heap of language*[95] (1966) is a delicate drawing on graph paper of a triangular form built up from words written in the artist's cursive script (fig. 28). These words such as 'slang, idiom' and 'vernacular' parallel the accretion of words into language with his interest in geological formation. The structure of this concrete poem and other writings allowed Smithson to use language as he used sculptural or building materials.

> *I thought of writing more as material to sort of put together than as a kind of analytical searchlight...I would construct articles in the way I would construct a work.*[96]

Smithson expands on this analogy elsewhere:

> *The names of minerals and the minerals themselves do not differ from each other, because at the bottom of both the material and the print is the beginning of an abysmal number of fissures. Words and rocks contain a language that follows a syntax of splits and ruptures. Look at any word long enough and you will see it open up into a series of faults, into a terrain of particles each containing its own void.*[97]

The parallels between anti-formalist tendencies in language are reiterated by Bois:

> *Language has its own laws of combination and continuity, but its primary material is constructed of irreducible atoms. Liquid on the*

[95] Illustrated in ibid. p. 160.
[96] Ibid. p. 161.
[97] Robert Smithson 'A Sedimentation of the Mind: Earth Projects.' in Charles Harrison and Paul Wood (Eds.) (2003) op cit. p. 880

contrary is indivisible...in that it remains identical to itself in each of its parts.[98]

Figure 29. Anne Hamilton, *Tropos* (1993)

The idea of impairing the rational logos to produce creative meaning is evident in the work of Ann Hamilton. In her installation, *Tropos* (1993)[99] Hamilton explored the breakdown of communication systems (fig. 29). A disembodied voice read hesitantly from various texts, with stammering caused by the actor's condition of aphasia, which impairs the ability to control spoken words. A performer sat at a desk and, using a pyrography tool, singed the script from the book she read, which slowly filled the room with smoke. The text was obscured as it was absorbed by this reader, and so its narrative could only be transferred orally, as in non-literate communities. The work invites us to consider the difficulties of the narrator's attempt to communicate through the choice and juxtaposition of the elements within the installation. However Hamilton's assemblage of props, actors and recordings are ostensibly a theatrical performance; I have taken similar thematic concerns and addressed them in an expressly sculptural idiom (see 5.iii*)*. Both approaches also function as expositions of Kristeva's description of abjection:

[98] Yve-Alain Bois and Rosalind Krauss (1999) op cit. p. 124.
[99] Illustrated in Joan Simon (2002) *Ann Hamilton*. New York: Harry N Abrams. p. 140

> *What disturbs identity, system, order. What does not respect borders, positions, rules. The in-between, the ambiguous, the composite.*[100]

Text as a medium is accessible and cheap, it can demonstrate meaning both directly and obliquely. Letters become gestalt images: like the human face, which is still recognisable when only traces are visible, our minds fill in the rest from stored templates. Faded adverts on ancient shops can still be read from thin flakes of paint, and so producing words in everyday materials that blur the letters will counter-intuitively add meaning beyond what is simply legible. The installation *Eating My Words* in Bruce Nauman's 2006 show[101] at Tate Liverpool was introduced with a quote from the artist:

> *I think the point where language starts to break down as a useful tool for communication is the edge where poetry or art occurs.*[102]

His practice embraces art in the wider culture and involves installation, film, performance and object making but his use of text is often the unifying motif. Nauman was an early proponent of video art, producing experimental non-narrative films that focussed on the medium's distinct properties and material qualities. These videos feature the artist in his studio, performing a repetitive physical act; alternatively, his body is substituted for the materials of sculpture. His interest in the structure of contemporaneous avant-garde music, particularly serialism and modal improvisation (repeated motifs without a narrative texture) is evident in works such as *Lip Sync* (1969)[103]. In this visual pun on the work's title, the screen is filled with an inverted view of the artist's mouth. He articulates the words 'lip sync' over and over, and his whispered voice provides the soundtrack; but the sound and visuals have been dislocated and they slide in an out of synchronicity throughout the 30 minute duration of the film. This example of Structuralist film typically centralises what can be a problematic aspect of the filmmaking process -

[100] Julia Kristeva (1982) op cit. p. 4.
[101] Exhibition titled: *Bruce Nauman: Make Me Think Me*, Tate Liverpool. May- Aug 2006
[102] Quote from the *Make Me Think Me* exhibition leaflet.
[103] See ubu.com/nauman

aligning audio and visual tracks - and reminds the viewer of the mechanisms that separate us from the performer.[104] *Lip Sync's* structural principles echo Steve Reich's *Different Trains* (1988)[105] where percussive patterns move in and out of phase, to deliberately unsettle what is perceived. In my *Word Film (Hell is Other People)* a reader's whispering voice attempts to articulate what appears on the screen, demonstrating how meaning is discerned from unfamiliar visual stimuli. Where Nauman has featured the mechanical slippage of aligning two information streams, I have sought to present the narrator's own foundering perception of what is presented to her.

Analogies to avant-garde music are also evident in the films of Paul Sharits; he produced 'intricate scores' of these that were exhibited alongside his 16mm projections at the artist's retrospective in New York last year.[106] Sharits' *Word Movie* (1968) focuses less on problems inherent in the filmic medium but in comprehension of the images presented. This film comprises stop frame images of words flashing past so quickly as to be almost unreadable, and so tests the limits of our perception. However, a pattern emerges on subsequent viewings as the letters in the centre are similar in several words at a time, and so hover in your gaze just long enough to enable some meaning to be descried in the frantic fluttering text:

ROMEBREAESSEURNISETRUNORMONELESSHITSPACESCREE

The work demands repeated viewing to establish possible meanings, as some words freeze momentarily before the rush recommences. We try to articulate words from the steam of letters automatically testing the sound of syllables and tripping over the lack of pauses or punctuation. Sharits is concerned with the materiality of the film making process but also the limitations of its ability to communicate.

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[104] Yve-Alain Bois and Rosalind Krauss (1999) op cit. p. 136
[105] Steve Reich (2004) *Different trains: for String Quartet and Pre-recorded Performance Tape*. London: Boosey and Hawkes
[106] Kirsten M Jones (2009) 'Paul Sharits at the Greene Naftali Gallery, New York'. London: Frieze Magazine. Issue 124.

I wanted to reconnect the human narrative within my own *Word Film* (see 5.iii) and to indicate the original source of the textual material, I used a young female narrator, whose struggles to communicate might arouse empathy, exasperation or ennui.

Where Burroughs cut up text and reformed it, visual artists have similarly dislocated a word or phrase to a new context. Words have adopted concrete form and have been given a 3 dimensional materiality in signage and commercial logos such as that of 20th Century Fox. This dramatic illusionary approach has been integral to the drawings of Ed Ruscha. Ruscha works up the context of his chosen text in backdrops and locations, all elaborately executed in his graphic style. He uses words all the time, and gleefully juggles Saussure's concepts of the signifier and the signified: sometimes tying image and script together in bald statements such as adverts or obtuse encyclopaedia illustrations, and at other times dislocating the text entirely from what is shown, compelling the viewer to re-read the evidence. He uses painstaking draftsmanship for the absurd elevation of mundane subject matter. His use of the stylistic forms of advertisements or logos is very relevant to elements of the sculptural work presented in this research.[107] Much of Ruscha's text is drawn in sharp perspective, or teeters over the picture frame to add to increase the illusion of three dimensionality. In *Screws and Eggs* (1967)[108] the limited interpretation evoked by this pragmatic label suggests we might have missed a double meaning, while the low focal point threatens to obscure the legibility of what is written altogether (fig. 30). A breakdown of communication is itself the focus of several pieces sharing the title *Lisp* where the word is spattered with glistening trompe-œil spittle.

> *Ruscha is preoccupied by the becoming inarticulate of words (sic), but also by all forms of erosion to which language is victim (for*

[107] Works such as *Fecundity, Feracity* and *Uberty*, chapter 5.ii.
[108] Illustrated in Margit Rowell & Cornelia Butler (2004) *Cotton Puffs, Q-Tips®, Smoke and Mirrors: The Drawings of Ed Ruscha*. New York: Whitney, Abrams, Steidl.

example, the devitalisation words suffer when they turn into clichés) and the inevitable and irreversible nature of this process.[109]

Ruscha's awareness of materiality is evident in his depictions of script written as folded floating ribbons, sticky pools or frothing blocks but also in the transient or mutable materials he uses to create his delicate drawings. Other works are of recognisable fonts against organically stained paper: the juice of lettuce and roses or potentially volatile gunpowder. Another recurring theme in Ruscha's work is architecture, photographs and drawings of modernist, utilitarian gas stations or shop-fronts and the sculptural signage that advertises them. Signs are often isolated and represented without scale as architectural forms in themselves for example *Honk* (1964) or his own interpretation of the 20th Century Fox logo in *Trademark # 5* (1962). This cartoonish rendering of flat text in deepest three dimensionality hints at 1930s sources and the rich seam of deco imagery from Hollywood. Futurist experimentation in architecture is strikingly similar, as in Enrico Pramolini's *Turin pavilion* of 1928[110] or Fortunato Deparo's 1933 *Campari pavilion* (discussed in 2.viii).

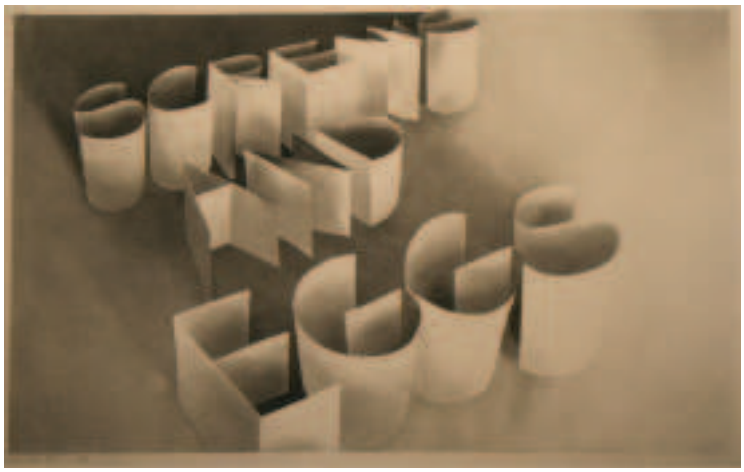

Figure 30. Ed Ruscha, *Screws and Eggs* (1967)

Art that co-opts text creates meta language through composition. In many text-based artworks it is not only the words themselves that utilise syntax, the

[109] Yve-Alain Bois and Rosalind Krauss (1999) op cit. p. 129
[110] Fabrizio Brunetti (1998) *Architetti e Fascismo*, Florence: Alinea Editrice. p. 57

visual context of the word is critical. Where such a text-based work is sited will impact on how it is read. The medium used can add a further layer of interpretation for work such as Martin Creed's *Everything is going to be alright* (2001).[111] This line of text was placed above the entrance of a neo-classical building in London's East End, in blue neon reminiscent of emblazoned lines of scripture outside churches, although the architectural reference to classical antiquity suggests other ancient beliefs. Text, then, is used by several artists who are of particular interest to this study, as they explore shifts in comprehension, of legibility and of context. Work takes on layers of meaning from its situation, and the forces that act upon it. Similarly, when I have used words, context is everything.

2.vii Materials and aleatory production techniques

2.vii.i Clay in recent practice.

Clay is of central significance to this research for its mass and density, and as an ideal material for creating multitudinous forms quickly and inexpensively. Indeed the liquid manner in which it can divide and reform with itself enables it embody the anti-formalist ideas described by Bois.

However, Isamu Noguchi indicates a potential problem with the material:

> *in a medium like clay anything can be done, and I think that's dangerous…You can make clay look like anything – that's the danger.*[112]

It is possible to mimic almost any material or surface using differing clays, glazes and oxides, but this denies the geological origins, the fundamental base earthiness of clay. If clay can do anything, it has the potential to address the varied thematic concerns of this study, and I will discuss here the works of

[111] Simon Morley. op cit. p. 209.
[112] Simon Groom (2004) *A Secret History of Clay: from Gauguin to Gormley*. London: Tate Publishing

various sculptors that demonstrate how it has been employed to aleatory, anti-form or generative ends. Indeed, recent art practice has utilised this material in ways that reflects these themes.

Figures 31 and 32. Kosho Ito, right: *Sea Folds* (2002) and left: *Earth Folds* (2002)

An example of how to confront the danger Noguchi described can be seen in the work of Kosho Ito who uses strategies that involve passing the control of form onto external forces or automatic actions. Ito exhibited two large installations at the Tate St Ives during his exhibition *Virus*.[113] For *Earth Folds (2002)* he composed an outdoor field of clay fragments in differing colours and textures, a broad red band of iron rich clay that had frozen in his studio and was subsequently fired, to preserve the crumbling shape of the material before it returned to dust. Oxidising tones and elemental glazing define other areas of the work, which resembles a section of earth transformed by a geological event rather than the actions of an artist (fig. 32). In contrast, a curved glass case within the gallery was stacked with hundreds of soft white forms, flecked with heavy dark grog that lent uniformity to their juxtaposed surfaces (fig. 31). For this piece, *Sea Folds* (2002), Ito worked very quickly, letting his hands ruck and crush malleable sheets of wet clay in a process that echoes Maiolino's (see 2.iii). The firing process recorded these semi-intentional movements, as a writer would notate a stream of consciousness. Ito's modular method and rapid gestural production parallels anti-form intent, as the artist lessens his control on each individual form. Although the units that make up my sculpture *The Grasp of It* were produced with notable differences, they are visually similar. This work is discussed in 5. iii.

[113] Illustrated in Susan Daniel-McElroy (2003) *Kosho Ito: Virus*. London: Tate Publishing.

Figure 33. Lucio Fontana, *Granchio* (1936)

Lucio Fontana was peripheral to the main focus of post-war Modernism because he *would not be restricted by its orthodoxies, in respect of the rigid separation of the arts and what constituted sculptural materials*[114] But his individualist approach greatly influenced the Arte Povera generation in his native Italy. His increasingly experimental use of clay and ceramic techniques has had some bearing on the style and production of my *Hell is Other People* series (see 5.iii). In 1937 Fontana spent time at the ceramic factory in Sevres, where he began a period of frenetic activity, evidenced by the extremely vital work he produced. This is characterised by smudged and gestural modelling; he dragged his fingers deep in clay and producing chaotic battle scenes, or perhaps with Bernard Palissy's[115] legacy in mind, lobsters, squid or *a whole petrified and shining aquarium.*[116] After an initial firing, his exuberant use of glazes allowed him the freedom to intensify the surface into something tauntingly grotesque. Colour is integral to these ceramic works, for example in

[114] Andrew Causey (1998) Op cit. p. 53.
[115] The work of Palissy is discussed in the booklet, *The Dove and 1000 Tides*.
[116] Lucio Fontana quoted in Enrico Crispolti (Ed.)(1999) *Fontana.* Milan: Edizione Charta. p. 119.

Granchio[117] (1936) the crusty carapace of a crab is redeemed from the rocks it sits on by a splashy russet glaze (fig. 33). Similarly *Battaglia*[118] (1947), a jagged explosion of clay; is revealed as human limbs and rearing animals protruding from a smudge of ochre earth; a complex form that would be almost impossible to read were it rendered entirely monochrome (fig. 34). The modelling was gouged with tools and the artist's thumbs so the clay burst and crumbled, yet Fontana preserved each subject's defining forms. His gestural expressionist approach constantly broached the limits of the material, stopping just short of allowing the material to control of its own form as anti-formalist practice does.

Figure 34. Lucio Fontana, *Battaglia* (1947)

It is important at this juncture to mention the clay work of Thomas Schütte, as it may be seen as a continuation of Fontana's stylistic concerns. Although Schütte's work bears evidence of the type of aleatory mark-making demonstrated by Orozco (see below), his strongly gestural work has not been of direct influence to this study. Schütte's ceramic works are often in heavily grogged clay tinted by the temperature it was fired to. His figurative heads,[119] some realistically modelled; others have cack-handed features, snaky hair and gouged eye sockets, are often finished with expressive, unctuous glazing. Schütte savours the slapstick, almost abject potential of fleshy clay and pours

[117] Ilustrated in Enrico Crispolti (Ed.)(1999) *Fontana.* Milan: Edizione Charta. p. 121.
[118] Illustrated in ibid p131.
[119] Julian Heynen, James Lingwood, & Angela Vettese (1998) *Thomas Schütte*. London: Phaidon.

lashings of syrupy glaze over the bald pates of wincing portrait busts, or taunts others with a face full of sticky greens and mustard yellows. He uses ceramic materials for their ability to freeze fleeting gestures such as the gravitational effect on liquid glazes, but he always resists submitting the entirety to anti-formalist principles.

Figure 35. Peter Fischli and David Weiss, *Under the Ground* (1981)

Fontana's influence persists in some recently exhibited gestural modelling. In 2007 an entire gallery at Tate Modern was filled with Peter Fischli and David Weiss' series of clay tableaux collectively titled *Suddenly This Overview* during the artists' retrospective, *Flowers and Questions.*[120] These works, selected from a series of around 250, are unfired figurative pieces that sit on individual plinths. The artists have worked rapidly and with a deceptive naivety to capture significant moments in time as they imagine them, applying the same absurd logic and ambitious endeavour shown in their other work. The collection is tied together only by the common material (unfired grey clay) and vague dimensions, but these limitations enable them to demonstrate the

[120] Bice Curiger, Peter Fischli, & David Weiss (2006) *Fischli Weiss: Flowers and Questions, a retrospective*. London: Tate Publishing.

material's versatility, as the frames of a comic book can show shifts in time, perspective and reality beyond the format. The title of the series suggests epiphanic realisations. They use the medium to zoom in on tiny worms dragging themselves through tunnels in *Under the Ground*[121] (1981) or to view the end of an epoch from the objective distance of a haughty god in *The Last Dinosaur*[122] (1981) (figs. 35 & 36).

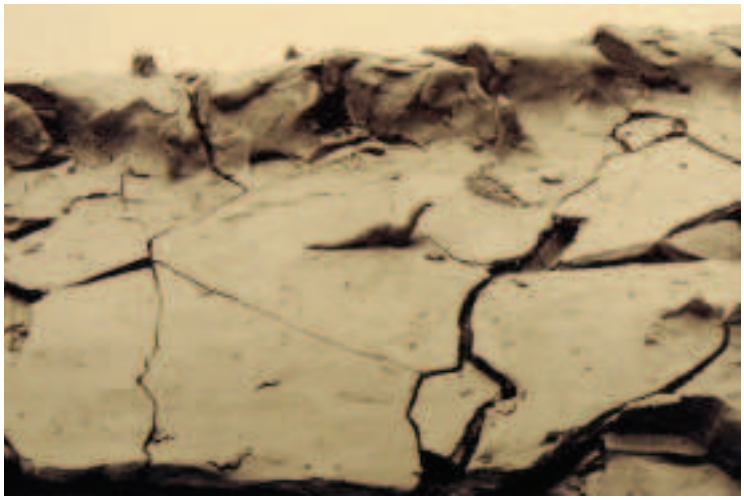

Figure 36. Peter Fischli and David Weiss, *The Last Dinosaur* (1981)

In contrast to the vitality of Fontana's ceramic sculpture the base density of clay has been examined in performance pieces and video works. *Pietà* (1992) is a 14-minute video by the Dutch artist, Erzsebet Baerveldt that demonstrates the morbid, fleshy qualities of wet clay, and its cold, yielding, dead weight. The film shows the artist laying out a life size model of herself on a table covered in plastic sheeting which resembles an operating table or mortuary slab. She starts to raise the model into the sitting position on the edge of the bed. This Golem is enormously heavy and as she carefully struggles the lifeless thing upwards, the composition suggests the 'pietà' of the title. Once she has her doppelganger in the vertical position, its limbs tear off and the whole lot falls to the ground, all the more like a decomposing body. She reassembles it and lays it back down, easing away the wounds until it is

[121] Illustrated in Bice Curiger, Peter Fischli, & David Weiss (2006) Op cit. p. 130.
[122] Illustrated in Peter Fischli & David Weiss (2001) *Plötzlich diese Übersicht*. Zurich: Stähli. Unpaginated.

smooth and whole again. Baerveldt uses her avatar to vividly express corporeality or being overwhelmed.

2.vii.ii Clay as an aleatory, formless or generative medium

The versatility of the medium has enabled artists to relinquish control to varying extents. Reiterating Noguchi's statement *in a medium like clay anything can be done,* the following artists can be seen to limit their own input through various strategies.

Gabriel Orozco produced a body of ceramic work while working in a brick factory at Sevres in 2002. For these sculptures he left fleshy wrinkles and stress cracks unsmoothed and allowed clay to record the actions of his hands and body. The results resemble accidental abstract sculptures, found objects such as fragments of bone or fishing weights, adapted for some basic function that has been obscured by industrial progress. Orozco describes how he sees tools and utensils as the end result of multifarious forces, requirements, capabilities and limitations; they develop to suit their function much as an organism will evolve to fill a particular niche environment:

> *I don't separate the making and the final result. But the criteria [sic], more or less, is the work is finished when it represents what really happens in the action of doing it.*[123]

Again this approach is similar to that of Maiolino (see 2iii), although Orozco presents his clay pieces individually, or arranged in small groups. One work called *Yielding Stone* (1992)[124] is a ball of Plasticine that bears the marks of its own construction, caused by it being rolled along a street (fig. 37). Hal Foster describes the aleatory nature of Orozco's practice in these terms: *'here the tradition of modelling was recast as an almost automatist practice, in*

[123] www.pbs.org/art21/artists/orozco/clip2.html
[124] Illustrated in Gabriel Orozco (2006) *Gabriel Orozco*. London: Thames & Hudson. p56.

which the everyday world, not the expressive artist, made the mark.[125] For Orozco the value of clay is that it is a material that similarly submits to process and can record this. His strategy recalls Ernst's 'frottages', aleatory translations produced directly from the surface of objects (see 2.ii above).

Figure 37. Gabriel Orozco, *Yielding Stone* (1992)

From the late 1980s Anthony Gormley has produced ceramic installations in his *Field* series. He handed over the construction of the myriad terracotta figures that comprise each installation to teams of volunteers thus preserving a certain distance between himself and the material. Minute decisions about size, form and surface texture were made by each co-opted worker, introducing an element of controlled chance into each of the final products. One such installation, *European Field* (1997) had a lesser known companion piece, which was an equally ambitious undertaking. At the Kunsthalle zu Kiel, Germany he lined three galleries with 43 cubic meters of clay and then filled this with seawater to the same height as the 40, 000 fired clay figures in the other gallery.[126] His juxtaposition of the mass of manufactured human forms with this vast volume of formless liquid is an unexpected experimental direction in Gormley's work, that has unfortunately been overshadowed by the familiarity and success of his *Field* series.

[125] Hal Foster (2003) *Design and Crime (and other diatribes).* London: Verso. p. 142
[126] Simon Groom (2004) op cit.

2.vii.iii Clay and modularity

Krauss states that *modularity of forms can be seen as a continuation of what [Donald] Judd and [Frank] Stella described as one thing after another, in their minimalistic approach.*[127] However, as outlined above, many artists have resisted the doctrines of Modernism and produced modular sculptures that depend on a large number of similar forms being produced manually to exhibit a desired cumulative effect (See Maiolino, Ito and Gormley, 2.iii, 2.vii.i-ii). The medium lends itself to such employment: easily handled quantities of clay will fire with great consistency and the resultant work is readily transported from studio to gallery. Several of the works produced during this research are modular constructions (See 5.iii *Hell is Other People* and *The Grasp of it* sculptures).

Tony Cragg[128] uses clay as he approaches other sculptural materials, by ascertaining its unique properties and developing work that exploits these. His early clay pieces were open vessels formed on a wheel and arranged in groups to suggest cooling towers, chimneys and gas tanks or solid urn-like forms, then sliced like a boiled egg to droop under their own weight (*Laibe*, 1991)[129](fig. 38). Teetering towers of hollow volumes were fused into stacks, reminiscent of sea squirts or bean pods, a process which concealed the modular origins of these forms. Recent pieces resemble the complex metallic components of dismantled turbines or pumps, but again are simple vessel forms fitted with sturdy flanges and bolt-holes then coated in a thick lustre. These huge items defy the difficulties that arise from moving and firing work on this scale, but their potential connectivity implies even larger structures or hulking feats of engineering.

[127] Rosalind E Krauss (1981) *Passages in Modern Sculpture*. Cambridge and London: MIT Press. p. 244.
[128] Tony Cragg (2003) *Tony Cragg: Signs of Life*. Düsseldorf: Richter Verlag.
[129] Illustrated in Germano Celant (1996) *Tony Cragg*. London: Thames and Hudson. p. 185

Figure 38. Tony Cragg, *Laibe* (1991)

Figure 39. Guido Geelen, *Untitled* (1992)

Guido Geelen works almost exclusively with the material processes and finishes particular to ceramics (slip casting, extruding and decal transfers) to produce work that is very much in the sculptural tradition. Like Tony Cragg, he produces monumental works from component parts. Geelen's work is constructed as 3D collages from casts of found objects (natural or manmade, utilitarian or decorative) compiled into large compositions that foreground their own manufacture. He retains the mould marks, runners and risers that were necessary to their production and often presents them on the pallets where

they were assembled (fig. 39). A view of his studio (fig. 40) shows various composite forms created from blocks of cast or extruded forms, and includes some produced from letter forms that have been contained within rectangular shuttering when still wet.[130] He has then constructed large geometric sculptures from variations of these once they are fired. Some blocks are tangled cubes of his initials G, but others derive from templates of signs or pictograms.[131] His apparently haphazard gleaning of shape suggests that it is a playful revelling in his craft and the limitations of the material that predominantly concern Geelen, above other theoretical explorations. Although his extensive use of extruded clay closely resembles my *Hell is Other People* sculptures, Geelen has used this approach for purely formal reasons.

Figure 40. Guido Geelen's studio in 1996

2.vii.iv Other materials and techniques: wax, honey

Having used beeswax as a substrate for the aleatory transformation of sculptures by bees; I will discuss other artists' responses to this most mutable

[130] Illustrated in Carmiel Van Winkel (Ed.) (1996) *Guido Geelen*. Tilburg: De Pont Foundation for Contemporary Art. P 17.
[131] www.guidogeelen.com

of materials. Joseph Beuys' diverse practice encompassed an eclectic use of scientific knowledge combined with social metaphor and myth-making. Although there are marked similarities between aspects of his work and that of the Arte Povera artists (i.e. discarded or 'low' materials, metaphor and cultural references) (see 2.iv and 2.vii.v), he is more associated with the European Fluxus movement. He established his own subjective associations for materials, found objects and animals that recur in many strands of his artistic and written production. One facet of particular significance to this study is his reference to bees and their products. He used both beeswax and honey for their therapeutic and metabolic associations, and what he saw as their alchemical transformation into flesh and blood via metabolism. Rudolph Steiner's series of nine lectures on honeybees[132] given to workers in 1923 particularly influenced Beuys, as these focus on Steiner's Anthroposophist[133] interpretations of these social animals, and what our society should learn can them.

Beuys sought to heal the wounds of mankind after the devastation of World War II through transcendent work that embraced both spirituality and physicality. In 1977 at documenta 6 in Kassel, Beuys presented *Honeypump at the Workplace,* a circulatory system of clear plastic tubes that pumped hundreds of gallons of honey up through the main stairwell and around the galleries of the Museum Fredericianum. For the 100 days of the exhibition He simultaneously conducted talks and discussion around the subject of social change as his contribution to the *Free International University* whilst significantly comparing a collaborative colony of bees to the interaction of the organs of the human body.

> *The bee is one cell in the whole organisation, just like a skin cell, or a muscle cell or a blood cell…So in practical terms, the human being is also a swarm of bees, a beehive.*[134]

[132] Lectures given at the Goetheanum, Dornach compiled in Rudolf Steiner (1998) *Bees*. New York: Anthroposophic Press. p. ix.
[133] Anthroposophy: from anthropos=humankind and sophia=wisdom.
[134] Heiner Stachelhaus, (1987) *Joseph Beuys*. Abbeville Press: New York. p. 59

His account of the formation of organs from a basic waxen state pre-empts developments in stem cell research.

> *if you take a little bit of beeswax, what you really have is an intermediate product between blood and muscle and bone. It goes through a wax stage inside the human body. The wax never sets but stays fluid until it can be transformed into blood, or muscles, or bone cells.*[135]

Ann Hamilton also employs a wide range of materials in her performative installations (see 2.v). Yet her use of wax and honey is more conventionally symbolic that Beuys's subjective, spiritual interpretation. In her 1991 installation *Offerings*[136] she filled a glass vitrine with wax heads supported by electrical elements that formed the base (fig. 41). The heads slowly melted, wax parabolas of wax built up beneath the vitrine like upturned honeycombs. Molten wax continued to permeate through the gaps between the floorboards of two storeys of the site, Pittsburgh's Mattress Factory. Canaries flew around the room containing the vitrine, illustrating their ancestor's use as sacrificial gas detectors in Pittsburgh's coalmines. The votive heads mimic the live performers that Hamilton frequently employs within her installations. These people often perform achingly slow and repetitive tasks, like those of production line workers or miners and nameless masses whose lives passed in the drudgery of work that built Pittsburgh's industrial eminence. Here she uses mutable wax for its references to pallid faces or death masks and it is the turn of the live canaries to flutter heavenward in memory of these souls. The wax accretes in jagged spires reminiscent of stalagmites, and this element of her installation 'grows', producing a striking form outwith the artist's direct involvement.

[135] Ibid p. 55
[136] Illustrated in Joan Simon (2002) op cit. p. 113.

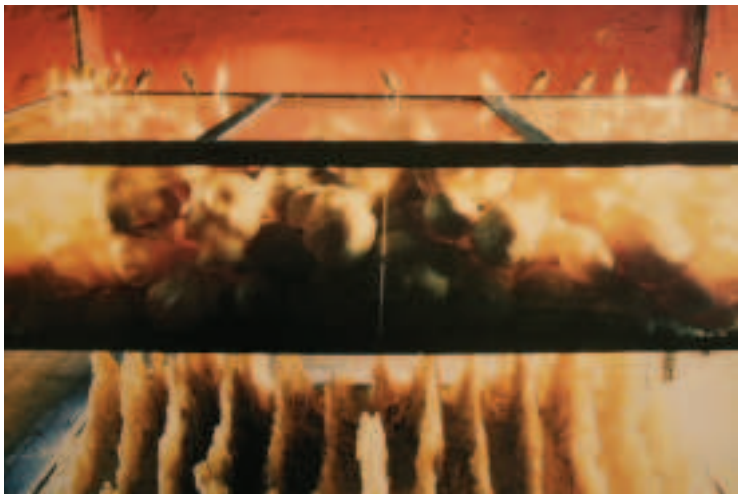

Figure 41. Ann Hamilton, *Offerings* (1991)

Aganetha Dyck almost always works with the products of her own beehives, allowing the insects to dictate the final form of her exhibited works. Like her compatriot Eric Cameron (2.iv), she subjects commonplace objects to a particular process of transformation by placing them in hives and allowing the bees to form honeycomb around them, until climatic and biological conditions cause this process to cease. In this respect she enables chance in the form of a natural processes to define the completed artworks. It is rarely the creatures themselves that are the focus of Dyck's work, but the materials they produce and the manner in which they go about it, however, in the exhibition *Inter Species Communication Attempt* (2000)[137] she enabled bees to manipulate Braille script in order to examine the languages that are hidden from the majority of us, as is the peculiar waggle dance of bees. This work can be seen to encompass two focal points of this research: the aleatory methodology and an examination of disrupted communications, albeit Braille rather than conventional text.

2.vii.v Other materials and techniques: Animals

This research uses the action of live organisms with sculpted objects, in order that nature might be shown to adapt and subsume these human constructs predominantly as a metaphor for the actions of human society (see *Ruskin*

[137] Serena Keshavjee 'Aganetha Dyck: Nature as Language' accessed at www.umanitoba.ca/schools/art/content/galleryoneoneone/serena.html 10/09/02

Quote and *Fecundity* chapter 5ii). Therefore it is relevant to outline here the conceptual aims of other artists who have used live animals within their work.

In 1969 Jannis Kounellis presented *Untitled work (12 horses)*[138] at Rome's *Galleria Attico.* This was not the first time the artist had shown live animals (two years earlier he installed a macaw alongside four troughs of earth and cacti). However these dozen horses presented in the gallery confronted the viewer not merely a representation of nature but the beauty, filth and danger of the real animals (fig. 42). His was the logical continuation of the increased use of natural materials in an unadulterated form, as exemplified by anti formalism. This unelaborated image was reduced to its most basic elements (the animals and what was required to sustain them), they were unmediated by any artifice. Although Kounellis was aligned with Arte Povera, his use of animals does not draw on their capacity to effect change beyond the hand of the artist. Instead he employs the horses as live 'readymades'.

Figure 42. Jannis Kounellis *Untitled (12 horses)* (1969)

Over the last two decades artists have utilised the action of live organisms on various substances to determine the outcome of their artwork. The results often display pattern and form as an outcome of dynamic processes exerted on materials outwith the direct physical control of the artists who initiated them.

[138] Illustrated in Eduardo Cicelyn (2006) *Jannis Kounellis.* Naples: Electa. P. 48.

Such a use of animals within aleatory practices can be seen in the work of Hitoshi Nomura. In contrast to Kounellis, Nomura has produced artwork that is determined to some extent by the actions of animals. By documenting changes in nature such as the movement of the stars or incremental corrosion of a piece of metal, he reinterprets what is commonplace. He produced several musical scores his technique of photographing flocks of birds on reels of film he has scratched with a five-line stave. *Birds score, Feb 6* (1987) comprises a group of ducks swimming on a pond (fig. 43), while *Birds score, March 15* (1987)[139] records the flight patterns of a flock of seagulls. He presented these as visual works without realising their potential as music beyond what the viewer can interpret from the printed score.

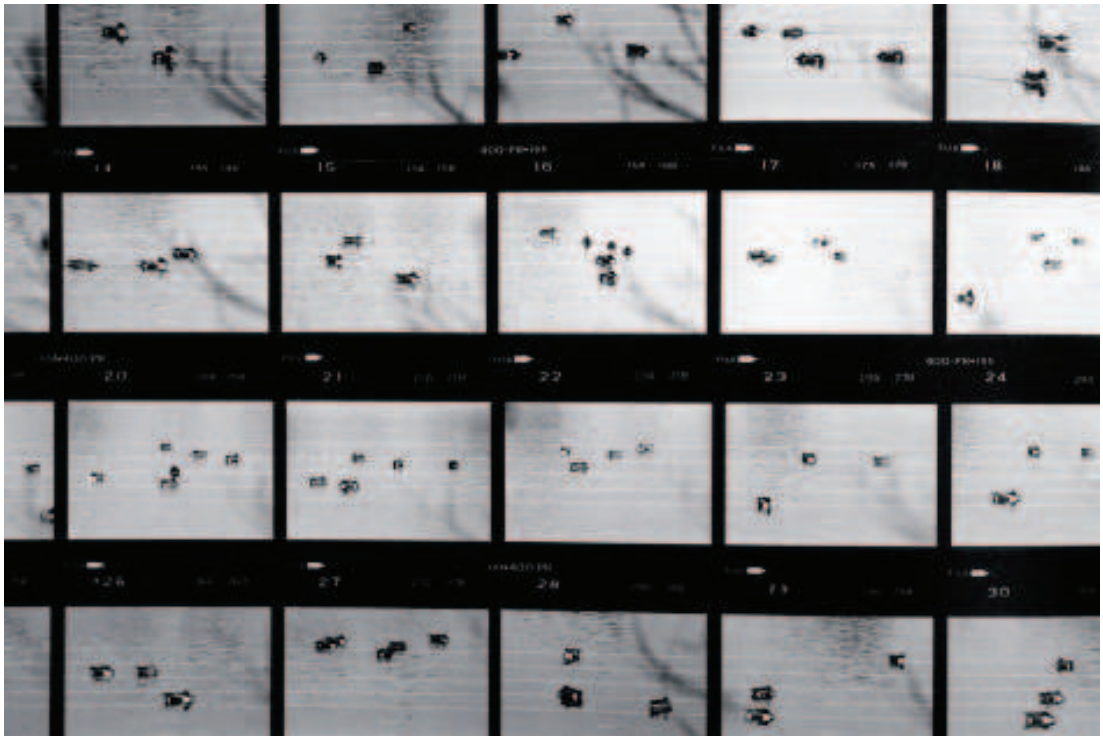

Figure 43. Hitoshi Nomura, *Birds score, Feb 6* (1987)

[139]Illustrated in Hitoshi Nomura (1994) *Time-Space 1968-1993*. Kyoto: Korinsha Press. p. 58

Figure 44. Yukinori Yanagi, *Wandering Position* (1996)

Another example of such a gentle, non-invasive approach involving animals is seen in Yukinori Yanagi's practice. Yanagi produced a series of graphic works employing another aleatory method. He confined an ant within a 'picture' boundary and followed its movements with a red pencil. As a dense tracery of lines built up like a complex road map, a pattern emerged of focussed activity at the corners illustrating the ant's strategy of escape. Yanagi produced such a work, called *Wandering Position*[140]*,* during a residency in the charged atmosphere of the abandoned Alcatraz prison in 1996 (fig. 44). This work illustrated a disturbing aspect of inhumanity, foisted onto one humble creature. In another work Yanagi set up an experiment relying on what has been termed 'Duchampian controlled chance'[141] allowing a range of variables to interact and run their course, and so produce an artwork without a defined end point. Yanagi's ant farm *Pacific* (2006) was shown at Tate Modern and must be seen as a time-based piece. A grid of 49 Perspex boxes were filled with coloured sand to represent different national flags and then connected by clear tubing. The artist established a colony of ants in this system whose

[140] Illustrated in Yukinori Yanagi (1996) *Field work on Alcatraz*. San Francisco: Capp Street Project. Unpaginated.
[141] See booklet entitled *Grey Book*.

tunnelling activities drag material from one box into the next. There is therefore no ideal moment to view this work: it might keep getting better, or the ants might blur the colours of the 49 flags into buff banality. Unlike the methodologies of Hiorns or Ackroyd and Harvey this work exhibits an open ended generative process, where the final artwork is subject to continuous change. The viewer is implicit in creating a perception of the work as its completed form is only evident from the last time it was viewed, and it is primarily in this respect that it echoes my own works which similarly exploiting the natural behaviour of creatures in unnatural environments.

Figure 45. Felix Baltzar, *Tierbauten* (1997)

Other examples of animal actions being co-opted in such a manner can be seen in Felix Baltzer's project, where the artist housed mice found in his studio in foam filled cages. These mice burrowed through the foam to form tunnels and chambers until Baltzar removed them. Plaster was cast into the hollowed cavities and the foam peeled off. The resulting plaster forms are presented as monolithic sculptures, their non-human origins lend them an unnerving air (fig. 45). Superficially they resemble Cragg's constructions of plumbing tubes *(Twenty four hour cycle,* 1984),[142] but their surfaces have a fleecy woven texture that was transferred from the gnawed foam[143]. However, Baltzer can now predict quite accurately the shape of each plaster form as he has become increasingly familiar with the behaviour of these animals

[142] Illustrated in Germano Celant. (1996) op cit. p. 100
[143] Illustrated in Felix Baltzer (2002) *Karambolage*. Wuppertal: Herausgeber. Unpaginated.

indicating that the element of chance within such a project dissipates as each artist becomes more familiar with an organisms' traits and limitations.

Although the exact chromatic or structural outcomes produced by Yanagi's ants or Baltzer's mice remain unpredictable in their specifics, other artists have precisely anticipated the effects generated by creatures with the materials put at their disposal. This is the case with Hubert Duprat who placed the aquatic larvae of caddis flies in a tank with fragments of precious materials in his long-term project, *Caddis Fly Larvae with Cases* (1980-99).[144] However, these creatures construct protective sheaths from whatever is at hand in order to transform into their imago stage and so produced exquisite shells using gold and jewels that the artist had dropped into the tank (Fig. 46). Having relinquished the process of construction to another external, non-human maker, there is almost no chance element to this process. The larvae have an imprinted pattern for their requirements, the cases' shape size and thickness are predetermined, and Duprat can only vary the next jewel they use. It is a beautiful, compelling process but it is also inflexible and unambiguous. In this respect his strategy resembles both Hiorns, and Ackroyd and Harvey's use of crystal growth, in that it can be seen as a predictable outcome in which chance occurrences have in fact been minimised.

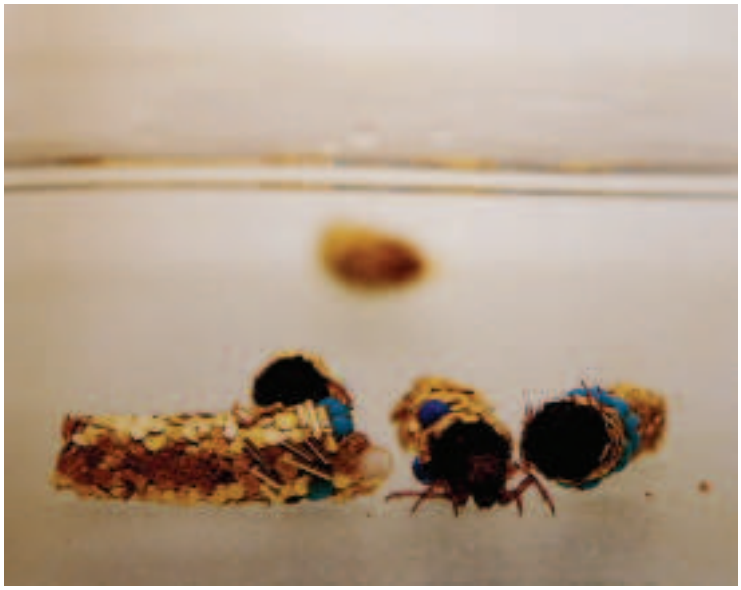

Figure 46. Hubert Duprat*, Caddis Fly Larvae with Cases* (1980-99)

[144] Illustrated in Steve Baker (2000) *The Postmodern Animal*. London: Reaktion Books. p. 71

Mark Dion presents natural process and organisms as part of his practice. *Vivarium* (2002)[145] was commissioned for the exhibition *Hell-Gruen* in Düsseldorf and comprises an eight metre long log housed in a greenhouse (fig. 47). The poplar tree trunk appears to be lying in state within a glass vitrine tiled with scientific illustrations of various insects, plants and animals presented as Delft-ware; examples of the micro-fauna associated with a living poplar. Unlike a metaphorical Snow White, lying undefiled in her glass tomb Dion's log is an example of an ongoing process - continual disintegration and regrowth. Peering through the glass display case, we see that the severed trunk is alive with another ecosystem of beetles, mosses and fungi. This juxtaposition of organic and manmade objects is consistent with works produced with sea-life for this study. Dion's presentation of *Vivarium* veers from any direct narrative or site specific underpinning; indeed he has created similar works in different locations that refer only to generic landscapes.

Figure 47. Mark Dion, *Vivarium* (2002)

In contrast much of Simon Starling's work relates to events, conditions and the environment around where they are exhibited. For the Power House Gallery in Ontario, Canada, he submerged a steel replica of Henry Moore's *Warrior with Shield* (1953-4) in an area of Lake Ontario that has recently become choked with an invasive species of zebra mussel that was originally

[145]Illustrated in *Hell-Gruen* Exhibition Catalogue (2002) Landeshaupstadt Duesseldorf, NordRhein Westfallen.

discharged from the bilges of foreign ships. The work, *Infestation Piece (Musselled Moore*) (2007/8) makes reference to a controversy that followed the Canadian government's commission for Moore's sculpture, *The Archer* (1964-5), at a time when nationalist critics argued that funding should be directed only to artists working in Canada. Like much of Starling's work this is the culmination of topical and historical research combined with a process of material transformation. However this was not open-ended project, the mussels have a similar function to those works discussed earlier which employ crystallisation, the process is halted at the point when the work was exhibited. Because of their site specificity, Starling acknowledges the importance of contextualising these projects, *I'm involved in an activity which is similar to that of a narrator;*[146] and so each work relies on visual and written documentation to accompany it. Another work by Starling, *Shedboatshed* is discussed in the following section (2.viii) for his transformative approach to architecture.

2.viii Architecture

This section focuses on examples of experimental and ambitious sculptural forms used or proposed as architecture. This study has made reference to some examples of temporary or utopian designs that have been connected with social experiment or an idealistic goal. These structures effectiveness as architecture is not relevant, and indeed many of them never left the drawing board.

Figure 48. Bruno Taut, *Alpine Architektur* (1919-20)

[146] http://artnews.org/gallery.php?i=1274&exi=10010 accessed 17/08/09

Bruno Taut's *Glass House* for the Cologne Werkbund exhibition of 1914, is the architect's most familiar work, and anticipates Richard Roger's *Swiss Re* (2003) building in London.[147] It is however Taut's extraordinary portfolio *Alpine Architektur*[148] (1919-20) that is of interest to this research (figs. 48 & 49). This was but one of many utopian ideas that were proposed by Taut and others after the Great War. These ambitious architectural projects aimed to revitalise and inspire young men, and so thwart the organic development of uprisings, riots and wars.

> *Harness the masses to a great task that fulfils everyone...there is only restless courageous labour in the service of beauty, in a subordination to the transcendent.*[149]

His proposed scheme for a series of glass pavilions, bridges and towers to be built in the Alps was unconstrained, vastly ambitious and, of course, a fantasy.

Figure 49. Bruno Taut, *Alpine Architektur* (1919-20)

[147] *Swiss Re* is also known as 30 St Mary Axe.
[148] Illustrated in Matthias Schirren (2004) *Bruno Taut Alpine Architektur: A Utopia.* Prestel Verlag: Munich.
[149] Ibid p. 72

The rationalist buildings of architects working for the Italian Fascist regime in the late 1920s and 30s have informed the work described in the *Colonies* booklet. Experimental modernism managed to flourish for a while during what we now know as the interwar period, but the architects were increasingly stifled by political dogma and the imposition of leaden symbolism. There are however some extraordinarily bold and inventive examples by Clemente Busari-Vici, Luigi Moretti, Gaetano Minucci and Adalberto Libera, among others that have formed the basis of sculptural interpretations here.[150] These architects were involved in the prolific programme to construct *colonia estive*[151] and *Balilla* buildings, which were schemes to systematically control children and young people's leisure time and instil obedience in the masses (see chapter 5.v).

These buildings have also been the focus of an exhibition *Fascismo Abbandonato*[152] by Dan Dubovich and Patrick Duerden, who documented some of these abandoned sites across the north of Italy. The buildings persist whilst the underlying credo has crumbled.

In his book *Crowds and Power*[153] Elias Canetti coined the term 'crowd crystals' to refer to the amassing of a crowd as akin to the natural process of organic growth; the metaphors he uses to describe crowding recur in my own work, particularly when I have used colonies of ants and bees (see *Colonies* booklet). This correlates with Canetti's interpretations of human crowd behaviour, in that mobs are not unpredictable after all, and that they develop following an underlying organic structure. Indeed for Canetti the organic growth of a crowd applies to the emergence of movements and mass uprisings - fascism, socialism - and this was instrumental in my approach when producing my earlier beeswax sculptures (see 3.i).

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[150] For further information see: Fabrizio Brunetti (1998) *Architetti e Fascismo*. Florence: Alinea Editrice; Rinaldo Capomolla, Marco Mulazzani and Rosalia Vittorini (2008) *Case del Balilla: Architettura e fascismo*. Venice: Electa; Robert A. Etlin (1991) *Modernism in Italian Architecture 1890-1940*, Cambridge MA: MIT Press.
[151] Italian word for communal recreational facilities particularly children's summer camps etc.
[152] *Fascismo Abbanonato* at Fermynwoods Contemporary Arts, Kettering, 2009.
[153] Elias Canetti (1962) *Crowds and Power*. London: Camelot Press.

Pavilions are temporary, ethereal architecture often built quickly and to survive just one season like a bird's nest, they are used to demonstrate ideas or products and are designed to attract viewers through innovative materials and fantastical forms like novelty-seeking bowerbirds. As their name suggests (from the French word for butterfly, *papillon*) pavilions are constructed to draw crowds at festivals or the seaside but with little thought for their permanence. However survivors do exist if they are treated like artworks. Examples such as Erich Mendelsohn's *De la Warr Pavilion* at Bexhill on Sea (1934) or Ludwig Mies van der Rohe's *Barcelona Pavilion* (1929) can endure, but others now exist only as photographs or proposals. The pavilion designed for the Campari drinks company by Fortunato Depero in 1933[154], deviates from all architectural forms. The walls comprise entirely of the letters from the word 'Campari' in various fonts arcing across the roof, curving round the lintels and stretching off to infinity down the sides (fig. 50). Another example of the beautiful potential of this temporary architecture is the *Heineken Wobo*, designed in 1963 by John Habraken and Alfred Heineken as a beer filled glass brick that would gently ease the lot of shanty dwellers in Curaçao by providing the materials for house building parties. The project failed when the company decided the project would result in negative publicity.[155] Unlike the extreme optimism of some pavilion structures, the Wobo project also considers the basic needs and urges of people.

[154] Illustrated in Fabrzio Brunetti (1998) *Architetti e Fascismo*. Florence: Alinea Editrice. p. 131

[155] Emilia Terragni (Ed.) (2002) *SPOON*. London: Phaidon Press. p. 418

Figure 50. Fortunato Depero, *Study for Campari Pavilion* (1933)

As an artwork, Simon Starling's *Shedboatshed - Mobile architecture No 2* (2005)[156] lends mutability to architecture form (see2.v). Starling found a sturdy old shed close to the Rhein at Cologne which he proceeded to transform into a boat (fig. 51). He placed the surplus timber in this boat and paddled up the river to Basle where he reassembled the original shed. Unlike the utopian structures proposed by Taut or the eye-popping visuals of Deparo's pavilion, Starling's humble structure is nothing without the circular narrative that accompanies it, and the parsimonious inventiveness of the artist. His training as a photographer has enabled him to resist permanency in his sculptural work, as he records mutations and transformations of supposedly permanent materials and structures. Like the works produced here, *Shedboatshed* is informed by the transient vision of pavilions, but by refocusing on the construction process he describes his modus operandi in terms of a relinquishing of authorial control:

> *[I] create the conditions that allow for a somewhat unexpected and uncontrolled chain reaction to occur...these kind of coincidences,*

[156] Illustrated in Phillip Kaiser (Ed.) (2005) *Simon Starling: Cuttings*. Ostfildern-Ruit: Hatje Cantz Verlag.

these sort of chance findings...it's about identifying them when they happen.[157]

Similar chance findings inform many artists' work including my own. Eclectic sources and diverse strategies can be seen to connect in the resultant artworks; it is the job of the artist to identify these connections, manipulate the materials and reveal new works.

Figure 51. Simon Starling, *Shedboatshed - Mobile architecture No 2* (2005)

2.ix Approaches used in this research

In chapter 1, a range of theoretical concepts, artistic approaches and material manipulations were proposed as relevant to this project. In this chapter, literature on these areas of theory and artistic practice has been reviewed to consolidate an appropriate strategy to address the research questions. A particular understanding of abjection has been argued as analogous to the relinquishing of authorial control; aleatory, anti-form and generative sculptural

[157] Ross Birrell (2006) 'Autoxylopyrocycloboros: Simon Starling interviewed by Ross Birrell' In *Art & Research*, Dundee: Studio 55.

practice have all been identified as significant directions within which to pursue that conception of abjection; and Deleuze and Guatarri's rhizome has been suggested as a central principle to bring together these strands in a modus operandi consistent with the contemporary field. The work produced in the research has drawn on all of these movements and ideas to establish a approach to generating coherent contemporary sculpture beyond the hand of the artist. Text, clay, wax, honey and animals have been identified above as artistic materials strongly suited to the approaches and concerns outlined, and therefore as useful in exploring the research questions. Chapter 5 contains an account of the technical methods and procedures for the production of artworks using these materials. Finally architecture has been highlighted as a key thematic concern bridging my previous work and the current study. In the following chapter I outline directions in my previous work that led to the point of departure for the thesis project, and to the adoption of this methodology.

Chapter 3. Precursory work

This chapter discusses my artistic practice prior to undertaking this research, and contextualises that work within the conceptual and thematic categories outlined in the previous chapter.

3.i Social animals and their architecture

In my practice I have utilised the actions of animals to alter the form of sculptures in projects that contrast human and animal societies. My collaboration with a beekeeper[1] began when a colony of bees was established in my sculpture *Departmental Store* (2002), a wooden model I had reconfigured as a working beehive from drawings my grandmother produced in 1933 for her final student exams in Architecture (fig. 52). During her studies the predominant aesthetic was the International Style, which sought to bring unifying Modernist principles to any context and subvert traditional or vernacular decorative idioms. My MFA exhibition combined this beehive with two enlarged versions of her floor plans, painted directly onto the gallery wall in honey and gold pigment. These fluid images smudged and distorted as they ran down the wall during the course of the exhibition.

[1] The beekeeper is Mr Brian Pool.

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Having researched how a beehive functions, and the method in which bees fabricate honeycomb within the loose frames of a modern hive, I adapted these processes for sculptural ends. In my ongoing project called *Crowds and Power* (figs. 53-56), I select examples of Modernist architecture and produce beeswax models of these which are placed within hives, allowing the insects to build their cellular structures on the surfaces and therefore to determine the final form of the work (see *Colonies* booklet) There are now around a dozen such sculptures, all of which have unpredicted aspects to their forms.[2] The actions of the insects are dependent on many variable conditions (weather, temperature, disease or seasonal changes), which suggests an underlying aleatory principle. However, like those projects initiated by other artists discussed in the contextual review (see 2.vi.v), my growing familiarity with the insects' habits and behaviour when such a model is introduced to a hive, and the moderating influence of the beekeeper, inevitably lessens the 'chance' aspect of the process. I therefore see these works as aligned with generative uses of animal input.

[2] These sculptures have been shown in several exhibitions: *Improve the Shining Hour*, Market Gallery, Glasgow (2004) *Laing Solo: Cath Keay*, Laing Art Gallery, Newcastle (2005), *See Scotland*, The Dick Institute, Kilmarnock (2005) and *A New Destiny is Prepared*, An Tobar, Tobermory (2006).
The Laing Gallery commissioned two new works: *Pelaw Co-op*, and *Infectious Diseases*. The latter is an identical hospital building to one in Paisley, showing the ubiquitous use of the International Style.

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For an exhibition in the Crawford Arts Centre, St Andrews[3] I researched interwar architecture extant in the area around the gallery. Near the ubiquitous bungalows and semis that line the approaches to Scottish towns and gaze across the links to the sea, there are several surviving air control towers, slowly crumbling back into the broken tarmac of their airfields. In Crail, Anstruther and Dunino I found their shells, recognisable by broad balconies and wide windows sectioned like Mondrian's paintings by narrow metal frames. These windows appear optimistic in houses but functional and paranoid in these edifices which were build to constantly gazing skyward, listening for the drone of approaching planes. Wax models of these obsolete structures were placed in hives in St Andrews' Botanic Gardens and the results exhibited.

I went on to look at later examples of Modernism, such as the four brutalist concrete tower blocks that loomed outside my flat in Glasgow. Their rational construction was evident in their repeated symmetry; four groups of four floors around a central axis adorned with a key pattern worked depicted by widened partitioned walls. Their only concession to décor was grey mosaic tiles that covered their surface mimicking concrete, but strong winds would bring these glassy fragments raining down on the pavement below. Two of these austere *Caledonia Road Flats* (2004) were due for demolition and so I constructed a model of one to echo the view outside my window (fig. 57). I had intended to place a candle in it on the day that the real buildings were scheduled for implosion and to film them collapsing simultaneously; unfortunately the demolition eventually occurred after I had moved to Newcastle. However, the mutability of materials, animal input and architectural design and control in this entire project were important precursors to the strategies and concerns of the present research.

[3] Exhibition titled *What in the World Is more Beautiful?* (2005)

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3.ii Silkmoths

I wanted to use a similar methodology to that of *Crowds and Power* for another project, by attempting to use silk-moth larvae as the agents of transformation. These caterpillars were to consume a sculpture constructed from pulverised mulberry feed and so convert it into raw silk for the second stage of this project, to reflect on the development of trade union banner making. Although this project did not achieve what was intended (I have outlined this in greater detail in the *Moths* booklet) various aspects of the process have informed the current research. The powerful impression made by the moths' life cycle led in part to the aleatory infestation by marine fauna of four terracotta sculptures (see *The Dove and 1000 Tides* booklet), which illustrates an unfettered triumph of natural abundance in the form of 'pest' organisms. I utilised various elements from this project in early works during this PhD research. For instance, in one installation,[4] a film I had taken of silkmoths hatching from their cocoons was projected onto ceramic moths fecundating to a soundtrack of improvised fluttering noises (see 5.i).

3.iii Materials: Clay and bronze

This research frequently focuses on the use of clay. Its organic properties are particularly suitable for subjection to natural processes and its dual states of soft vulnerability and fired permanence enable it to directly record physical processes that have been enacted upon it. Clay is particularly expressive of anti-formalist concerns, and the firing process can preserve slumping, stretching or collapsing forms midway through their demise.

Prior to this research I had used clay predominantly as a starting point in the casting process and rarely within a completed work. I had employed clay as an inexpensive material able to produce innumerable replications from one mould, but one that remained malleable, allowing later adaptations to the

[4] Exhibition titled *Silkmoths* at Glengorm Castle, Isle of Mull (2006)

form. I had also made several works in bronze utilising the metal's ability to record ephemeral objects or soft substances; for example I cast several dozen flowers (*Chrysanthemums*, 2002) to preserve the form of these transient things (fig. 58). I had used bronze's transformative potential to produce a permanent artwork from a model originally knitted by a local women's group[5] (*Pithead Memorial,* 2000).

My first ceramic sculptures were a series of speech bubbles, press moulded in buff clay then fired to a papery white colour. The surfaces are inscribed with the symbols of inarticulate oaths as depicted in comic books. These *Expletes* (2003) lie heavily on a surface like markers at the scene of an accident, and represent the voice made concrete (fig. 59). As speech bubbles they present stilted communication through unreadable script, a theme that is explored further for the *Hell is Other People* sculptures (5.iii).

[5] *Pithead Memorial* was knitted by the *Llay Wives* for Alyn Waters Country Park, Wrexham.

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3.iv Modularity

Elsewhere in this thesis I describe the background research to the *Ruskin Quote* sculpture (5.ii), which explores the clashing doctrines of evolution and creationism, themes that first emerged in my installation *Sssh* in 2003 (see Dove and 1000 Tides booklet). *Sssh* comprises around 7000 glass test tubes arranged as pixilated snowflakes across the high altar of St Mary's Cathedral in Glasgow (fig. 61). The context of the installation lent it an ambiguity that was not present in the formality of its original gallery setting.[6] Reflected light from the myriad forms encrusting the altar, suggested devotional candles but contradictorily obstructed the ceremonial process within the cathedral. Ice crystals evolve with apparently endless inventiveness and every snowflake is said to be a unique form. This assertion, although ultimately unprovable is open to the scrutiny of two belief systems and therefore this installation alluded to both evolutionary science and religion.

[6] *Sssh* was first exhibited in the Sculpture Court, Edinburgh College of Art in 2001.

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3.v Other architectural references

During a residency in Düsseldorf in 2005, I was reminded of John Ruskin's reverence of mountains. He devoted a whole volume of *Modern Painters* to the subject, and this is still widely read in Germany. The nation's pride in its dramatic alpine geography is evident in many varied sources; from their landscape painting tradition to footage of mountain resorts televised every morning.[7] The introduction to Bruno Taut's portfolio *Alpine Architektur* (see 2.vii) shows an etching of the Matterhorn by Ruskin that I replicated in soapstone, inscribing *Horizontkorrekturens* obliquely across the front. This word*,* borrowed from Taut's text, means 'to change the landscape', but also 'to change one's outlook'. The sculpture was then propped up on a heap of glassy sugar crystals grown during the course of the residency. I made several other text-based works, enjoying the uncertainty of using a language whose subtleties I could not comprehend. The blunt translations that tourist dictionaries offer do not allow for the colloquialisms that colour a word's meaning or any other slippage of understanding. I borrowed phrases from the notes scribbled in the margins of Taut's portfolio. *Gross ist die Natur (*Nature is Grand) was carved in wood and placed it on the gallery floor with icing sugar heaped onto the raised letters until the wood was no longer visible, the whole thing resembling the aerial view of a snowy landscape.

Alpine Architektur, the largest work produced for my show *Only the Facts are Clear,*[8] comprised 30 jewel-like crystalline forms constructed in prosaic cardboard and composed as a mountain range. I made models of three of Taut's sculptural glass pavilions in fondant icing and placed them on the highest peaks. Again dusted with icing sugar these architectural models were too fabulous and utopian to be realised, like Hansel and Gretel's gingerbread house, it was the stuff of fairy tales.

[7] Programmes such as *Panoramabilder/Bergwetter* on Bayerisches-Fernsehen.
[8] Exhibition titled *Only the Facts are Clear*, Galerie Am Der Ecke, Düsseldorf (2005).

These works introduced some recurring motifs to my practice that are more fully developed in the work produced for this research, such as the use of re-contextualised language and transient or generative materials (powdered sugar and sugar crystals). It also rekindled an interest in the diverse and often idiosyncratic work of John Ruskin.

3.vi Other text-based work

I have used text in several other pieces, seizing on evocative fonts and script that evoke specific locations or eras. Castle Ashby in Northamptonshire was a formative influence in this respect. The garden is contained and protected by a nineteenth century balustrade constructed from ceramic letters that spell out a verse from the bible.[9] It is a strange feeling to be wandering in a landscape that is pontificating at you as you pass through it. The context of a phrase alters its meaning and often in an uncontrolled or intuitive way. The letters of the balustrade reveal only short phrases at a time from any one viewpoint, and so the meaning of the text is attributed to the landscape itself.

Apiculture has again been used as a metaphor for human crowd behaviour in various other text based works, particularly a series of light-boxes constructed from emptied honeycombs, lead shot and resin. Each of these depicts a phrase extracted from beekeeping manuals that urge humanity to follow the example of bees, thereby anthropomorphising the behaviour of these insects. Phrases such as *Improve the Shining Hour, A New Destiny is Prepared* and *The End of Misunderstanding* (2004) (figs. 62 & 63), imply that a utopian strategy exists amongst the hive's subjects, and these works pre-empt the re-contextualised imperative slogans (see 5.v).

[9] *Consider the lilies of the field, how they grow; they toil not, neither do they spin: And yet I say unto you, That even Solomon in all his glory was not arrayed like one of these*. St. Matthew verse 28.

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The font used in these light-boxes is that of an old black and gold typewriter used by my grandfather, father and brother in the family business; in their hands its sturdy metal keys almost punctured the paper. This lettering has an unspecific utilitarian appearance and is used again for text pieces produced during this study (see 5.ii-iii *Ruskin Quote* and *Hell is Other People*) However like all old typewriters, the letters of this one bear unique distortions and slippages, which I retained in the magnified form I used. The same type recurs in the following work, *There's Nothing to See Here* (2003) (fig. 64).

I had also been looking at crowd control clichés, and carved *There's Nothing to See Here* in lime wood as a block print with the intention of stamping it on various surfaces. It worked well on the filthy beach at Saltcoats near Glasgow where day-trippers spend weekends stoically building sandcastles surrounded by last week's sewage. The potential for such text-based work to transfer into the medium of print is demonstrated again with the *Ruskin Quote* sculpture, which has an accompanying edition of embossed prints (see 5.ii).

In 2002 I travelled to Florence where I noticed the sculptural form of the signs on shop hotels and restaurants. These often remain unaltered on the building from the time when each company was established. Bespoke logos appear to have been a substantial outlay for a new business and perhaps for this reason may remain in place for many generations. It is common to see wrought iron, bronze, glass and acrylic lettering, each redolent of a particular era, and these are often very expressive sculptural forms in their own right. I copied one such sign - *Ristorante* - using recycled cardboard, which I filled with oats (fig. 60). I then placed the work in a park and photographed it as pigeons gorged on its contents. This work is echoed by three terracotta works produced for this research (*Fecundity, Feracity* and *Uberty,* see 5.ii), which share a similar fluid font; but significantly, like calligrams they collapse the meaning and the context of a word into one image, a device seen in some of Ed Ruscha's work (see 2.v).

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During a residency in Mull I researched the journals of Isabella Bird, a Victorian travel writer who lived on the island between her trips. One of several text based works I produced there was *A Thousand Privations* (2005), the letters of this quote from her carved into bars of green soap which I wanted to film as hands washed away the text. Like the *Caledonia Road Flats* (3.i), this can be seen as an aleatory work that was never taken to its conclusion, yet the material of the exhibited sculpture[10] displayed its *potential* to change.

The research produced for this PhD can be seen as building from works such as those described in this chapter, which enabled me to record and conclude developments as processes alter the appearance of sculptures, and to use materials and organisms that change over a longer timescale.

[10] Exhibition titled *Roaring Out Confidences at* An Tobar, Isle of Mull (2005).

Chapter 5. Work produced and methods used during this research

This chapter provides a detailed account of the artworks produced for this research project, with each work described under its title (in bold type), in the approximate order in which they were undertaken. However, many works were produced concurrently, and one was reworked at a later date (the *Hung Sentence*). My background research and decision making, derived from the various strands of investigation that have inspired these pieces, is presented more comprehensively within separately bound booklets (*Moths, The Dove and 1000 Tides, Colonies, Hell is Other People* and *Grey Book*). Technical information about materials, construction methods or other techniques used is supplied briefly, as are kiln temperatures and schedules for the ceramic works. Images of these listed works and some examples of earlier sculptures, which have bearing on their production, accompany this thesis.

5.i Preliminary works

I initially explored methods of mass production, particularly slip casting techniques, to familiarise myself with possible materials and processes. Continuing to work on themes from an earlier research project[1] about silk production in Britain, I began by fabricating silk moth forms in clay (see *Moths* booklet).

Silkmoth installation

(2006) Buff clay. 200 pieces, each approximately 20 x 12 x 10cm, combined in groups of 2, 3 or 4.

Having read an account of the construction of the Terracotta Army of Qin Shihuangdi, I wanted to try that approach on an experimental scale. The

[1] The Royal Institute of Architects in Scotland's Millennium Award.

Chinese craftsmen had assembled uniform components in almost limitless combinations, to give the impression of thousands of differing individual soldiers.[2] I modelled three silkmoths and from these made a series of two-part plaster moulds of wings, bodies, legs etc. A set of these was slip-cast every day and the moths assembled in various mating combinations (figs 65 & 66). These were then dried slowly with sponges supporting any fragile connections, and subsequently fired at 1060ºC. For an installation in 2006 at Glengorm Castle on Mull that coincided with my exhibition *A New Destiny is Prepared*, I presented video footage of 500 moths hatching from their silk cocoons, and the mating frenzy that subsequently ensued. I projected this onto the white surface provided by the wings of these ceramic moths to reanimate the sense of recoil that the live moths had evoked. (See appendix, exhibition poster).

[2] Lothar Ledderose (2000) *Ten Thousand Things: Module and Mass Production in Chinese Art*. Princeton: Princeton University Press. p. 51

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Sea potato

(2006) Buff clay or porcelain. 25 x 20 x 12 cm. Four variations: two are crackle glazed, two are unglazed.

During research at Newcastle University's Dove Marine Laboratory I looked at the building's historic significance and the forms of the creatures studied there (see *The Dove and 1000 Tides* booklet). I modelled a skull-sized version of a sea potato's boney exoskeleton in order to recreate it in white ceramic and subsequently inscribe its surface as a Phrenology diagram. From a four-piece plaster mould I slip-cast several versions, in both buff clay and porcelain. After they were de-moulded, two were drilled with minute holes, like the visible pores on the skeletal remains. The porcelain casts shrank to such an extent they no longer resembled a skull, and would have required remodelling to take account of this distortion, but those produced in buff clay retained their original size. However, at this stage I began to explore more unmediated or aleatory techniques (fig. 67).

Snowflakes

(2007) Porcelain. Approx 100 pieces, each about 12 x 6 x 6 cm.

Both special and grogged porcelain were extruded through a snowflake pattern I cut in an aluminium template. I have used images of snowflakes in earlier work for their associations with endless diversity and the evolution of form (see 3.iv). Each piece is rendered unique through the random behaviour of the material, as the clay coils and tears depending on its moisture content and the pressure exerted when it is forced through the intricate and unfiled template. These extrusions were then dropped from various heights; the clay records the impact, as the complex ribbing and curlicues created by the template contracted and buckled. These elements were dried and fired to 1260ºC. The *Snowflakes* were displayed in a similar manner to the ceramic moths: that is, strewn as a loose crowd on the gallery floor, where the hefty crumpled porcelain contradicts the weightlessness suggested by snowflakes (fig. 68).

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5.ii *Ruskin Quote* and the *Fecundity* series

Background research for the following works is discussed in the booklet *The Dove and 1000 Tides*.

Fecundity, Feracity and ***Uberty***.
(2006) Three terracotta sculptures. Each work is 90 x 60 x 12 cm.

These three eponymous sculptures are modelled in heavily grogged terracotta sculpture clay.[3] The words *Fecundity, Feracity* and *Uberty* (written in the style of flowing script used in old advertisements) all mean fruitfulness, and are terms used by biologists. Sketches of the three stylised words were scaled up onto architectural tracing paper and laid onto thick slabs of clay. The clay was trimmed and modelled with a bevelled edge, to attach each letter to the larger form and to give the entire work additional strength. Although very thick in places I chose not to hollow out areas from beneath but to retain the solid dense form of architectural ceramics.

The first version of *Fecundity* exploded in the kiln, as it was not sufficiently dry prior to firing. As parts of these sculptures are around 15 cm thick they were thereafter dried for 6 weeks, then fired very cautiously as follows:

5 degrees per hour to 100ºC, then 2 hour soak.
10 degrees per hour to 250ºC then 2 hours soak.
20 degrees per hour to 1020ºC.

The sculptures were then fixed in open sided wooden crates, using plastic cable ties, and the crates secured under the pier at Blyth in order to be colonised by 'pest' organisms such as barnacles, mussels and sea squirts

[3] I use clays directly from the manufacturer and have rarely needed to alter the compositions of these products, with the exception of the porcelain used for the ***Hung Sentence*** sculpture. Products most appropriate for each sculpture were selected by consulting the catalogue, or the suppliers' technicians. No significant technical problems arose and I have been happy with the results of each clay body. The manufacturer's recommendations for firing times and temperatures were followed, apart for some large sculptures, and I have detailed these amended schedules within the relevant sections above.

thereby altering the final form of the works. After being submerged for over 2 years the crates began to collapse, and so arrangements were made to exhibit the three sculptures in tanks on the roof of the Dove Marine Laboratory in April 2010 (figs. 69-77).

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Ruskin Quote

(2007) Terracotta sculpture clay. The combined tiles form a square 100 x 100 x 8cm and are in a glass tank measuring 110 x 110 x 30 cm.

An absurd quotation from John Ruskin forms the basis of this text-based sculpture following research carried out in collaboration with the Dove Marine Laboratory[4]:

> *If you fasten a hairbrush to a millwheel, with the handle forward, so as to develop itself into a neck by moving always in the same direction, within continual hearing of a steam whistle, after a certain number of revolutions the hairbrush will fall in love with the whistle; they will marry, lay an egg, and the produce will be a nightingale.* [5]

Firstly 46 long tiles were extruded in heavily grogged terracotta clay, that together form a panel slightly over one square meter. The letters of the alphabet were cut as aluminium templates for the clay extruder. These derived from the magnified script of an old typewriter font I have used in previous sculptures.[6] The linear forms of the extruded clay suggested growth patterns; grit snagged in the templates caused ribbed columns like celery stalks or the shafts of seaweed. The juddering of the metal components caused contractions on the surface, mechanical growth rings and torn tendrils of clay, which I rejected for this particular work. The elongated letters were then cut into 7cm sections.

These sections were placed on the tiles so as to read as a block of justified text. The tiles were dried slowly below wooden boards to prevent warping and then fired to 1020ºC. A glass tank was purchased in which to place the *Ruskin Quote* and accommodate live marine organisms (described in *The Dove and 1000 Tides* booklet) (figs. 78 & 79).

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[4] Funded by the Catherine Cookson Trust.

[5] E. T Cook & A Wedderburn (1912) *The Works of John Ruskin. Library Edition*. London: Allan. Vol 25, p 36.

[6] This font used in my light-box sculptures such as *The End of Misunderstanding, Improve the Shining Hour* and *A New Destiny is Prepared* and the woodcarving *There's nothing to see here* (see 3.vi.)

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Native sponges, which were originally proposed for this sculpture, grow so slowly that the work was initially colonised with brightly coloured anemones, the organisms studied and catalogued by Phillip Henry Gosse.

They were living flowerbeds, so exquisite in their perfection.[7]

A marine science research student and myself went out across Cullercoats Bay at low tide to collect these creatures. Sea anemones release their grip at high tide and float with the current to fresh feeding grounds. That day, hundreds were found lining a crack in the sea wall. They are predominantly small red 'Beadlet'[8] anemones although others can be found in this area, including the violet and green 'Snake's Head' anemones. The Dove staff and crew of the *Bernicia* (Newcastle University's research ship) also gathered some deep water varieties, most noticably flamboyant powder pink ones trawled from near the city's sewage outlet at Howden.

The *Ruskin Quote* was installed in a custom made square tank at the Dove Marine Laboratory in August 2007, and the collected anemones were transferred from an overcrowded holding tank onto the terracotta letters two days later. The tank was photographed as it filled with seawater from the overhead taps; the water momentarily formed a shallow pool punctured by the dry hollows of the looped letters. After half an hour the water brimmed evenly over the edges, as it does in the laboratory's other tanks. Once filled, the solid form of glass and water refracts the image, distorting the view of the letters, condensing the script on the front plane with a heightened perspective and repeating whole tracts across the top surface and the side nearest the viewer. The artwork was no longer composed of different elements, tank, tiles and text, but became a whole sculptural entity contained, as a painting is, within a frame. Refraction alters your perception of it as your line of vision changes.

[7] Edmund Gosse (1947) *Father and Son*. London: Penguin Books. p.110
[8] www.marlin.ac.uk/sah/species_index.php?phy=Cnidaria (accessed 04/12/08)

Adding the animals therefore added yet another variable, a vulnerable and transient counter to the fired terracotta and sheer glass.[9]

Ruskin Quote print

(2008) Embossed etching 76 x 76 cm.

In response to seeing the *Ruskin Quote* sculpture submerged in water, I produced an accompanying edition of 25 prints depicting its raised text. The tactile qualities of relief printing and etching emphasised the textured surfaces and tonal variations of the sculpture. A photograph of the tiles was transferred onto a copper plate using UV sensitive photo emulsion paper. This was placed in a solution of ferric sulphate and monitored until the copper plate was bitten to approximately 1mm deep. The first prints were purely embossed, taken from the bare plate without any ink. However, due to the difficulty of 'reading' the image, the plate was subsequently inked up as a relief print by using a roller. The 'darker' white of the ink falls into the lower shadowed areas of the final image and emphasises the three dimensionality of the original sculpture. Therefore the resultant prints are embossed photo etchings, printed using white ink on white paper (Somerset 300g etching paper), to emphasise the rough ceramic texture of the original work. A slight tonal difference between the paper and the silky sheen of ink changes with the light falling on its surface, enabling the image to alter as you move past it, and echoing the refraction of the *Ruskin Quote* sculpture in its tank (fig. 80).

[9] Photographs taken at the Dove's centenary celebrations in 2008 show the *Ruskin Quote* sculpture colonised by a range of creatures (anemones, whelks, squirts and crabs). Some letters are out of alignment as crabs drop between them and shoulder themselves free.

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5.iii Hell is Other People

The collective title *Hell is Other People* refers to both a body of work comprising seven large sculptures (the titular *Hell is Other People* sculptures) to be shown in a group, and to other associated pieces that sprang from the same research: a modular porcelain work suspended from the ceiling (*Hung sentence)*, a modular floor based piece (*The Grasp of It*) and another floor based sculpture (*The whole lot is out of my control*). There are also 2 videos (*Word Films*) and an edition of prints.

Hell is Other People sculptures
(2008) Seven crank clay sculptures fired to 1060ºC. Each is approximately 90 x 60 x 60 cm and sits on an individual plinth topped with blue Formica.

These seven sculptures are based on the monologue of female patients recorded in Laing and Esterson's book *Sanity, Madness and the Family* (see *Hell is Other People* booklet). Using the same alphabet templates as in *Ruskin Quote* (see 5.ii), a short paragraph of text was extruded letter by letter in crank clay. The form of individual letters determined the length of each extrusion, and when the clay in the barrel of the extruder was expulsed, each was thrown in a heap following the same order. These works rely on the dampness of the clay and gravity to hold the letters together, as any manual manipulation spoils the textured surface and anti-formal immediacy. These ribbed extrusions buckle differently depending on their cross section, with some very complex and unpredictable results. Many of the ends of these strands protrude from the heaps indicating the textual source of the works, although the meaning of each monologue is rendered too garbled to decipher (figs. 81-85).

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The quotes are as follows: [10]

- *No, there was nothing. It was er – I don't know the word for it now – I used to be able to use words but I seem to have got out of the way of everything – it's no use trying to search for a word that just won't come to you.*
- *Well it's something that seems to be so vague – there doesn't seem to be anything in it. I suppose the – I haven't got a clear definition of what I want to do in life, that's the truth of it, and I can't express as I'd like to – I seem to be just a blank*.
- *I lost sort of faith in myself, naturally – get no support, no support in anything I want to do. I feel that it's sort of collapsible, sort of in a collapsible state. Can't get any firm backbone at all*.
- *There doesn't seem to be any solution to it – it doesn't leave you any kind of er- hopeful move at all – you can't make any kind of hopeful move can you? Seems hopeless.*
- *Over this bit I am a bit in the air. Not over all the things in the world, not over everything – not everything – but over this I am a bit sort of dubious.*
- *I can't make out your kind of life. I don't live in your world. I don't know what you think or what you're after, and I don't want to*.
- *I don't know how to deal with the unexpected. That's why I like things neat and tidy. Nothing unexpected can happen then*.

These sculptures are therefore an accretion of between 100 and 200 letters depending on the quotation, heaped up in the order in which they would have been uttered, and so the volume and density of clay is unpredictable. Therefore each work had to be dried very slowly over several weeks and fired in a similar way to the three sculptures in the *Fecundity* series:

[10] Ronald D. Laing & Aaron Esterson (1987) *Sanity, Madness and the Family: An Investigation into the 'forgotten illness' Schizophrenia*. London: Penguin Books. pp. 45, 46, 59, 65, 74.

5 degrees per hour to 100ºC, then 2 hour soak.
10 degrees per hour to 250ºC then 2 hours soak.
20 degrees per hour to 1060ºC.

Once fired, each sculpture was slid onto a Formica-covered board that forms the top surface of its plinth, ensuring these weighty but fragile pieces do not have to be disturbed again until they are exhibited. The choice of a patterned Formica surface redolent of 1950s domesticity or institutional furnishings reflects the era in which Laing and Esterson studied these patients. The first completed sculpture was also the basis of the *Hell is Other People* print edition, the second *Word Film* and *The Grasp of It* sculpture, all of which are described in more detail below.

The action of dropping or throwing each extruded unit of clay was originally used to impart unpredictability to the final form of the *Snowflakes* (see 5.i) and was employed for the *Hell is Other People* works as an aleatory strategy capable of expressing the rejection and abjection felt by the patients. These sculptures will be shown in a group of 6 on their individual plinths which will be arranged in 1 or 2 rows so that the viewer inspects each in turn as a doctor would perform rounds on a hospital ward.

Hung sentence
(2009) Porcelain fired to 1260º C. Each letter is approx. 60 x 5 x 6cm.

Hung sentence is a porcelain work comprising 72 elements that hang from pegs in the wall or the ceiling of an exhibition space. This work focuses on a different aspect of clay's physicality from previous ceramic works in this research, that is, its sound. Fired porcelain emits an unsettling grating noise when it touches, sounding fragile and brittle; it implies scenes of damage, destruction or abuse. When fired to high temperatures, it is also deceptively strong. Again the quote *Over this bit I am a bit in the air...*[11] was extruded one

[11] Testimony of 'Ruth Gold' in Ronald D. Laing & Aaron Esterson (1987) op cit. p.175.
Full quote is: *Over this bit I am a bit in the air. Not over all the things in the world, not over everything – not everything – but over this I am a bit sort of dubious*.

letter at a time to produce strands around 60-70cm long. Initially made from grogged porcelain, this did not always prove capable of withstanding the stresses that these long irregular forms endured as they dried, and so a second batch of porcelain with added flax fibre[12] was used. This also helped counteract the problematic shrinkage[13] associated with drying porcelain that had contributed to many letters in the first batch to cracking (figs. 86-88).

During an exhibition each letter of the quote is suspended at eye-level, so that their bases present an even horizontal band. The ridged graphic shapes appear as a frieze of vertical linear forms sprouting upwards like plants, or long bones grinding and ringing as they move in the air. The cross sections are not immediately apparent, but the individual letters are discernable from the folds and creases running the height of each form. The meaning of the sentence will be evident if the viewer looks along the level base of the suspended units. The apparently brittle frailty of this work will exhibit a physical manifestation of the narrator's state of ambiguity. A recording of this work was made during the *Hell is Other People* exhibition (June 2010) and is included in the Appendix.

[12] 10% flax fibre was added by volume to dried porcelain, which was then reconstituted.
[13] Porcelain may shrink around 16% from its wet to fired states.

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The whole lot is out of my control

(2008) Buff clay fired to 1060º C. 200 x 8 x 15 cm.

A smaller but connected work *The whole lot is out of my control*[14] was extruded in buff clay and laid out as a linear sentence; each clay letter was dropped into position and leans against its neighbour for support and understanding (fig. 89). These will be subjected to another level of formal abstraction when their porous surface is used as a substrate for mosses or lichen. They will be placed in a north facing position outdoors where the sculpture and its meaning to be slowly subsumed. This imposed change by the actions of the extraneous agencies reiterates the meaning of the words, once the viewer has determined what it says**.** However due to the timescale involved in establishing these plants, and the similarities of this aleatory strategy of organic growth to that employed for the *Ruskin Quote* and the three sculptures in the *Fecundity* series (see 5.ii above), this work was not exhibited as part of my research submission.

The Grasp of It

(2008) Crank clay and black pigment. 162 pieces, each is 6-10 cm diameter.

The title of this work, *The Grasp of It,* refers both to understanding language or text and mastering a manual task. This piece is another sculptural interpretation of the quote used as one of the *Hell is Other People* sculptures:

> *No, there was nothing. It was er – I don't know the word for it now – I used to be able to use words but I seem to have got out of the way of everything – it's no use trying to search for a word that just won't come to you*.[15]

Each letter is represented by a fistful of clay squeezed as tightly as possible between both hands (figs. 90 & 91).

[14] Testimony of 'Maya Abbott' in Ronald D. Laing & Aaron Esterson (1987) op cit. p.45.
[15] Testimony of 'Lucie Blair' in Ibid. p.59.

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The surface records the tracery of lines on the palms and an impression from the underlying structure of tendons and bone. Depending on how the hands link together, some pieces adopt the fluted edge and smooth heel of a clamshell; others are boxy and cubic, crisscrossed with fingerprints. The form is determined by tension and pressure and each implies the action of abject hand wringing (figs. 28 - 30). The 162 elements were fired to 1260º then soaked in black ink, which forms a variegated surface of shiny peaks and parched dents, and emphasises the surface patterning. These pieces were laid out in the manner of a paragraph of justified text, yet only the number of elements and the spaces between them indicate what is being said:

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The words have been rendered meaningless. The blacked out letters censor the patient's confused utterances as she attempts to describe her own loss for words.

Word films

(2008) Video.

I have produced two films of the manufacture of the *Hell is Other People* sculptures, using this process to reflect the difficulty experienced by Laing and Esterson's patients when voicing their thoughts. The extrusion technique is in itself compelling, but I also wanted to capture the fragility and uncertainty of the patients' voices as I imagine they sounded. Each of the letters was filmed as it emerged from the extruding machine, then this footage was reversed so each scene shows a listless column of clay tentatively stalled before beginning to writhe. The camera focuses on the surface of each column of clay, revealing snags and abrasions like perished rubber. We are nervous of these fissures and their potential to grow and rip the clay, but inversely they are seen to repair themselves; the strands lapse back to their original mass, clearing up all traces of their production as they go. Uneven pressure causes the clay to coil or momentarily lash around, before the tears on their swollen ends smooth and heal. Loose gobbets flock back into the hole that created them, and each of these holes is a letter of the alphabet. The base plate ceases to shift and pulse as the pressure is relinquished. There is a gap of a couple of seconds before the next form appears. The facile repetitive action of the clay is hypnotic as we anticipate any living, pulsing movement, or flatulent expulsion to rupture the moist surface. The reversed motion of clay sees it sigh back into the hole before the final view of a glistening amalgam of hefty fallen slop, a flaccid, lifeless heap. The baseness of the extruded material appears as shitty and abject.

A female voice reads the text as it appears on screen, her faltering voice slowly forms meaning out of the previously unseen sentence as she tests how each revealed letter might fit together as words. To preserve the sense of confusion, the narrator was allowed only one attempt to read the script, as on subsequent readings her familiarity with the words would have been evident in more assured pronunciation.

The *Small word film* (6 minutes) derives from the quote *The whole lot is out of my control*... while the *Large word film* (12 minutes) is based on *No there was nothing...* (see *The Grasp of It* above). Again the footage has been reversed and a female narrator pieces together the text from the images on screen. These works can be presented as audio pieces only within an installation of the *Hell is Other People* sculptures, thereby using the reanimated spoken word to provide context for the three-dimensional work.

Hell is Other People print.
(2008) Edition of 10 embossed etchings. 112 x 76 cm.

This print depicts one side of a *Hell is Other People* sculpture and appears as an elevation of complex linear forms, graphic as Lichtenstein's magnified brushstrokes.[16] The image is almost life-size and embossed on buff grey paper in ink several shades lighter (Rives grey etching paper 300g). The edition was produced in a similar way to the *Ruskin Quote Print* (see 5.ii) except that it was inked up as an etching: the ink sits in the low-lying etched areas, and so colours the raised surface of the embossed paper when printed. Several letters can be discerned amidst the cloud-like tangle of swirling textures, alluding to a graphic rendering of a thought cloud in a comic strip or the chalky marks left after a blackboard is erased.

5.iv Maximilian Banners

Maximilian Banners
(2008) Grogged pink stoneware. Three pieces, each approximately 90 x 60 x 15 cm.

These high relief plaques were produced in response to seeing the *Triumph of Maximilian* exhibition at Newcastle's Hatton Gallery in 2008. The *Maximilian Banners* are three-dimensional renderings of standards that appear above the triumphal procession in the 16th century woodcut series the *Triumph of*

[16] One example is *Big Little Painting* (1965) illustrated in Michael Archer (1997) *Art Since 1960*. London: Thames and Hudson. p. 19

Maximilian I. The contrast between Burgkmair and others' elaborate and sumptuous engraved imagery and the banners that are depicted fluttering above each scene is striking,[17]as these have been left blank for the addition of text, while some others have not been cut at all, and so print as black doom-laden forms hovering over the depiction of pomp and posturing below.

Figure 92. Hans Brugkmair and others. '*Sweet melody'* woodcut no 24 of *The Triumph of Maximilian I* series (1512).[18]

The plaques were modelled in grogged pink stoneware clay. The differing thicknesses of clay between the dense central parts and their tapering ribbon-like ends meant that these pieces had to be dried slowly over several weeks before firing to 1260ºC. The *Maximilian Banners* have been placed outdoors where the natural growth of mosses and lichens will eventually soften and obliterate the surfaces. Like *The whole lot is out of my control* (see 5.iii) time is an integral constraint in the completion of this work, so more immediate strategies are employed for the final pieces (figs. 93 & 94).

[17] The series was produced by Hans Burgkmair, Albrecht Altdorfer, Hans Springinklee, Leonhard Beck, Hans Schäuffelein, Wolf Huber and Albrecht Dürer. Work ceased when Maximilian died in 1519.
[18] Illustrated in Applebaum, S. (1964) *The Triumph of Maximilian I: 137 Woodcuts by Hans Burgmair and Others.* New York: Dover Publications, Inc. Plate 24.

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5.v Ants and architecture

This body of work was mainly produced in Rome in 2009 during my Helen Chadwick Fellowship[19]. Other works produced there included three foundation wax sculptures[20] (figs. 55 & 104), similar in style and content to earlier work in the *Crowds and Power* series (see 3.i) and two architectural text-based works[21] (figs. 102 & 103). However, I will focus on seven prints that depict aleatory actions undertaken within the specific context of Italian International Style architecture; specifically buildings constructed for mass control or compliance by the Fascist regime during the 1930s. Further detail on this background research is outlined in the *Colonies* booklet, in the British School at Rome Fine Arts catalogue 2008-9, and in a journal article 'Beach *Colonie*' (see Appendix).

Ants and architecture prints

(2009) Series of 6 prints 100 x 33cm. Digitally printed on photo quality paper and mounted between frameless acrylic sheets.

This work was originally conceived as a series of video works. A colony of ants was to be filmed as they laboured tirelessly to shift imperative slogans written in tiny letters. These slogans were derived from phrases inscribed on the walls of Fascist era buildings. In contrast, the slogans I chose urged the ants to suppress their natural instincts and 'shilly-shally', 'screw up' or 'languish' instead. The film did not produce the desired results as only a very few ants were designated the task of retrieving the (pasta) letters, the rest of the colony continued to explore for new sources of food. In order to engage more individuals in the task, the letters were stuck down using small drops of honey which prevented them being moved too quickly by a single insect and indeed encouraged crowds of ants to gather on the text. They were photographed at various stages of the deconstruction of the slogans, and then

[19] Arts Council England's Helen Chadwick Fellowship is hosted by the British School at Rome and Oxford University.
[20] These works are: *Balilla* (2008), *Calambrone* (2009) and *Late in October* (2009).
[21] These works are: *Altolà* and *Avanti* (both 2009).

six images were chosen then juxtaposed alongside images of *colonia* buildings that I had documented during the fellowship (figs. 96-101).

Figure 95. Gaetano Minnucci (Architect) Casa del Balilla, Montesacro. (1934-7)[22]

[22]Illustrated in Capomolla, R, Mulazzani, M. and Vittorini, R. (2008) *Case del Balilla: Architettura e fascismo*. Venice: Electa. P. 200

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The words that the ants grappled with were:

NICCHIARE - shilly-shally
TITUBARE – hesitate
SVICOLARE - evade the issue

BARARE - cheat
INGANNARE - deceive
INSABBIARE - cover up (with sand)

SBRACARE– put on something more comfortable
SBOCCARE– work up to
SALTELLARE – hop or jump around

PEGGIORARE – make worse
SBALLARE – screw up, go crazy
ANNEBBIARE – to cloud

LANGUIRE - languish
IMPEGRIRSI – get lazy
OZIARE – laze around

SBAGLIARE – make a mistake
GUASTARE - spoil
ROVINARE ruin or crash

The resultant works form a series of 6 digital prints of, on the left hand side, ants moving pasta letters that spell out imperative phrases (in Italian), and on the right hand side, imagery of 1930s *colonie*[23] buildings in their current state of near disintegration. The absurd and futile act of giving written instructions to insects in the whimsical script of alphabetti spaghetti was derived from the

absurd Futurist spectacles chronicled in articles and leaflets accompanying the exhibitions in Rome in 2009 celebrating the centenary anniversary of the publication of Marinetti's *Futurist Manifesto.*[24]

Insabbiare

(2009) Digital print showing carved firelighters burning on the sand of Ostia Lido beach, near Rome. 60 x 45cm.

The letters of the word 'insabbiare' were cut from blocks of solid fuel firelighters in a cursive script based on my own handwriting. These were then taken to a stretch of coast at Ostia Antica near Rome, an area extensively developed by the Fascist regime in the 1930's, where the letters set alight. The image features some of the buildings that survive from this era, including a stunning example of a former *Colonia Marina*[25] in the background. Like *Fecundity* and others, this work functions in a similar way to a calligram because the verb 'insabbiare' in its imperative state demands that the order is observed: 'cover with sand'. Indeed the burning letters must be covered in order to be extinguished, but the Italian word 'insabbiare' also alludes to more furtive actions, that is, to hide unpleasant facts or 'perform a cover-up'.

The digital prints (*Ants and Architecture* and *Insabbiare*) are documentations of transitory substances or creatures that are in a continual state of flux. The sculptural processes that informed the actions, although essential to their development are not the predominant aspect of these final works.

[24] Filippo Tommaso Marinetti 'The Foundation and Manifesto of Futurism' first published in *Le Figaro*, in Paris on 20 February 1909. Charles Harrison and Paul Wood (Eds.) (2003) op cit. p. 146.

[25] See *Colonies* booklet for further details about the history and terminology associated with these buildings.

5.vi Summary of works

The sculptures and other artworks produced for this research fall into the five categories described above. The following chapter describes why some works have become increasingly marginalised and others rejected as not sufficiently able to demonstrate the issues discussed in this thesis. That is, some failed to successfully employ aleatory or generative processes in their outcomes or were deemed unable to do so within a reasonable timeframe, while others did not address the concept of abjection as defined in the contextual review (see 2.i). Another area of focus outlined in that chapter was the technique and implications of anti-formalism on sculpture (2.iii), and a group of these resultant works (*Hell is Other People*) utilised this strategy to impart concepts of dislocation and alienation in a physically apparent way. Chapter 6 presents a more detailed consideration of the artistic outcomes of this PhD, and its subsequent dissemination.

Chapter 6. Discussion and conclusions

This PhD proposed the following research questions:

- What means and materials can be used to balance the relinquishing of authorial control in sculptural production with outcomes which retain formal and semantic coherence?
- Is it possible to devise a written equivalent both to elucidate this aim *and* reflect subjective creative processes in sculptural practice?

The research sought to apply principles of rhizomic theory and aleatory practice to answer these questions using varied methods, described in chapter 5, to produce works. My decisions for including or rejecting specific works in the final submission, and consideration of how they may be developed in the post-doctoral period, are discussed below.

6.i The Dove and 1000 Tides.

My collaboration with the Dove Marine Laboratory enabled me to broaden the scope of this research beyond regular studio practice and harness natural cycles of growth to renegotiate the relevance of the 'hand of the artist' to the final form of sculpture. The *Ruskin Quote* can be seen as the first stage towards the aleatory process based on natural growth that was instigated for the three works crated and left under the pier at Blyth. The use of live and mobile animals contributes another variable outcome to these works. The initial forms of *Fecundity, Feracity* and *Uberty* were modelled very precisely in clay to emphasise my authorial control to the point when they were fired; these works entered an aleatory phase over the course of two years when they were exposed to whatever the tide brought their way. Clusters of colonising creatures and weed obscure the initial scripts in an unpredictable manner, leaving them, to a greater or lesser extent like rocky accretions rather than words. Numerous dynamic processes dictate the form of these pieces at the moment when they are exhibited; as the tide and various life-cycles cause

blooms of organisms that may be torn by storms or suffocated by sediment or pollutants. Whereas artists like Hiorns or Starling (see 2.iv & 2.vii.v) have worked towards predetermined outcomes, submitting objects to fixed periods of encrustation before exhibiting the results, my sculptures are subject to far less authorial control. Tide and time has dictated access to these works and so their final form is truly an unforeseen outcome. I am looking for a suitable location in which to site these works permanently in seawater, so that the process of change can continue beyond the period of this research and allow the works to be entirely subsumed by external or chance occurrences.

The body of work arising from the Dove collaboration involved interdisciplinary research seen to be of relevance to a wider social remit, and this has again been demonstrated by interest from other parties, including the trustees of the Catherine Cookson Fund who supported this research. This project has attracted much attention, yet the work's fragile vitality makes it particularly problematic to display in art galleries and museums. 2009 was the 150th anniversary of the publication of Darwin's *On the Origin of Species,* and consequently there was a great deal of interest in both artists' collaborations with scientists, and art that referenced Darwin's evolutionary theory.[1] This would have been an ideal context in which to show these sculptures. However, although plans to include them in themed exhibitions[2] were at advanced stages, these were ultimately thwarted by curatorial concerns about the proximity of water to other delicate artefacts, the weight of the tanks, the difficulty of keeping the animals in good condition and obtaining 'live animal' licences. These factors have limited the opportunities to show this work. When a work is exhibited, purchased or collected, the aim of the collector will most probably be to stabilise and halt changes to the work; therefore curation and conservation may be the antithesis of some aleatory or generative processes explored in this research. Although the works have been documented at various stages in order to facilitate exhibition, they should function more as a performance, albeit one enacted by nature. They can only

[1] One such themed exhibition was *A Duck for Mr Darwin* exhibition at Baltic in 2009.
[2] I was invited to exhibit the *Ruskin Quote* and the *Fecundity* series in an exhibition *Barnacles* at the Great North Museum organised by Professor Linda Anderson of Newcastle University's Department of English Literature, Language and Linguistics.

retain their fidelity to principle if innovative ways of siting and retaining them as organic processes are embraced, since the aleatory quality of these works is not a property of the modelled and fired clay but of the living organisms themselves.

6.ii Hell is other people

Strategies of sculptural production suggested by anti-formalism were utilised as a pertinent methodological segue between the investigation of chance actions and the other underlying interest of this research: abjection or an anti-epiphanic sense of being overwhelmed. Anti-form methods were employed to express the themes of the research directly in material form, initially to make the *Snowflakes* (see 2.i). These porcelain forms proved rather decorative, while variation occurred only in the impact recorded on their surfaces. The snowflakes lacked the potential to embody any narrative structure. However the act of throwing each form, with its implied rejection, suggested further use of the text templates I had devised for the *Ruskin Quote* sculpture. This enabled an aleatory process where background research was immediately assimilated into the action of making the sculptures. Normal deliberate strategies of sculpture production, such as modelling, form making and construction were used to produce the terracotta script for the *Fecundity* series as described above. However in the production of the *Hell is other people* sculptures, these authorial choices were overwritten by expressive chance actions that illuminate and enact the textual subject matter. This approach expresses the loss of individual control as described by Laing and Esterson's patients. The material both demonstrates aleatory action upon it and retains formal coherence in the sculpture, as each strand of clay simultaneously displays the original letter/shape (at its end) and the individual trajectory of formation and collapse that has brought it to that final form.

Unlike the *Fecundity* series these works have a definite end point. The seven heaps of garbled letters that are the *Hell is Other People* sculptures were fired very slowly, petrifying the spoken words and enabling these pieces to be stored and exhibited. They differ from those aleatory approaches described in

chapter 2.ii in that Burroughs et al randomised their choice of text, whereas I selected quotes for their universality, and the empathic response evoked by each anonymous voice. Chance in these works was instead expressed in the form the clay took as it amassed into each sculpture. The works were undertaken to visualise the denial of communication that confounded Laing and Esterson's patients. Paradoxically, while the meaning of the original statements is disrupted through chance mutation, my semantic objective to express the women's loss of communication is achieved *because* text was selected as a material. Like the shredded remains of a letter, an irresolvable tension exists between what may have been said and what can be read in the scrambled and fired script, bringing semantic coherence to the final sculptures.

However these works also suggest further aleatory developments. A site specific performance of 'found' script being extruded and stacked, then allowed to dry, crumble or wash away would be one way in which chance strategies might be extended. Spoken monologue from recordings, letters or interview statements could be used for similar material interpretations.

These works' collective title is borrowed from Sartre's play *Huis Clos* in which the three characters instigate their own fate: what constitutes hell for each of them is the proximity of the other two. Four of the *Hell is Other People* sculptures were shown in the context of a working church for the exhibition *Inspire: Mortal and Visible* (2007) at Wallspace Gallery, London. The exhibition focused on mortality and vulnerability in society. The formal surroundings exerted their presence on these works, and emphasised their source material, text describing an individual's inarticulacy when confronted with overwhelming social structures. (Exhibition booklet is included in the Appendix).

Hung sentence also focuses on properties of the material. Each letter retains coils and tears on its surface formed as the grogged porcelain was extruded. Once fired and suspended any movement causes these porcelain forms to

grate against one another, implying the brittle fragility of the narrator's state of mind.

Hell is Other People and *Hung Sentence* were to be exhibited with a soundtrack derived from *Large Word Film*, as the reanimated spoken word would provide context for the sculptures. Changing light conditions and an unstable camera tripod hampered the first *Small word film* (6 minutes); this was very evident in the edited film. So, another work was produced using tungsten lamps to alleviate fluctuations in natural light. The *Large word film* (approx 12 minutes) followed the same arrangement of extruding each letter separately. However, when the *Hung Sentence* was installed in the exhibition space, the ambient noise created when each element moved against its neighbour proved to be very compelling and musical. A recording of the noise of these ceramic pieces moving together has been included in the Appendix.

6.iii Colonies

It is *disturbed identity and order*[3] that compounds the confusion of Laing and Esterson's patients, and is also the source of Ruskin's dilemma. The abjection explored in these works is located within social interactions, the communications of states of mind and the differentiation that is made between our own identities and those of the 'other'. Although I do not work with abject materials as such, my interest in using 'dirty' ants and 'pest' organisms that *do not respect borders* is to rehabilitate those that offend or risk rejection.

The digital prints (*Ants and Architecture* and *Insabbiare*) are from a body of work produced in Rome. The work derived from research outlined in the *Colonies* section interested the selectors of the Helen Chadwick Fellowship as socially significant and therefore relevant to other fields of research, which could benefit from the interdisciplinary contacts that would arise from the opportunity. It enabled me to discuss this research with architects, archivists and social historians whose fields of interest it encompassed. These

[3] Julia Kristeva (1982) *Powers of Horror: An essay on Abjection*. New York: Columbia University Press p210 See chapter 2.i.

documentations capture substances or creatures that are in a state of flux. The sculptural processes informing these actions are not the predominant aspect of the final works, which exist solely as photographs of aleatory acts. Unlike the benign honey-bee, ants are often regarded as tenacious pest organisms, or insignificant specks of living dirt. Ordered columns of ants certainly do not respect the boundaries laid out by human society. I used a colony of ants to ridicule the ideological slogans that peppered Fascist architecture, particularly on colonia buildings designed as children's summer camps. The insects' strenuous efforts to shift pasta letters undermined Fascist presumption of permanence, stability and imposed order. *Ants and Architecture* was originally conceived as a film of a swarming colony. When this did not transpire as the ants tended to toil individually, a certain amount of control was introduced when honey was used as an incentive to gather large numbers of the insects to one place. Capturing the actions of ants has potential for more sustained work: Charles Darwin focussed increasingly on these humble creatures towards the end of his life, which suggests the emergence of yet another rhizomic connection within this research. However their aleatory potential may diminish as I begin to ascertain their habits and preferences. The more the behaviour of ants is understood the more predictable are their actions upon a given artwork.

The use of 'found materials' such as ants demonstrates that almost anything that can be an agent of change, or anything that will naturally transform, has the potential to take up relinquished authorial control. A colony of ants was chosen for their semantic relevance as social creatures like ourselves, who similarly follow the control of higher authority. These animals, while functioning like any other materials, require a certain amount of prior knowledge in order to achieve any aleatory outcome. Any sculptor looking to relinquish their authorial control to an unpredictable transformation must know how to get their engine of change started. The success of the *Ants and Architecture* series therefore required a balance of my authorial control (by concentrating the ants' activities using honey) and the insects' subsequent response. In aleatory practice it may be useful or necessary for the artist to define certain parameters to the processes they engage with. The reason that

ants and clay have worked here is because they can all be encouraged towards a formal coherence. Therefore aleatory materials although chosen for their unpredictability must still function as materials: a substance that would dissipate, disperse or disappear, such as smoke, could not retain the formal coherence required to produce something termed a sculpture.

Other works produced in Italy included three foundation wax sculptures,[4] similar in style and concept to earlier work in the *Crowds and Power* series (see 3.i) and two architectural text-based works.[5] In 2009 I presented papers from this research at St Peter's College, Oxford University,[6] the British Academy, London[7] and at *Revisiting the Beach* conference held in Newcastle University.[8]

[4] *Balilla* (2008), *Calambrone* (2009) *Late in October* (2009).
[5] *Altolà* and *Avanti* (both 2009).
[6] Presentation was *Era: Sculptural responses to 1930s Italian Colonia buildings* at St Peter's College, University of Oxford, 20/10/09.
[7] Presentation on 16/11/09.
[8] *Revisiting the Beach* conference 03/07/09.

Sheet 1 here

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6.iv Rejected works

Several works produced during the period of this research are not presented in the final submission as they were considered 'failures': they either duplicate techniques more fully explored in other works, or did not contribute significantly to the aleatory or unpredictable nature of this study (fig. 106). Slip-casting clay, as in *Silkmoths* and *Sea potato* (3.ii & 5.i) proved to be an unsatisfactory approach in this research as it required the original forms to have smooth convex surfaces able to draw easily from the moulds. The 'hand of the artist' is all too evident at every stage of this production technique, from the original modelling, the precise mould-making and the painstaking joining of the cast elements. The detailing and finishes of the resulting sculptures tended to resemble mass produced castings such as toys or ornaments. The technique was therefore abandoned as it suppressed the spontaneous or aleatory outcomes I sought. My decision to reject the *Snowflakes*, and instead to develop the extrusion technique using the alphabet templates, is discussed above (see 6.ii).

The *Maximilian Banners* did not deviate sufficiently from predictable outcomes or demonstrate chance occurrences, having instead a tendency to appear overworked or simply inevitable (see 5.iv). These works and *The whole lot is out of my control* have been left outdoors to build up a patina of mosses and lichens to smother their forms. However this process will take time to develop and so these works are not included in this submission.

Although it predates this research, the video recording I made in response to the hatching silkmoths was significant in retrospect (see *Silkmoths* booklet). My input occurred after the unplanned and startling scene of emerging, copulating insects had already begun. When this event was over, I surmised that this unforeseen element within the *Silkmoths* project was its most aleatory aspect but would be highly predictable if the process was repeated. These moths are an evolutionary cul-de-sac themselves and are unable to exist without continual human intervention, and therefore are fundamentally unsuitable as agents of aleatory change within this research or anywhere

else. The account of the failure of the original silkmoth project has however contributed productively to this research in the form of a narrative account of the entire process. I took this experience as one of the strata from which to launch an exploration and as such my consideration of the implications of this project is documented as one of the five booklets.

Figure 106. Rejected silkmoths.

6.v Written component

This thesis explores how visual art research can be communicated in a narrative form. As the research progressed, elements of the written component evolved into artworks (the booklets) that allude to the manner in which sculpture is conceived and presented. The booklets chart the rhizomic connections between strands of theoretical research. Concurrently, script in its concrete form developed as a unifying device within the body of three dimensional and printed work; examining how text communicates or is hampered by social and external forces, ambiguity and misunderstanding. This thesis demonstrates one way for artists to produce work to a research

agenda, and to document and reflect on that work in a manner that in turn informs their own practice. Given that works of art are predominantly the unique product of an artist and are therefore irreproducible, the manner in which this written component is compiled may be viewed as a useful strategy that might be adopted by other practitioners.

To this extent, this written equivalent to the practical work shows that it is possible to elucidate the aims and outcomes of sculptural practice while embodying the uniquely subjective way in which artists go about their work. In the following sections I outline the impact to date and future scope of this contribution.

6.vi Other outputs

Exhibitions of work produced during this research have included *NU Print* at Ex Libris Gallery, Newcastle University in 2009, where three prints were shown in the context of new directions in printmaking techniques. Those exhibited were the *Ruskin Quote* print two prints from the *Ants and Architecture* series. The *Ruskin Quote* print was also exhibited at An Tobar Arts Centre, Isle of Mull in 2009 and Gallery Eleven, Hull in 2010.

I am developing specific themes within the booklets, which will be produced as conference papers, presentations or journal articles. A talk I presented at the conference *Revisiting the Beach* describes my research for the *Ants and Architecture* print series in relation to the conference's exploration of the beach as a 'zone of tension' that embodies the dialectics of 'modernity and tradition, chaos and order'. The prints are diptychs showing the breakdown of slogans by a colony of ants alongside images of crumbling *marine colonia*, emblematic of the end of dictatorial order in Italy (see chap 5 artwork). *There's nothing to see here* (3.vi) was exhibited in the exhibition[9] in Newcastle University. A paper entitled *Beach Colonie* has been selected for publication[10]

[9] *Revisiting the Beach* conference and exhibition held in Newcastle University and Ex Libris Gallery 03/07/09.
[10] Currently in print.(see Appendix)

in the *Journal for Visual Arts Research*, and a further paper[11] expanding on this research was submitted to the Association of Art Historians' 2010 conference 'Architectural objects: Discussing Spatial Form Across Art Histories'.

6.vii Directions for future research

The various outputs from this research will be taken forward in a number of ways. The work encompasses several strands of interest that suggest site-specific proposals. I am currently investigating post-doctoral funding opportunities and contacting commissioning bodies with proposals that build on the body of work represented in this thesis.

I intend that *Hell is Other People* will be developed as an installation for a thematically appropriate site, such as a hospital or disused psychiatric unit. Whilst researching 1930s architecture for my *Laing Solo* exhibition in 2005 I was given access to two such sites in the Newcastle/Gateshead area through the council's planning department. I will select examples of first person dialogue from recordings, letters or interview statements relevant to the selected site and will utilise them in a similar manner to my use of patients' dialogue in the *Hell is Other People* sculptures, using '*random piling, loose stacking, hanging'*[12] to build up a wall or barrier of extruded clay. Therefore an installation would be developed on site through a continual performance that lasts the duration of the exhibition.

The curator of the Kohler Arts Centre in Wisconsin has expressed considerable interest in my recent work. The Centre hosts an ongoing programme of residencies for ceramics and glass artists funded by the National Endowment for the Arts. I have been asked to submit a proposal to be considered for the 2011 residency programme and I want to continue the exploration of ceramics and sound that emerged from the installation of the

[11] Title: *Crystal blossoms and brick machines: 20th century Utopian experiments contrasting architectural manifestations of pacifism and pugilism in interwar Europe.*
[12] Yve-Alain Bois and Rosalind Krauss (1999) *Formless: A User's Guide*. New York, Zone Books. p. 98.

Hung Sentence (a recording of this titled *Hell's Bells* is included in Appendix). I am also pursuing the potential of this work as part of a larger exhibition that combines visual and aural elements. This will be taken further through collaborations with musicians such as the improviser and composer Dr Graeme Wilson who worked with me on the original silk moths project.

The research contained in the *Colonies* booklet will be developed in several ways. One recurring element in the booklet was reference to the Scots born sculptor Eduardo Paolozzi. His use of collaged images and forms can be seen as developing from Futurist concerns, which he described as influencing him during his frequent visits to Italy as a young man between the wars. He gathered a vast array of printed ephemera and objects, which are now housed in the Victoria and Albert Museum[13] and the Dean Gallery in Edinburgh. I want to access these collections to investigate occurrences of Futurist imagery and print, or references to the rationalist architecture he encountered as a youth and recalled in his autobiographical writings. This research would inform a series of sculptures and prints experimenting further with aleatory approaches to the construction of sculptural and architectural forms through rapid prototyping technology. Recent developments in this digital technology will increasingly provide options for 'hands off' working for contemporary practitioners. Investigation of the thematic links between the current research and Paolozzi's ephemera is the catalyst for this project; I have therefore arranged to meet with Dr Kirsty Meehan, the archivist for the Dean Gallery, to discuss this research idea and to arrange to examine the archived material. Following this I will compile a detailed brief for this project to submit for funding.

Several pieces initiated during this research continue to develop beyond the timescale afforded to this project. The *Maximilian Banners* and *The whole lot is out of my control* are ceramic works that will grow mosses and lichens of the kinds found on stone buildings. These are a long term, ongoing experiment that I am conducting at my studio. Given the slow and delicate

[13] This collection is called The Krazy Kat Arkive after George Herriman's eponymous cartoon.

development of these organisms it is important to establish how best to cultivate them on ceramic substrate.

The sculptures produced in collaboration with the Dove Marine Laboratory are currently back on dry land. However I have been in discussion with Anna Kirk-Smith, a curator who has an interest in marine biology and contemporary art that engages with the sea; with a view to submerging them in sea-water again to restart the process for a future long-term exhibition. Research on the historical work conducted at the Dove Marine Laboratory, and connected sources held by Tyne and Wear Museums, such as watercolour studies of marine organisms by Albany Hancock and Joshua Alder, are being developed into a project to create interactive floating sculptures for coastal sites. I was invited by Rednile Arts (an independent artist-led agency facilitating project development) to give a talk about aspects of the PhD research at their Factory Night event at the Dove in September 2010. The event was organised by Rednile and marine biologist Dr Jane Delany from the Dove in order to foster other such interdisciplinary projects between scientists and creative practitioners.

I am developing conference papers and presentations from the specific themes within the five 'booklets', which will be further developed as journal articles. I was invited to submit my presentation at *Revisiting the Beach* conference for publication in a special edition of the *Journal for Visual Arts Research*. My article, *Beach Colonies* was accepted and is currently in press, and due to be published in early 2011. I continue to develop further articles on the use of aleatory and generative practice in sculpture.

6.viii Conclusions

Permanence and monumentalism are attributes traditionally associated with sculpture. In this study, natural, generative processes were identified as significant to the research aims of each artwork. As most things do change, altered by growth, gravity or decay, these aleatory strategies were selected for both formal and conceptual considerations: to contrast human and animal

societies, or demonstrate an individual's sense of abjection. This research sought to elucidate the connections between these divergent values and to present the resulting work in such a way that the sculptural and textual outcomes of the original enquiry were integrated in a relevant, symbiotic manner, and so used the structural device of a collection of thematic booklets that echoed the presentation of self contained though connected sculptures at an exhibition.

In this thesis, the production of the artwork has been described and discussed in relation to the contextual review, and thematic concerns and the contributions of the research are outlined. The use of chance strategies and generative processes enables a fresh understanding of abjection to be expressed in contemporary sculpture. These methods are best deployed when the artist embraces abjection by allowing these processes to overwhelm their work. The more artistic control is relinquished to aleatory practice, the more innovative such strategies are in articulating this idea of abjection.

In answer to the first research question, the discussion in sections 6.i to 6.iii shows that the practical element has demonstrated a body of means (aleatory, generative and anti-form techniques and a rhizomic strategy) and materials (clay, text, wax, animals) that can be used to balance the relinquishing of authorial control in sculptural production with outcomes that retain a formal and semantic coherence. The works *The Dove and 1000 Tides*, *Hell is Other People* and *Colonies* have variously combined clay, text, wax and animals with a variety of aleatory, generative and anti-from strategies. Outcomes for these works were unpredictable to the artist, yet resulted in innovative contemporary sculpture that can be successfully exhibited as a coherent body of work whose interconnectivity enriches the whole.

In answer to the second research question, the thesis has shown how a written equivalent to practical work can both elucidate the aims of such sculptural work while reflecting subjective creative processes in sculptural practice. It combines formal academic documentation with experimental

creative writing. The incorporation of interchangeable booklets on thematic sources which draw on alternative literary approaches has allowed me both to explicate and amplify the practical work that has formed the primary focus.

The research therefore makes a substantive contribution to the current field. I have described above how the artistic practice undertaken has coalesced and driven my own work forward as well as offering analysis and strategies for the development of contemporary sculpture in general. Abjection, for instance has been cast in this thesis as an important thematic and structural concern in contemporary sculpture through the application of a distinct understanding of wider theory on this state. The practical work has demonstrated how aleatory and generative approaches offer a convincing and fruitful way to explore and express this concept for myself and others working in this area. As indicated in sections 6.vi and 6.vii this project has already generated substantial diverse outputs and is leading to interdisciplinary and innovative new research.

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Colonies

Parallels between human and animal societies can be striking. Similar impulses are found in the architecture, laws and crowd behaviour of both. Bees and ants are seen as living in colonies of like-minded individuals, all working towards a greater shared goal, and are persistently used as metaphors for collective human ambition. Yet the anonymity of a crowd suspends an individual's responsibility for its actions. The inevitable swarming of bees and human wars seem to be natural animal instincts rather than 'hysteric' behaviour we hope we can avoid. When individuals gather and act on one intention the situation can become uncontrollable. This is both disturbing and compelling.

I became interested in bees through using wax as a sculptural material. It is integral to bronze casting for its mutability, at once able to hold a form then to vaporise completely in the heat of a foundry. Beeswax is fantastically versatile. When cold it is plastic and brittle, waterproof and sculptural, and the basis of the architecture constructed by bees. When its temperature

is increased it becomes sticky and malleable and when melted it resembles the honey it is created to contain, Maeterlinck's *liquefied light* of *honey flies.*

Beeswax is used in church candles because it was associated with a virgin queen bee, a theory that has been disproved and so taken one of its most spectacular manifestations with it. A guidebook to the Santissima Annunziata Church in Florence recounts that it once housed a vast collection of beeswax votives; life-size sculptures of the rich patrons who left them as solidified prayers. For 300 years they amassed in such numbers that the church was extended to accommodate them. They lined the walls and hung from the roof of the nave like wax spirits. Even a full size horse stood by the door. Perhaps the prosaic truth about the nuptial flight made by a young queen bee and her drones was behind it, but in 1789 the votives were all melted down to make candles.

Many clergymen and women looked to natural philosophy for guiding principles to impart in their teachings and believed they found these in beekeeping. Amongst those who kept bees and mused on the lessons to be learned from these chaste sisters of toil

include the Reverend L.L. Langstroth, who invented the removable frame, Brother Adam of Buckfast Abbey and Brigham Young, founder of the Mormon 'Beehive State'. Even Maria Von Trapp spent her latter years tending bees. My bookshelves contain several volumes that ponder on the similarities between the author's flock and their colony of bees. I like the didactic certainty of the language they use in these small lyrical liturgies. I have chosen some of these phrases to construct in honeycomb light-boxes, blazing out messages such as *Improve the Shining Hour, The End of Misunderstanding,* and *A New Destiny is Prepared*.

Having read a book from the college library on beekeeping whilst completing my Masters, I began exploring bees as both producers of a sculpture material and as social animals like ourselves. I constructed a beehive in the form of a building designed by my grandmother for her final exams in Architecture in 1933. The colours, subjects and presentation of her drawings are redolent of that era we now describe as the interwar period, and they optimistically embrace the modern curves and sweeping lines of the International Style. She had hoarded all her flawless watercolour washes of tearooms and vaudeville theatres

banded in mint green tiles, wide curved windows and stairwells illuminated by radiating stained glass. She stored this archive of her arduous hours of graft under her bed. The design I focused on, the *Departmental Store* suggested the divisions within a hive, and her design's cubic form made it relatively easy to convert to contain the two sets of frames that furnish the brood chamber and the honey box of a working beehive. I made the hive in durable cedar wood, an aromatic timber used for trunks that protect documents or heirlooms. The aluminium lid follows her design for the Store's rooftop cafeteria and workers' garden. Alongside the exhibited hive I drew her interior plans on the gallery walls in honey and gold pigment, which slowly dripped on to the floor over the course of the exhibition.

Notable parallels occur between the regulations imposed on an architect when she designs a building and those that a bee knows when she constructs wax honeycomb. Bees leave corridors between the combs that allow two workers to pass back to back and each hexagonal cell is the dimension of one bee. The whole structure's orientation and circulation is aligned with the passage of the sun's rays. A modern beehive also imposes more

specifications in order that the combs can be removed without destroying the workers, with layers of shallow frames and a screen to prevent the free movement of its queen. A beehive is a family concern and the queen is the mother of all the hive's inhabitants. This matriarchal society is significant to the origins of my hive, the *Departmental store*. This hive was sited near Edinburgh and with the help of beekeeper Brian Pool, was colonised by bees.

Whilst constructing the hive I learnt that bees draw honeycomb from flat wax sheets set in frames by the beekeeper. This foundation wax is embossed with hexagons, the groundwork for more rapid construction. I began to make foundation wax models of other International Style buildings I had seen around Glasgow, a school, a cinema and a library. These buildings remain distinctive for their optimistic embrace of up-to-date materials and universalist ideals. These aesthetic edifices express all the Modernist assuredness that obscured concerns about vernacular style and climatic requirements. Consequently these low buildings with their characteristic balconies and flat roofs fit neatly in a beehive 'super' (honey box). Mr Pool had worked as a pattern maker in a bronze foundry, carving vast propeller

moulds in sand for Clydeside shipyards, and was keen to see what his bees could make. He had predicted the bees would build on any shape although they show a preference for vertical surfaces. In June 2004, at the height of the honey flow from oilseed rape fields, we placed the wax model of the cinema in a box between two brimming 'supers'.

Around this time I first visited Italy courtesy of an architect's legacy to Scottish artists. During the 1930s, the International Style expressed all that Mussolini could wish to confer in rational concrete and modern steel. I built wax models of the *Puccini Theatre* in Florence with its curved entrance and dominant glass tower; and the airborne flights of stairs that sweep from the sides of *Fiorentina Stadium* and a *Hotel in the Mountains*, three ellipses of glass bricks that echo the utopian Alpine Architecture proposed by Bruno Taut a decade before in the 1920s. One building I modelled but could not visit at the time, was the former *Colonia Marina XXVIII Ottobre*, a children's summer camp at Cattolica on the Adriatic coast that was built for the sons of Italians living overseas in order to assimilate them into the Fascist regime's collective programmes of education and leisure. Ex-patriot Italians were assisted by the regime

and the church in sending their children back to Italy for several months of flag hoisting, roll calling, mass gymnastics and anthems. I focused on these children's colonies, and the manner in which children would be coerced by a mixture of discipline and doctrine, and their parents by heavily subsidised child and health care. I explored the continued significance of the *colonie* as formative childhood memories, mining the tension between spontaneous mass play and assumptions of mass compliance with visionary imperatives.

Childhood memories, fixed through play, amusement, or surprise, define the limits of lived reality. The 1930s are the decade furthest in the recall of most our oldest relatives and acquaintances, a moment of utopian thought that subsequently hardened into dogma. I researched Italian *Colonie* and *Case del Balilla* from this era as vivid architectural forms expressing the recollections of some generations ago. They show a playful innocence in the shadow of impending war and upheaval, mirroring the Futurists' transformation of engineering feats into aesthetic ends in themselves. The *Opera Nazionale Balilla*, (ONB) was established in the early years of the Fascist government as part of the Ministry of Education. A skewed version of

Baden Powell's scouting movement, the children were divided by age into groups called *Figli de Lupa* (5-7 years old), *Balilla* (8-14), and *Avantguardisti* (15-18). The ONB evolved into GIL (*Gioventu Italiana del Littorio*) in 1937 and became increasingly militaristic, and its remit extended to involve students. The construction and organisation of *Colonie estive* (summer camps) was the responsibility of local branches of the ONB/ GIL. These optimistic holiday buildings appear free from the dictates associated with the modernism of the later Fascist era, yet commands written on the walls reveal an insipient credo of regimentation. Balilla was the name of a semi mythical boy who had thrown a stone at invading troops and therefore embodied bravery, patriotism and youth; ideals constantly reiterated by the Regime

Rome's present-day youth hostel was originally constructed as a *Casa del Balilla* and forms part of a proposed Olympic village radiating off the former Foro Mussolini. The name has been changed to Foro Italico but everything else has remained, an obelisk inscribed 'Mussolini Dux', a pitch-sized mosaic of eagles, machines and lumpen sports heroes. A continuous border runs round the site chanting DVCE DVCE DVCE. Next to this is

the Stadio di Marmo rimmed with sixty-six marble athletes that show expedience won over mastery in the rush to provide a bombastic backdrop to the spectacle of the games. A hulking marble archer stands naked but for his belt and quiver, alongside another stolid brute teetering on his tiny yacht, with a sail as thick as a mantelpiece covering his dignity. These smoothed figures clearly exhibit the heroic ideal promoted by the Regime and allow for no ambiguity or nuanced form. Both artists and architects were impelled or cajoled through a system of commissions and privileges into a position of subjection to the ideals of the state and so their creative integrity was eroded away in an attempt to assuage their leader.

In 2009 I travelled to see some of the remaining *colonie estive* architecture. Seven were constructed at Tirrenia, a small town set in a pinewood along the dunes of the Tirrenian Coast, south of Pisa and the marble mountains beyond. In the 1930s, this area was reclaimed from the sea, and was to be developed along rationalist principles to resettle the over spilling populace of Italian cities. The broad main street was planned for triumphal parades past the mile or so of *colonie estive* built between the wars and able to cater for up to

9000 children.

Colonia Marina Principe di Piemonte drew me here. From the beach, it appears as two buildings: vast vanilla and sky blue villas behind one another, with tiered steps, broad bay windows and open terraces like a hospital. A glazed corridor connects the two. This building was designed to house the children of aeronautical personnel and so is shaped like an aeroplane when viewed from above: the wings of the façade echoes those of a plane, the curved balcony facing the sea is its nosecone, the glass corridor, its fuselage and the rear building forms the tail. This is a concrete manifestation of the Futurists' mania for flying, as demonstrated in their *Aeropitture*. Satellite images show it bulky as a snow angel, its form echoes the boxy bi-planes flown by the Fascist hero Italo Balbo.

Next is a complex of detached buildings, mirrored down a central axis like an ink-blot print. Restoration work is progressing from one end to the other, recolouring the drab concrete in its original fuchsia pink and hot orange. This was *Colonia Marina Rosa Maltoni Mussolini*, by the architect Angiolo Mazzoni (who also designed Rome's *Termini* station). On the occasion of its inauguration by Il Duce, archive films show

children scattering out from it across the beach and forming a waving fringe from the spiral water towers like sea anemones. The artist Tato (Guglielmo Sansoni) depicted *Calambrone* as a fractured vortex of plane propellers and perspective redolent of the 'aviomania' that captivated the Futurists. *We Futurist poets, architects and journalists have conceived of the single Great City of continuous lines, to be looked down upon from in flight*. The machine is seen flying above Mazzoni's *Colonia Rosa Maltoni Mussolini* as viewed from its own water tower.

> *In a long symbolic ceremony held on 24th July 1937, Mussolini drove along the avenue in a motorcar, receiving the homage of thousands of children who threw him flowers, pouring out onto the public space and giving life to the urban image of Calambrone as the city of childhood. But Mussolini also received another sort of homage: that of the architecture, its facades laden with symbolic and allusive meanings. And a few hours later, going back along the same avenue in an aeroplane, he*

> *received a third homage from the succession of buildings, including Mazzoni's colonia, whose new message and meaning he could now make out from his privileged position.*

The exclusive view given to Mussolini is now available to anyone passing by the developer's hoarding or browsing Google Earth, and the Futurists' vision has triumphed.

In Cattolica I went to see the former *Colonia Marina XXVIII Ottobre*, another summer camp built in 1934 for the sons of Italians living overseas. The sculptor Eduardo Paolozzi came every year for several years when he was a child between the wars. Born in Edinburgh, his Italian parents were keen to strengthen their children's links with their culture and language and so took advantage of the subsidised trip, which cost £5 for three months. Paolozzi writes lucidly on his memories of his time there as filled with sunshine, activities and exquisitely crafted buildings.

My own first glimpse of the *colonia* was of some grey, curved walls visible between the masts of mothballed yachts. The main building is a series of tiered balconies

topped by a tower and flagpole, a metaphor for the bridge of a ship from where the director's elevated stance enabled him to oversee the activities of his charges. Elements such as a balcony for speeches, exercise ground, a flagpole and a clock are integral features of these buildings, and indicate the communal activities and strict timetables of the resident children. Originally this V-shaped building faced a wooden pier where, in 1934, Mussolini landed in his hydroplane, to the orchestrated cheers of hundreds of little boys in sailor suits and black shirts, for the buildings' inauguration.

The boys' dormitories are extraordinary. The seaward ends, supported by four rudder-shaped buttresses, are curved for 180-degree views of the coast. The landward bows swoop beautifully from the roof to the ground with arched apertures like the lights of a streamlined train (perhaps the Flying Scotsman of that era that took people from Edinburgh to London). The flank walls swell out from the base, the metallic sheen from the lead roof and the external staircases like gangways, continue the architectural metaphor of transport; of the ferries, trains and planes that brought the boys there. Only two dormitories remain of the original four; at its peak this colonia

catered for 1100 boys. Paolozzi talks of the de Stijl colours of the interiors, orange awnings and coloured flags, now a subdued grey with occasional blue details. Today the porthole windows brim with rusty streaks from the salt spray of the sea smashing the beach behind.

The Futurists' fascination with all things aeronautical had a substantial influence on urban developments at this time. Balbo, the heroic aviator who flew from Italy to Brazil, helped propose a design for a promenade that would run from this building up the coast to Rimini, a distance of 50km.

> *The great road will have trees and lighting, and will be metalled and used by electric trams; it will become a grandiose promenade about 50 km in length, a truly Roman work which will greatly increase the value of the coastal area of Romagna.*

The last building I visited is in Montesacro, now a northern suburb of Rome, but in 1939 it was open fields, and was where Paolozzi went to Campo Dux as a teenager. This was his last visit to Italy before the outbreak of war. This building was completed in 1937 for the GIL (*Gioventu Italiana del Littorio)*.

Images of this building shortly after its construction show clean Modernist forms and pristine surfaces. Balconies and loggia connect the theatre and library to the gymnasium, the exercise yard and swimming pools. The rational geometric facades are punctuated by grids of windows or blocks of text incised into walls of Carrara marble. I was taken round by a local man who laughed as he showed his *Figli de Lupa* card still in his wallet. I saw the exercise yard now crowded with extended buildings and fire escapes. The pool is half filled with pea green water and marble slabs slip off the sides into the deep-end. In what looks like an overgrown orchard, trees now grow through the tiled terracotta courtyards where hygienic puddles once reflected didactic marble words exhorting the young swimmers. Seventy two years later grafitti obliterates an eagle insignia, and the stone lane markers protrude through the ivy, still as graves.

It was an example of imperative sloganeering shown above the outdoor pool in photographs of the building in the late 1930s that suggested a series of images that would mine the tension between spontaneous mass play and mass compliance. The script above the pool at the Montesacro GIL had read:

CREDERE OBBEDIRE COMBATTERE

BELIEVE OBEY FIGHT

Such an example of individuals yielding entirely to a group ideal was echoed by a colony of ants behind the skirting board in my studio in Rome. These insects laboured night and day, constantly amassing stores for some future debacle that each ant cannot envisage. Using a packet of alphabet pasta (tiny upper case letters, the perfect size for a single ant to lift) I laid out groups of imperative verbs encouraging the ants to resist atavism and relax or underachieve.

The Dove and a Thousand Tides

Museum collections are amassed by beachcombing the world for oddities or examples that link one theory to another. Like flotsam and jetsam their contents reveal the main trade routes and tides that brought the ships. Britain's colonial empire sent out thousands of prospecting geologists, surveyors and missionary expeditions, and these individuals brought back tides of mineral samples, bird skins or artefacts; meanwhile painstaking studies were also made of the birds, fossils or shells to be found in their own environment. Their endeavours came together as collections like the Hancock Museum in Newcastle, opened in 1890 and named after the brothers John and Albany Hancock, from a family of naturalists who, along with other 'gentleman scholars' (both male and female), amassed large collections and studies in natural history, ethnography and palaeontology.

In 2006, prior to the Hancock Museum's transformation into the Great North Museum, it organised 'behind the scenes' tours for staff and students of the university.

On show were remarkable materials and ready made art: a fossil of an ammonite, cast in bronze by volcanic action; a sandstone block whose fibrous mica structure allows it to bend like a ream of paper; or rolled bird skins arranged alphabetically like varicoloured manuscripts; finches, flamingos and fulmar stacked in dark cupboards that reeked of formaldehyde. On this tour was the director of the Dove Marine Laboratory at Cullercoats. He was particularly enthusiastic about the Dove's collection of hand-illustrated books. This prompted an ambition to work with an artist and so he put round a call, which I answered. My initial research was in the library of the Dove, where I saw the Ray Society portfolios, Cassell's Natural History, Haeckel's lithographies, and original volumes illustrated by Albany Hancock and Joshua Alder. These old books revealed hand painted illustrations in infinite shades of sharp greens or vibrant colour clashes never penetrated by sunlight. Around this time the Hancock museum was exhibiting their own edition of these delicate watercolours of translucent sea slugs, dimly lit in a gallery. The startling blues or orange markings and intricate pencil lines depicting the lacy crowns of the slugs' external lungs are curious, beautiful and virtually unknown

beyond the scientists that study them. Hancock and Alder produced these illustrations for their *Monograph of British Nudibranchiate Mollusca*.

Around the same time I visited the Victoria and Albert museum and passed a plate covered in mosses, toads and grass snakes in gleaming muted earthy glazes. Remarkable and beautifully realistic, it was produced in Renaissance France by Bernard Palissy, who was a contemporary and follower of John Calvin. He studied painting and stained glass before being shown what was probably a white-ware cup from Saint-Porchaire, which prompted him to devote the rest of his life to perfecting ceramic techniques. For this he had to understand the composition of the minerals he ground into powders and the chemical reactions that would occur at different temperatures in his kilns. Extracts from his writings describe tortuous decades of continual trials and disasters, explosive residues and mis-firings. His studies of natural processes and materials extended to his subject matter; he crammed a teeming variety of living creatures onto dishes and platters of glistening greens and browns like a core of swampland or a promising rock-pool. The works revel in the diversity and quantity of life, the heavy glazes almost

camouflage the myriad creatures crammed onto their surfaces, each gap is filled with a smaller shell or leaf or newt or sprat. His unadorned depictions of earthy, factual biology seem iconoclastic in relation to contemporaneous art so infused with religious symbolism and mannerist effects. A basin from Palissy's workshop and now in the Musee des Beaux-Arts, Lyon dates from around the late 1560's. It is an asymmetric oval form smothered in coiled snakes, frogs, lizards and turtles, a fecund, primal cauldron of slithering life, in a robustly vaginal form. Palissy ended his days in the Bastille having refused to disavow his Protestant religious beliefs; yet his secular use of organic subject matter shows his affinity with natural philosophy. Palissy's empirical studies led him to form an academy, and give lectures on all manner of material sciences; he bragged that anyone able to disprove his theories would be offered their money back fourfold. He published these lectures as *Discours admirables* in 1580. He assembled a cabinet of curiosities, a precursor to natural history museums, with which to demonstrate his discoveries. Unlike other 16th century examples, Palissy's collection had a purely scientific, rather than sensational, intent. His experimentation with minerals gave him insight into fossil forms well in advance of

general knowledge at the time. Amico (1996) tells us that in *Discours admirables* his *speculations permitted him to explain all sorts of phenomena: from petrifaction, to the formation of fossilized shells on mountaintops* but does not describe how far his explanations could go in advance of evolutionary theory.

Bernard Palissy built a grotto for his patron Catherine de Medici in Paris's Tuilleries Garden (the site of a former tile works, or '*tuileries')*. He decorated this in the manner of his rustic basins but on a much grander scale, with cast rocks encrusted in shells and nesting birds, reptiles spouting water into pools teeming with ceramic fish and seals, he revelled in the diversity of marine life and revealed a spectrum of natural specimens to those more often cosseted from earthy uberty. When he died in 1590 his techniques all but died out with him, but were rediscovered 250 years later by 19th century French ceramicists. Excavations for the Louvre museum during the 1850s revived interest in Palissy's work and now hundreds of parts of the grotto have been unearthed. In 1851 both Charles-Jean Avisseau and Joseph Landais exhibited revivalist interpretations of rustic ware at the Great Universal Exhibition in London's

Crystal Palace, but much of this later work is blighted by unnatural tableaux and bizarre coincidences featuring casts of thousands wrought round, for example a 5 tier comfit dish. However this 19th century revivalist work seems anachronistic and garish, unable to recreate Palissy's sense of wonder and awe at the diverse life all around. Their aims were different – their awe was at Palissy's ceramics rather than his scientific examination of sources from the natural world.

The Dove Marine Laboratory incorporates an ingenious example of Victorian engineering. The twice-daily tides fill two vast tanks at the back of the building, which in turn irrigate a system of taps, an internal tide that circulates through aquaria filled with starfish, sea potatoes and anemones. The creatures brought to mind other scientific artefacts I had encountered elsewhere such as glass starfish in London's Natural History museum. In Dresden from 1863 the workshop of the glassworkers, father and son, Leopold and Rudolph Blaschka started to produce intricate lamp-worked glass models of sea invertebrates, to enable scientists to view the lifelike colours and forms that could not be preserved in pickling jars. Similarly I

knew Ernst Haeckel's *Art Forms in Nature* but was unaware that Haeckel was the chair of Zoology at Jena University and made these ornate and ever changing prints to demonstrate diversity and development and to decisively illustrate Darwin's theory, particularly in Germany. The Blaschkas used both Haeckel's illustrations and those of the British zoologist Phillip Henry Gosse to construct their models.

The Hancock Museum owns a small collection of around 40 of the Blaschkas' glass anemones, that I presume to be North Sea species; frilled pink or beadlet anemones, those modest red droplets like sealing wax that are familiar to us from tidal pools along the coast. In 2008 these were exhibited at the National Glass Centre in Sunderland alongside some other models of the Blaschkas' marine organisms, a few of Hancock and Alder's watercolours and *British Sea Anemones* written and beautifully illustrated by Gosse in an exhibition entitled 'Art Forms from the Ocean'.

Phillip Henry Gosse had one child, Edmund, who wrote about his extraordinary upbringing in his memoir *Father and Son* (1906). His parents were members of a strict religious order referred to as 'The Brethren'

who believed in the absolute word of the bible and in their own preordained place amongst God's elect. The father's painstaking studies were widely consulted and his more popular works such as *A Naturalist's Rambles on the Devonshire Coast* (1853) and *The Aquarium* (1854) did much to popularise the study of marine biology and were partially responsible for the Victorian seashore craze of the time. However Gosse junior viewed his father as increasingly troubled by balancing his belief in the world having been created in six days, and his own painstaking evidence, which supported a theory of evolutionary development.

> *This was the great moment in the history of thought when the theory of mutability of species was preparing to throw a flood of light upon all departments of human speculation and action. It was becoming necessary to stand emphatically in one army or the other.*

I wanted to look at the historical impacts of work such as that done at the Dove Marine Lab, when an emerging science began to clash with the prevailing absolutes of religious certainty. Initially I looked for

materials of marine origin. I read about sea silk, tufts of golden, gossamer threads used by mussels to anchor themselves to the seabed. This ‘byssus’ was harvested and spun into luxurious fabric. The British Museum has a pair of gloves from this golden stuff, which is said to be so fine that a pair of stockings may be put in an ordinary sized snuffbox. Our own native species has been used to accomplish much larger structural tasks as described in Cassell’s *Natural History*, which relates how a bridge over the Torridge River in Devon relied on the strength of this silk.

> *The tide runs so rapidly that it cannot be kept in repair with mortar. The Corporation, therefore, keeps boats employed in bringing Mussels to it, and the interstices of the bridge are kept filled with Mussels. It is supported from being driven away by the tide entirely by the strong threads of the byssus that these Mussels fix to the stonework.*

A delicate balance was achieved between a man-made feat of engineering under a continual threat of failure, supported by an encrusting armour of living molluscs. This story of the collective power of such humble

creatures led me to think again about crowds, swarms and colonies. This began to look like another project involving animal collaborators; I discussed the potential of various marine organisms with Dove scientists, who initially suggested sponges as they were being used in other research.

I decided I would look at the writings of John Ruskin for an apposite quotation. Although we know him predominantly as an art critic, he wrote of science and nature in an equally florid and charismatic way, and was an assured commentator on the events happening around him. His natural theology *expresses God's purpose in the harmonious creation of the world and its creatures, including man*. He personifies animals and elements in a manner that is very typical of the era; he discusses the ethics of dust and the quarrels of crystals. When organisms such as sponges are being utilised to find cures for human diseases, as is now the case at Newcastle University, it seems apt. These organisms are no longer wild and mysterious they are domesticated and rally to our cause. They now exist for a purpose. The sense that there is a cure for all our ills if we allow our enquiring minds to search the boundless seas seems to echo Victorian ideas.

The quotation I eventually arrived at is from a series of lectures on ornithology that Ruskin gave at Oxford University, published as *Love's Meinie* (1873). I chose the following piece of Ruskin's writing as here he ridicules the theories of Darwinism. He was a profoundly religious man with a considerable interest in natural history but one rooted in biblical accounts of a world designed perfectly by God, and he was deeply disturbed by Darwin's evolutionary theory. The quotation is reminiscent of Surrealist writing and certainly is not recognisable as typical of Ruskin. Its sheer daftness engages the viewer's curiosity:

> *If you fasten a hairbrush to a millwheel, with the handle forward, so as to develop itself into a neck by moving always in the same direction, within continual hearing of a steam whistle, after a certain number of revolutions the hairbrush will fall in love with the whistle; they will marry, lay an egg, and the produce will be a nightingale.*

Ruskin wrote this for himself to speak aloud during a series of lectures, and so he would have anticipated adding his own mannerisms, emphases and intonations

during its delivery. To extract only the written words is knowingly duplicitous, or at least allows for a level of ambiguity about its meaning.

John Ruskin was somewhat more than a peripheral figure during the events surrounding the publication of Darwin's *On the Origin of Species* in 1859. He was the Slade Master of Fine Art at Oxford University and was involved in the design of the University's Museum of Natural History, constructed between 1855 and 1860 and the site of the debate on evolutionary theory between Thomas Huxley and Samuel Wilberforce, Bishop of Oxford in 1860. Huxley was a proponent of Darwinism and the Bishop believed the museum was there to celebrate God's work. The building embodies the educative ambition of this project as even stripped of its contents its parabolic roof arches echo the whale jaw at the door, the pillars catalogue the multicoloured marbles quarried at the time. Each of these is topped with a different carved bough and accurate leaves cluster around the bases. Intricate fossils progress around the walls; for the modern visitor, these clearly sequence the eons before we exist. The roof space was built for a colony of swifts and the stairwell a colony of bees, accumulating stock from the University's

parks directly before them. Ruskin would have seen the museum as an expression of God's harmonious creation of the world and everything in it. But farthest from the door, a statue of Darwin leans against a pillar with an assured look and gazes across the range of evidence presented before him. Nevertheless a mutual respect between Darwin and Ruskin continued throughout their lives, and indeed Darwin visited Ruskin's home, Brantwood, at Coniston in 1879 and 1881.

The sea change in our understanding of the natural world occurred with the publication of *On the Origin of Species* and seriously destabilised the foundations of many individuals' beliefs and principles. Such conflict and anguish are vivid in Edmund Gosse's account of his father in the fervid debates that preceded its publication:

> *So, through my father's brain, in that year of scientific crisis, 1857, there rushed two kinds of thought, each absorbing, each convincing, yet totally irreconcilable. There is a peculiar agony in the paradox that truth has two forms, each of them indisputable, yet each antagonistic to the other...It was*

> *not really a paradox, it was a fallacy, if he could only have known it, but he allowed the turbid volume of superstition to drown the delicate stream of reason. He took one step in the service of truth, and then he withdrew back in an agony, and accepted the servitude of error.*

The significance of this irreconcilable crisis profoundly affected Ruskin too. Underneath his vast output and polymathic interests was an intense, sensitive, and very devout individual who suffered a series of mental breakdowns throughout his life. Until then, many Victorians saw investigation of the natural world as celebrating the Biblical account of creation. The preordained and immutable diversity of life was being challenged in a clash corresponding to the currently opposed ideas of evolution and intelligent design. It must have been a very disturbing idea for him to contemplate the marvels of creation as the continuing product of a vast unthinking machine.

For Ruskin drawing from life was an extension of his natural theology: *he drew in order to gain certain facts* intended to represent and record the world around him and *express(es) God's purpose in the*

harmonious creation of the world and its creatures, including man.

It is revealing to note how progressive Ruskin's writings appeared to some contemporary readers, however. For Edmund Gosse it is his relative secularity that appeals:

> *My growing distaste for the Holy Scriptures began to occupy, and to surprise as much as scandalise me. My desire was to continue to delight in those sacred pages, for which I still had an instinctive veneration. Yet I could not but observe the zeal with which I snatched at a volume of Carlyle or Ruskin – since these magicians were now revealing themselves to me...*

While young Edmund Gosse was eagerly reading Ruskin as an alternative to his father's prescribed theology texts, Ruskin was embattled with the overwhelming dichotomy of his views. The phrase 'Natural History' itself indicates that nature changes, that events cause the fall and rise of dynasties of organisms, and these events and changes are traceable through the lineage and recorded in fossil records –

natural history is written *in* the victors.

Gosse Senior's painstaking work illustrated the evolving forms of the diverse range of sea creatures, but Edmund states that this ultimately caused him anguished pangs of culpability.

> *That my father, himself so reverent, so conservative, had by the popularity of his books acquired the direct responsibility for a calamity that he had never anticipated, became clear enough to himself before many years had passed, and cost him great chagrin.*

For this reason Gosse Senior then attempted a subsequent compromise, a much derided treatise on the origins of fossils, published as *Omphalos: an attempt to untie the Geological Knot* (1857). In this he proposed the theory that God had created fossils and other geological phenomena in accordance with the account in Genesis at the moment of creation, in order to test the faith of his subjects. However, his suggestion that God had created forms that bore false witness to the development of life-forms over eons gained an opposite and adverse response from

even his own supporters. One of these, Charles Kingsley, stated that *he could not believe that God has written on the rocks one enormous and superfluous lie.*

Although Ruskin was an enthusiast for scientific investigation, when he was told that everything is in continual flux, he reached his crisis. When Ruskin attempts to ridicule evolution in the above quote by involving hairbrushes and steam whistles, he implies that tools and organisms are interchangeable, which is now less ridiculous with each new wave of advances in biotechnology. However this quotation shows that Ruskin had reached, and revealed, a state of abjection.

> *If only the geologists would leave me alone, I could do very well but for those dreadful Hammers! I hear the clink of them at the end of every cadence of the Bible verses.*

Museums are like high tide marks. Within them objects are stratified with those of similar size, material and timescale, and are dependent on local geography of trade routes for what is carried there. Things in the sea are otherworldly, and free to float with the boundless intercontinental currents,

but jettisoned cargo being tracked around the world revealed a complex global figure of eight in which items were eventually arriving back at the scene of their release a decade before. Batches of plastic turtles and trainers can be traced back to the time and place of the incident that set them adrift on these cyclical tides, they are flotsam with serial numbers. This contained, fluid sphere revisits past errors, like a polluted snow-dome. What goes around comes around.

Grey Book

In America in 1915 Marcel Duchamp started work on *The Bride Stripped Bare by her Bachelors, Even*, also referred to as the *Large Glass*, although he had been planning and preparing drawings for several years prior to this. He stopped working on it in 1923. Concurrently he amassed the documentation of his thought processes into an accompanying *Green Box* (or more precisely an edition of boxes). The elements contained in the *Green Box* were made from 1911 before the large work commenced; they constituted Duchamp's idiosyncratic archival process and it is this parallel, reflexive project that I wish to discuss.

> *In 1914, Duchamp photographed a few of his notes and one drawing and reproduced them at their original size on photographic paper. Mounted on separate cards, the photographs were then assembled in sets in the standard cartons used for photographic plates and glass negatives. In this way four, or*

> *maybe five boxed sets were made, together with another box that contained the glass negatives and another containing the originals. On the lid of a specially made green box, which later gave the work its short title of Boite Verte, the title of the Grand Verre appeared in full, perforated in mirror image: La mariee mise a nu par ses celibataires, meme.*

The Green Box contains 93 elements; notes, photographs and sketched ideas and the description of experimental techniques that Duchamp assembled prior to, and during, the production of his *Large Glass*. The outside is bound in what is now sage green fabric with the title picked out in dots. Originally four or five were made; then Duchamp undertook the considerable task of producing 320 such boxes. He made much of the elaborate preparations he took in order to recreate these inky notes on torn paper wedges, choosing to employ painstaking techniques such as *pochoir* stencils (metal templates used for hand tinting photographs) and collotypes (a photomechanical print process) when it is presumed that at that time, and as a trained printmaker, he could have achieved

facsimiles faster using the standard lithographic process. These techniques allowed Duchamp to eliminate stylistic and impulsive gestures, to impose uniformity in direct contrast to his deliberate use of chance in several elements of the *Large Glass*. Like other earlier works that cultivate carefully documented 'chance' actions (such as the *Erratum* musical, 1913), their accompanying descriptions outline the conditions under which they can be recreated.

Two aspects of the *Green Box* are particularly pertinent here; his method of presenting such diverse work, particularly the folders containing various projects, and his conceptual use of controlled chance. Duchamp's ready-mades were the earliest manifestation of his challenging the authorial mark in a work of art, his denial of the 'hand of the artist', or anything resembling a 'masterstroke'. Works such as *Fountain*, (1917) (signed 'R. Mutt') have been well documented, but I am interested in how he employed chance in his vocabulary of mark-making techniques. Several elements of the *Large Glass* were conceived using such hands-off strategies:

> *A thread of a given length, one meter, falling from a given height,*

> *also one meter, onto a prepared surface, has, within these predefined limits, total freedom. ...If the thread is then glued down, chance is being preserved: canned chance, hazard en conserve.*

This hands-off method was used to outline the nebulous *Bride* of the title that floats like a cloud above the grasp her bachelors. Another part of the composition, *The Shots* was 'executed' by a toy cannon that fired matches dipped in paint, thus determining where nine holes were drilled into the glass.

> *Instead of accepting the vagaries of chance at large, or 'wild' chance, he raised for his own purposes a cultivated variety. He domesticated chance by making a careful selection and definition of the conditions under which it was allowed to intervene.*

Duchamp discussed controlling *the hand of the artist.* Instead of privileging the stylistic and authorial effects inherent in a crafted object, he employed complex techniques such as collotypes to create these editions with a machine-like precision and

uniformity. The techniques of the *Large Glass* – the craftsmanship and even the planning method – are devised to isolate the artist from any emotional relationship with his medium. He distrusted the significance placed on expressive rendering of the individuality evident in an artist's mark:

> *The hand is the great culprit, so how can one consent to be the slave of one's own hand? It is unacceptable that drawing and painting should today still stand where writing stood before Gutenberg came.*

The fact that he devoted years of work to producing each element shows that he regarded the boxes as a distinct creative, generative work and not just a convenient decoder for those unable to access the *Large Glass.* The *Green Box* is therefore a meta-text of the *Large Glass*. I am interested in the parallels between these works and the process of practice based PhDs. The accompanying written element should, like Duchamp's *Green Box* be *a substantial piece of creative work, and a novel way of reflecting the themes explored in the creative aspect – a hybrid work.* This

research has to be verifiable and able to be re-created from the evidence submitted, and in this sense the *Green Box* anticipates the requirements of a practice based PhD. Duchamp referred succinctly to the *Portable Museum,* his subsequent more comprehensive boxed edition, as comprising *approximately all the things I produced.*

The body of work presented as a PhD submission has to enable the research to be reproducible. The contents of Duchamp's *Green Box* have allowed at least two facsimiles to be made: the first in 1961 by Ulf Linde for the Moderna Museet in Stockholm, and the second in 1965 by Richard Hamilton while he was working at Newcastle University. Hamilton created his version ostensibly to enable visitors to the Tate's retrospective exhibition of 1966 on Duchamp to view the *Large Glass* as the fractured original was too delicate to travel from America. The notes, photographs and documentation that Duchamp selected to present within the box has provided sufficient information for verification, as proven by the two reconstruction projects. Both Hamilton and Linde produced their copies whilst Duchamp was alive and Hamilton discussed his translations of the *Green Box* artefacts with Duchamp.

However, it is acknowledged by Hamilton that he was attempting to reproduce a complex nuanced work at one stage of its production, before accidents and age patinated it. He refers to his reconstructing procedures rather than claiming to imitate the effects of Duchamp's creative actions. In turn Hamilton produced another document to accompany his own extension of the project, and inevitably this resultant *Green Book* (1966) echoes and updates Duchamp's *Green Box*. Hamilton also produced an edition of prints, full-scale reproductions of his *Large Glass* inscribed with his translations of the notes from the original *Green Box*.

Duchamp again tied the 'hand of the artist' and limited his authorial control in his particular way of presenting the documentation in *Green Box*. By another expression of controlled chance, he allowed the contents of the box to be viewed in any order. The notes, images and diagrams were not bound sequentially which would require conscious ordering, but each item was instead allowed to acquire meaning from whatever texts surrounded it. Each element can be drawn from the pile like a playing card, thereby avoiding a fixed narrative interpretation and enabling chance and the reader to determine the

order in which it is read. However, he abandons nothing to chance unless it is chance considered from all its potential outcomes and mediated by himself. Indeed each subsequent edition of his *Portable Museum* had various slight modifications, to control how the objects are viewed.

Viewers of the original *Green Box* could select objects from the heap of intriguing, personal notes, and view them at will, and were therefore afforded the privilege of browsing the artist's working method. The order in which they were drawn was mediated by chance, to enable connections and subjective readings, ultimately revealing Duchamp's intention for continual reinterpretations of this gathered material.

> *The manifold overlaps and cross-references in his work as a whole are reflected in the special construction of the* Boite*, as well as the arrangements of the reproductions. His artistic statements and achievements, in all their heterogeneous and many-sided profusion, are represented here by Duchamp as a carefully ordered whole.*

Marcel Duchamp's *Green Box* is now a

venerated object, only to be viewed in the order set out by a curator before protective glass is screwed over the contents on a gallery wall. I have more freedom and so I intend for the background writings, influences and connections in my work to be accessible in the order that suits the reader. These five booklets also contain a profusion of overlaps and cross-references, an archive of the chance discoveries and cultivated connections that form the background research to each body of sculpture.

Hell is Other People

The sense of being overwhelmed is peculiar to each individual. I am aware it is irrational to find a pot-bound ball of roots or the minute order of curved eggs laid in a perfect circle by an unseen insect as nauseous. Yet to realise that there are inevitable laws and unalterable events occurring at both a microscopic and macroscopic level, that have no awareness of or significance to you, is giddying: both are examples of the amazement and confoundedness that Burke described. *When we attend to the infinite divisibility of matter...the imagination is lost as well as the sense, we become amazed and confounded at the wonders of minuteness, nor can we distinguish in its effect this extreme of littleness from the vast itself*. This unease comes from the knowledge that one has no more bearing or impact on our surroundings than the unseen insect has on us.

Although both Ronald David Laing and Aaron Esterson were from Glasgow and undertook their medical training there, it was while working together in London's

Tavistock clinic that they co-authored the book, *Sanity Madness and the Family* in 1964. They shared scepticism of the range of invasive treatments that were performed on psychiatric patients at the time and instead favoured an examination of the social environment surrounding each individual. Their book gives examples of this phenomenological research in the form of the transcribed dialogues of patients with a diagnosis of schizophrenia as they discuss their illness with their nearest family. In doing, the authors *document quite manifest contradictions that beset these families*, and highlight the reflexive process of self-examination each patient underwent as they comprehend their situation and the events that led to it.

I started reading this book because its structure of written dialogue is formatted like a play and it is a compelling read. The patients were all women between 15 and 40 years old. Laing and Esterson have included very few interpretations of the women's speech in their book, instead they lay out examples of the interaction between family members with little comment so that the reader can perceive the dynamics within each group.

The members of each patient's family

discussed with her why they think she had come to be where she is, and these conversations were transcribed. The stuttering, colloquialisms and pet words of each personal account lend a raw connectivity to that individual's personality and predicament. It is with growing unease that you read how words, actions and memories are attributed to each patient until she can no longer discern or articulate her own recollections. These women's physical descriptions of their emotional states suggested a sculptural response to me, at a time when I was exploring ways of producing work in a more hands-off way. They describe their inability to communicate alongside descriptions of their emotions in very tangible ways: as collapsible, cast aside or as having no backbone, all of which are abject properties that can be described using the manipulable anti-form tendencies of clay. Here 'Mary Irwin' describes her struggle to communicate:

> *I'm scared I'm going to stop and then all that I've shoved back will come rushing forward and hit me and knock me over.*

The patients' identities and the hospitals where they received treatment are concealed by assumed names. I selected

quotes from four of the ten women as the starting point for sculpture, with ‘Lucie Blair’ and ‘Maya Abbott’ providing most of my references.

The women were asked to relate how their perceived madness manifested within normal interactions. They talk of their loss of power in expressing themselves and of their tentative control over their own lives. Their speech appears as ostensibly unadulterated utterances; raw, immediate and made incoherent by emotion. Pauses, repetitions and non-sequiturs acquire significance as the external pressures or insidious manipulations that have formed patients’ thoughts unfold. The action of the authors in formulating and selecting each instant of a speaker’s developing thoughts, is analogous to firing clay which records on its surface the actions that formed it. Laing and Esterson demonstrate that although these women were diagnosed as mad (i.e. schizophrenic), the quotes can be seen as entirely sane reactions to the circumstances each are in. But by being labelled as such, they have become the ‘other’ and all subsequent behaviour can be viewed as abject. ‘Lucie’ articulates the effect of this self-fulfilling diagnosis:

There doesn’t seem to be any

solution to it – it doesn't leave you any kind of er- hopeful move at all – you can't make any kind of hopeful move can you? Seems hopeless.

The first person dialogue breaks down the barriers between speaker and reader and the segments I chose to render in clay are devoid of external references to other people, places or the timescale they describe. The women talk only of their emotions, their confusion and the difficulty in communicating the overwhelming nature of their predicament. Therefore these statements retain universality, and are not overtly the words of an individual displaying irregular or abnormal psychology. It could be the reverie of any of us, and it is this familiarity that is most disturbing.

I don't know how to deal with the unexpected. That's why I like things neat and tidy. Nothing unexpected can happen then.

I chose eight quotations from the patients, where they discuss their confusion and their difficulty in articulating words, or when they refer to their feelings in very tangible, physical ways. It is these quotes that are

interspersed throughout this section. I used the same templates of typeset that were cut for previous text-based sculptures including the *Ruskin Quote*. Although this particular font has developed a patina evocative of age and associations, it was a standard style from the era in which *Sanity, Madness and the Family* was written. Where my earlier work with this script depicts impersonal, didactic statements or commands, the texts chosen here represent the very introverted voices of women who are unsure if their utterances deserve an audience. Their confusion is manifest in the tangled, illegible form of each sculpture. In contrast to the earlier sculptures, these clay works spell out monologue weighed with introspection and self-doubt.

> *Well it's something that seems to be so vague – there doesn't seem to be anything in it. I suppose the – I haven't got a clear definition of what I want to do in life, that's the truth of it, and I can't express as I'd like to – I seem to be just a blank.*

I sought to capture these women's thoughts in clay. 'Lucie's' description of her depressive state is literally spelt out in slumping letters of extruded clay and her

words read as an espousal of formlessness:

> *I lost sort of faith in myself, naturally – get no support, no support in anything I want to do. I feel that it's sort of collapsible, sort of in a collapsible state. Can't get any firm backbone at all.*

In Laing and Esterson's book, the spoken word is changed by the process of editing and printing, where it appears crisp and ordered. But, just as each patient's words are shown to be obscured by those around her, each clay letter is covered and crushed by those that surround it. The dialogue reveals a dense overlaying of alternative memories and contradictory accounts of the same events; clay becomes a concrete metaphor for this spoken language. The garbled words, painfully extracted in an attempt to communicate, are thwarted and negated by those around them, just as the rush of conflicting thoughts causes an impasse in 'Lucie's' conversation:

> *No, there was nothing. It was er – I don't know the word for it now – I used to be able to use words but I seem to have got out of the way of everything – it's no use trying*

to search for a word that just won't come to you.

The collapsing clay is frozen by the firing process, just as the original recordings might have captured the cadences and intonations of each patient's voice. Letters crowd upwards as etiolated life shoots toward a light source or else spring from the mass in a manic attempt to communicate. Others have slumped and collapsed; their jack-knifed forms rent their own surfaces and are crushed beneath the mass of others, buckled individuals only evident as crushed de-contextualized smudges. The completed works recall Bataille's abject nightmare of unimpeded form: *Impossible and fantastic vision of roots swarming under the surface of the soil, nauseating and naked like vermin.* The malleable clay made the women's thoughts tangible and evident as a tangle of coiled letters, once ordered and communicative, but now illegible and vitrified, they are abstract sculptures formed by gravity and trauma.

These sculptures exhibit all the deformation caused during their creation, where clay has ballooned, curled or split it reveals the pressure of its expulsion from the machine that formed it. The pressures of forceful exclusion are written on their distorted

surfaces and their marginality is emphasised by the heap of apparently discarded clay.

When fired the clay becomes lighter in colour, more buff and fleshy but it retains its raw surface which I left unadorned and unpainted, evident and functional. The sculptures sit on identical cot sized plinths, presenting each piece at a height that encourages close examination. The sky blue Formica covering each plinth traces out a network of crazy patterns beneath them and allows each to resemble a stolid little cloud felled by the density of its stuff. The pattern and shade is redolent of 1950's institutions, a clean, functional material under the formless mass of confused thoughts. As 'Ruth Gold' distances herself from the uncomfortable questioning of her family, her mind drifts and she refuses to be tied down to specific reasoning:

> *Over this bit I am a bit in the air. Not over all the things in the world, not over everything – not everything – but over this I am a bit sort of dubious.*

Hell is other People is the collective title for this series of ceramic sculptures. The

phrase is borrowed from Jean Paul Sartre's 1944 play *Huis Clos (No Exit)* where three new arrivals in Hell establish what form of torture is to be used on them. As time passes they realise that the three of them have been selected to be each other's eternal torment. Like the characters in the play, the narrators of my chosen texts are inextricably linked to people and situations that appear fundamentally different to themselves. 'Maya Abbott' rails against her tormentors:

> *I can't make out your kind of life. I don't live in your world. I don't know what you think or what your after, and I don't want to.*

On reviewing the material they gathered, Esterson and Laing reflected of their patients: *Their behaviour is more socially intelligible that has been supposed*.

Moths

My first studio was in a former cotton mill in Dalmarnock in Glasgow's east end. The building had originally been one of two similar red brick mills, and had been the one condemned for demolition. Like some hospital error the wrong building was removed and ours limped on. The landlord had removed the lead from the roof to sell as scrap and to avoid paying rates. He used tarpaulins from his son's banner company to line the floor above our studios, affecting some inadequate weatherproofing. This arrangement allowed many pigeons to colonise the building, flapping through the crumbling ceiling tiles, shitting on the floor and then ultimately dying.

About half a mile from there a graveyard at Abercromby Street contains the remains of the Calton Weavers. A plaque commemorates these six men who were killed by soldiers sent to quell their strike in 1787.

Another half a mile from both the studio and the graveyard is the People's Palace, built in 1898 as a 'palace of pleasure' for the

working people who lived in overcrowded and unsanitary tenement blocks that crammed the surrounding areas of Calton, Bridgeton, Dalmarnock and Gorbals. The museum's collection contains several silk trade union banners, some made by local embroiderers, others commissioned from George Tutill. This London company manufactured many of the most elaborate banners which are still recognisable from union, lodge and church regalia by their gold stitching and heavy fringe set around a symbolic painting. One banner dyed in brick red was for the Glasgow Cotton Spinners union.

I became interested in using silkworms in a piece of work whilst working on a residency near Erddig Hall by Wrexham. The National Trust shouldered responsibility for this sullen and broken building because of the multitude of things it contained, and because it held unique and idiosyncratic records of every thing and everyone associated with the building. The family had hoarded almost everything that came into the house and so when the building subsided into the mines beneath it and rain sloughed the Chinese painted silk wallpaper off the walls, this too was gathered and placed with the obsolete machinery, nature specimens, travel

souvenirs and everything else. Eighteenth century portraits of the staff and poetry or '*Crude-ditties'* describing both their duties and foibles line the downstairs corridors. The benevolence shown by the family towards their staff extended as far as encouraging their artistic development. A lady's maid Elizabeth Ratcliffe, made several pale intricate models in vellum and wood, which were placed in golden cases and displayed in Erddig's Gallery. One of these is of the Chinese Pagoda in Kew, its fretwork railings embellished with mica and mother of pearl.

Chinese culture has long embraced the concept and advantages of mass production. Porcelain tea sets, ceremonial bronzes, silk paintings and the first emperor's terracotta army were all achieved not through individual genius but through collaborative processes culminating in vast outputs.

Mass production techniques were used by the First Emperor of China's craftsmen to construct the myriad terracotta warriors with which he was buried. Using methods similar to those used in their regular jobs (making drainage pipes) craftsmen produced several moulds of different body parts - legs, arms, faces, hair etc. - and assembled these

in almost endless combinations in red brick clay. But these are avatars rather than portraits. Each warrior is like a word constructed from an alphabet of elements that can combine and reconfigure with almost infinite variety.

Silkworms no longer exist in nature. The true silk-moth (*Bombyx Mori*, to distinguish it from the myriad of other silk producing moths) has been cultivated and bred for so many millennia that it no longer occurs in nature and requires human intervention to propagate. The population is sustained to manufacture luxury goods and is extinguished before the completion of the breeding cycle in order to prevent the hatching silk-moths devaluing their cocoons by breaking the threads. They are sacrificed in order to produce a luxurious commodity.

Silkmoth eggs were allegedly smuggled out of China to Europe inside a bamboo cane in order to start silk production in Europe. The West had hankered for the means of producing this hugely sought after material and fortunes were made from it. One of the most redolent images of this is the *Duomo* in Florence. This Carrara marble and red brick cathedral was funded by the silk guild. Here, Charles I like other European rulers was so impressed by the potential profits

from sericulture that he had over 100,000 mulberry trees planted in the south of England (unfortunately these were the wrong kind, and the silkworms perished). W.G. Sebald describes the silk-weavers of Norwich transforming the raw material into cloth: *with their wretched bodies strapped to looms made of wooden frames and rails, hung with weights, and reminiscent of instruments of torture.* Like the insects, the human producers of this commodity were stuck in luckless toil to manufacture wealth for those with more power. Sebald documents a more recent and disconcerting effort at bringing sericulture to the masses. In line with plans laid out in 1936 to make Germany self sufficient, the Third Reich avidly promoted silk cultivation as a cottage industry and an educational tool. A public information film produced at the time titled *Deutscher Seidenbau*, outlines the educational objectives of planting mulberries around playgrounds, the developmental stages of the worm and finally, a modified system to kill the worms in batches. The other aim for this nation-wide effort was to manufacture the raw materials of parachutes, essential in wartime.

My project focused on silkworms on the Dalmarnock mill building; a functional modular structure in red brick. Its elevations

comprise 88 arched windows. I made a mould of one such window in order to mass produce similar blocks and construct a model of the mill. These blocks were cast in commercially available feed, powdered mulberry leaves that reconstitute into a solid green jelly. Silkworms would consume the building and convert it into raw silk cocoons, which would be processed, dyed, spun and woven into a banner that celebrates its own production. I bought the feed and 1000 eggs from an on-line supplier of silkworms as both education packs and fish bait. When they arrived the eggs hatched like spilt punctuation. The minute appetites of these grubs allowed them only to consume crumbs of feed at a time, the rest of the blocks would desiccate or go mouldy. The tiny larvae could not be coaxed onto fresh feed and my attempts to brush them onto fresh feed only harmed them. Many died each day, but the rest grew. A month later, 4 translucent silkworms of reasonable size had survived, their pulses visible through their parchment skin. Then they died. Cleaning out after the sorry event I found one delicate cocoon the size of a grape. One of my worms had survived a lifetime of constant relocation and chemical pap to spin a capsule for future mothhood.

After another similarly doomed attempt I

ordered 500 completed cocoons from the same source. The supplier kept none himself as he admitted it is near impossible to raise silkworms in our climate, and so he ordered them from Japan. After a wait I collected a box of cocoons from the sorting office. Back at home that day I opened the box and found a live moth struggling through the cocoons. Silkmoths are buff colourless creatures with bands of down on their plump bodies, large feathery antennae and wings like embossed paper. Within an hour each of the 500 cocoons was trembling as the moths hatched. I attempted to feed them but during their final perfect imago state they cannot eat, they have no mouth. The emerging moth excretes a brick red acid, which softens the silk allowing it to emerge, but tears the endless metres of continuous filament that surrounded it. Their papery wings are insufficient to lift them and so they flutter like a shuffled deck of cards. They exist only to mate and produce their inky eggs. For three weeks they copulated and laid eggs on any available surface. Their fecundity is immense; each female lays around 500 eggs. For three weeks they consumed nothing, only mated and excreted eggs. The velvety fur on their bodies wore off to drying yellow skin. Their antennae snapped off. Their wings eventually beat themselves to tatters like an

old paper lantern torn off to the bamboo ribs. Their bodies shrink and go brown, and then they die. The 500 cocoons stained like bandages, the 500 desiccated bodies and the myriad eggs were all connected by invisible single silken filaments that jerked the cocoons into false life or jolted one final death throe from an apparent corpse. I waited for a week of silence and then separated it all out, placing the cocoons in a box, and feeding the moths to pigeons.

A fear of moths seems to be quite widespread and I have tried to imagine why this is. Perhaps this phobia is caused by moths' nocturnal nature, their panicky attempts to get to light windows, their fuzzy squat bodies, like drab deformed butterflies or the chalky dust that brushes off their wings. For me it was not the moths but the overwhelming numbers of eggs and twitching hatchlings, a surge of nature followed by waves of pestilence, blooms of mould and blossoming cankers. It was a cumulative progression of mess that defied my control.

In this research project I wanted to respond to this abject uncontrollability and unease in a sculptural installation. I made 7 plaster moulds of modelled moth wings and bodies, and I cast each of these daily. These

modular elements were combined to form moths, grouped in twos and threes like the seething mass of mating moths I recalled. The clay when fired turns papery white and so the combined surface of their wings acted like a screen on which to project a video of the insects hatching from their cocoons in my Gorbals flat. The compelling sound of 1000 wings created a hectic rush like the hum from a factory floor and so I collaborated with a musician who recording a tonal sound-scape of overlaid tracks: a saxophone's fluttering keys, squeezed banknotes and the agitated noise of forced clockwork. I installed these in the darkened drawing room of the stately Glengorm Castle on Mull in 2006.