Soul Models:

Rationalization and

the Art of Subjectivity

Volume I

Jonathan Willett

A thesis submitted in partial fulfilment of the
requirements of Nottingham Trent University
for the degree of Doctor of Philosophy

2007

Acknowledgements

Soul Models: Rationalization and the Art of Subjectivity

Abstract

In the exchange between theory and practice, art is appropriated as a creative mode of enquiry, a differential form of knowledge and experience in the processes of rationalization. As a differential in knowledge, art is explored as the practice of composition *making* differences out of established rationales - the discrete disciplines that find stability in economic, pedagogic and scientific discourse. As a differential in experience, art may contain the potential to destabilize social, historical and political constitutions of sense, working as an interference pattern in the production and reproduction of rational subjects. The academic distillation of the artist's know how into the 'art of subjectivity', draws both the subjects and objects of knowledge into this critical space of composition, a dynamic space of contestation in which the artist acquires the capacity to become an agent of cultural change.

As a cultural and critical formation, the 'art of subjectivity' reactivates the art historical tradition of institutional critique. Re-evaluated through the critical and philosophical components of the doctoral research, the material rendition of institutional critique is configured as a series of artistic engagements with the procedural and regulatory codes of practice that comprise the info-structure of instrumental reason. Through a gradual synthesis of process and product, the 'art of subjectivity' begins to merge with the arts (techniques) of rationalization, drawing upon rather than resisting the bureaucratic, informational, scientific-technical and semiotic energies of political economy. In the aesthetic merger of productive processes there emerges an affirmative mode of critique, the 'constructive criticism' of the intelligent artist whose purpose in the doctoral research is to interrogate the terms and conditions of knowledge and experience, and in the process open up new possibilities of expression.

Constructive criticism foregrounds what art can do in the register of production, as opposed to what it means in the register of comprehension. Artwork is situated on the side of creation, whereby the work of art is conceived as an aesthetic process, an aggregate form of thought and action, which in the doctoral research develops as the 'intelligence key' of the combination-composition. The artwork as intelligence key is designed to unlock the established practices of discrete disciplines in an attempt to realize a more permeable, inquisitive condition of subjectivity, recomposed in a connective fabric of affective and perceptual understanding. In this respect, the 'art of subjectivity' is motivated by the desire to deregulate what limits the potential for expression, questioning how sense becomes restricted as a basis for remaking the thresholds of knowledge and experience.

It is envisaged that the doctoral investigation will be of value for artists who wish to develop a critical role for their work in the context of academic research. Through the composition and re-composition of method the 'art of subjectivity' yields a palette of practices, any one of which could be re-appropriated by the critically minded artist. Conversely, the techniques of constructive criticism provide an operating model for the perceptive critical theorist who may wish to utilize art as the practice of least restriction, in the strategic integration of creative thought and action.

Contents: Volume 1

Chapter 5

Chapter 6

Postscript

Endnotes

Bibliography

Appendices

Contents: Volume 2

List of Figures

Appendices

Introduction

With the ability to predict nature comes the ability to control nature. Hence when a science of humanity emerges, society and individuals will likewise be subject to control.

Auguste Comte, *The Positive Philosophy* (1855)

This precisely is the long story of how responsibility originated. The task of breeding an animal with the right to make promises evidently embraces and presupposes as a preparatory task that one first makes men to a certain degree necessary, uniform, like among like, regular, and consequently calculable.

Friedrich Nietzsche, *On the Genealogy of Morals* (1887)

The relationship between the modern process of rationalization and the subjects it produces, has greatly informed the development of my artwork over the last six years. During the course of the doctoral research this dynamic has shaped the artistic parameters of the investigation albeit after a series of adjustments and alterations. As a consequence, the consistency of the artwork developed as part of the doctoral research is determined by different but repeated engagements with specific coordinates on the socio-political landscape of rationalization. As a practical response to the conditions of instrumental rationality, the visual language has emerged as an antidote to a particular form of subjectivity, constituted in the mid nineteenth century in the conception of an over-coded, over-determined individual of modern life. The artistic encounters with this individual accumulate into a series of case studies, which attempt to locate, diagnose and destabilize established rational subjects and their corresponding subject matters. As both process and product, 'the art of subjectivity' makes differentials of knowledge and experience at the interface between individual and society, where the artist[1] becomes an agent of cultural transformation and critique.

As portraits of subjectivity, the subjects of rationality are the 'soul models' of the doctoral research, framed as the Research Subject in Chapter 3, The Emotional Subject in Chapter 4, and the Creative Subject in Chapter 5. 'Soul model' is a reference to the abstract/conceptual

models that provide theoretical grounds for constructing specifically modern individuals. Soul models as such are investigated as systems of thought and practice in which individuals are produced and reproduced as meaningful subjects/objects of knowledge. As a type of cultural surplus value, the lived experience of the individual is never completely determined by the 'soul model', insofar as subjectivities and models are reproduced in and through social practitioners who are the simultaneous expression of both the models and the subjectivities. Portraits of subjectivity are therefore continually reproduced as unfinished works in progress, which to some degree remain inherently unstable constitutions of the subject. In this respect, the soul model becomes a soul modulation[2] in the doctoral research, in a series of artistic engagements with rational processes of subjectivation[3]. The soul model of 'the artist' is taken to be the least determined mode of existence and as such, potentially the most critical with the capacity to make differences (modulations) out of the received stability in established regimes of sense. The concepts deployed in the doctoral research are to some degree academic soul models, which provide intellectual frameworks for rethinking modern subjectivity in and through the composition of artworks.

Modern subjectivity is itself a complex and contentious terrain, which in the doctoral research traverses three phases of analysis that correspond with Weberian, Foucauldian and Deleuzian models of subjectivity. Hall's (2004) analysis of subjectivity from the Classical period to the present day provides a wider theoretical resource for understanding the historical conditions, which produce different modes of subjective experience. Hall evaluates historical-materialist, psychoanalytic, discursive and feminist conceptions of the subject, through a detailed account of the corresponding Enlightenment, Marxist, Freudian, Lacanian and Foucauldian models of subjectivity. The critical framework of the doctoral research appropriates Foucault's conception of the subject as formulated in *The Subject and Power* in (Drefus & Rabinow, 1982), *The History of Sexuality Volume 1*(1978) and *Discipline and Punish* (1977) adapting it to the creative configurations of artistic thinking. Amy Allen's (2000) critical evaluation of the tensions between structure and agency in Foucault's oeuvre has facilitated the carving out of a position for artistic practice in the ongoing debates surrounding the constitution and reproduction of subjects. As a critical

disposition, the 'art of subjectivity' unfolds as a series of case studies, which aim to put into process the conditions of subjectivity, and at once destabilize the established constitutions of experience.

Chapter 1 surveys the process of rationalization as integral to the social, historical and political terrain of Modernity. Modern subjectivity is in turn considered as the effect of multiple techniques for modelling individuals who are determined as components in the socio-political machine. A creative dynamic is set up between the 'art of subjectivity' and the arts (techniques) of rationalization, in order to develop visual techniques for making differences out of established systems and practices. The artistic process is proposed as a critical modulation of individuality, in which the artist does not stand in naive opposition to instrumental reason but is engaged in critical differentials of its power. Modalities of rationalization are interrogated as programmes for informing and reforming the lives of individuals, who in turn reconstitute themselves as reasonable and reasoning subjects. The subjectivity of the individual is first approached through the thought of Max Weber and Michel Foucault whose different philosophical traditions address the problematic condition of a fragmented modern subject, produced in the objectifying forces of socio–technological mechanisms. The review of Weber's historical materialism and Foucault's discursive analysis prepares the aesthetic terrain for an 'art of subjectivity', which permeates the sense of rationality and upsets the rational subject.

In Chapter 2, the art historical precedent of the machine aesthetic provides a stylistic device, suitable for engaging with the social machines of rationalization. Introduced toward the end of Chapter 1, Deleuze & Guattari's concept of 'the machinic' (1984, 1988), is adapted as a critical application of the machine aesthetic. The machinic augments the creative register of research, enabling critical engagements with Deleuze & Guattari's 'productive unconscious' (1984, 54), in various combinations of working relationships or 'machinic assemblages' (Deleuze & Guattari, 1988, 88-91). The machinic is further developed as a conceptual tool for adjusting the creative disposition of the artist, allowing the expressive potential of the machine aesthetic to take shape in dynamic forms of

constructive criticism[4]. The role played by the machinic in the doctoral research is developed through Mc Mahon (2002) and Johnson (1999), with emphasis on creation above comprehension of artworks in 'agencements' (Deleuze & Guattari, in Johnson 1999, 28) of material production. The agencements of doctoral research are experimental productive processes, gradually made critical by interrogating objects of knowledge in conceptual-creative assemblages. In Chapters 4 and 5, the artistic assemblages cohere into a critical semiotic method, produced and reproducing in the interconnected registers of desire, history and discourse. Where desire destabilizes, where histories provide events and where discourse generates expression, the machine aesthetic translates into the method of 'machinic vision…a field of decoded perceptions' (Johnson, 1999, 27), in which the 'art of subjectivity' reprocesses its objects of investigation in creative modulations of instrumental rationality.

The objective is to realize constructive criticism as a gradual synthesis of process and product, whereby the 'art of subjectivity' amalgamates with the art of rationalization at points where rational techniques are appropriated as conditions of possibility, creative processes in themselves that are ripe for re–engineering in the critical differential of the machinic artist. The differential productive space is therefore explored as the critical space, where the artist moves between things (practices, objects of knowledge, subjectivities) as an engineer of differences, breaking down the logical connections between the practices of instrumental rationality and the reproduction of rational egos. The purpose is to conceive of art as a method for re-evaluating the conditions of subjectivation, putting into process existing terms and conditions of experience through a subject of permutation, whose position is not immediately reducible to any particular practice, but remains in a dynamic state of composition. Art is proposed as a transformative practice, an object 'in the making', where subjectivities and rationalities move in and out of each other as soul models unfolding on the same plane of production. As a technique of machinic vision, constructive criticism will aim to make research 'go with the flow', negotiating thresholds of knowledge and experience by investing the individual in semiotic energies that draw upon rather than resist the productive forces of political economy.

The second section of Chapter 2 rejoins the 'sense of the individual', which emerged as an area of investigation toward the end of my M.A. research. The objective in the doctoral research is to establish a reflexive approach to the production of subjectivity, able to continually evaluate its capacity for negotiating the territories of rationalization. In the doctoral research framework, art's productive power is opened up as a critical force and situated in a creative interface between the developing conceptual and aesthetic components of the thesis. The artistic disposition of the 'quantitative attitude' emerges as a critical fold in the quantitative techniques of rationalization, a productive energy and stylistic device for shaping the form and content of constructive criticism in the remaining chapters. The quantitative attitude begins to function as the artistic reproduction of social technologies of quantification, a critical making of differences. The *Heart Calculator* (2002) is reproduced in the quantitative attitude as it transitions from soul model to soul modulation in the emerging 'art of subjectivity'. The reprocessed *Heart Calculator* becomes the first character in the play of the rationalesque, in which the artist's 'know how'[5] is delivered as a postscript to instrumental reason. The purpose is to forge constructive criticism into a sharpened critical discourse, the aesthetic instrument capable of cutting into fault lines inherent in the constitution of reasonable subjects.

Chapter 3 contributes to the art historical tradition of institutional critique, highlighting the injunctions on art that govern its practice in accordance with the codes and conventions of holding academic office. The tension between the role 'artist' and 'academic' in the University machine is investigated as the discrepancy between experience and description, inherent in the dominant research model. The 'know how' of artistic knowledge is investigated as an ambivalent academic product, established retrospectively in the rationale of the written thesis. The anomalies in the constitution of the artist-researcher are figured out through two additional characters of the rationalesque, Melville's *Bartleby the Scrivener* and his derivative in the doctoral research, the *Emotion Officer*. The purpose is to re-evaluate the terms and conditions of academic office by modulating them in the 'object lesson'[6] of the studio–office assemblage, designed to question the validity of underwriting

art with the intellectual currency of other disciplines. The object lessons are rendered as bits and pieces of method, which begin to permeate the constitution of rational authority and question the premises upon which certain types of knowledge are valued above others. The experiments in visual critique prepare the ground for a fully functioning method in Chapters 4 and 5, which begins to take shape as a critical practice working in and through itself as a mode of acting and thinking at once.

In Chapter 4, material critique becomes compositional method through an investigation into the scientific rationalization of emotion since the early 20th Century. The scientist's model of emotion is apprehended as a laboratory creation similar to an aesthetic object, allowing for the formulation of a critical space that questions the difference between objective and subjective productions of affect by reproducing them in the critical character of the *Mechanical Freud*. The aim is to develop machinic vision as a diagnostic technique, which in this case engages the desire of the scientist as it resurfaces in the 'scientific image of emotion' (Dror, 1999b). In keeping with the quantitative attitude, the focus in the doctoral research is on the isolation, measurement and graphical rendition of laboratory emotion as a quantifiable stream of data. In the studio–laboratory assemblage a corresponding stream of artworks are conceived as critical emotional data, designed to infiltrate the apparent symmetry between the transitory emotional event and its representation as graphical information. A similar technique is applied to the emotion diagram of neuroscience, in which scientists identify emotional data as the informational flow of an affective state. With recourse to the semiotic method, critical emotion diagrams generate flows of emotional sense, which attempt to render the affective event as an unstable and destabilizing object of knowledge, deferred beyond reason.

Chapter 5 introduces *Mainframe* (2005) as the culmination of my doctoral research into the 'art of subjectivity'. As an intersection for the production and emission of semiotic flows, the information architecture of *Mainframe* is installed and developed as a self-organizing creative system, the auto-poetic program taking shape as an art machine that is built by the people who use it. The *Mainframe* assemblage is developed as a machine for creating

production, an attempt to materialize the differential space of the artist, and in the process transform viewers into creative agents. The *Mainframe* system is then mobilized as the *Inn of Information*, a prototype site-specific institution for realizing overtly material forms of information architecture, enabling creativity to *take place* as the process/product *in* formation. The immediate purpose is to render machinic vision in the social dynamic between art and the informational power of rationalization, conducting and converting the cultural mobility of the sign by plugging into the vast semiotic energies of the information society. The long–term ambition is to develop *Mainframe* as an intelligent public art platform, restoring the vitality of Renaissance invention to the 21st Century subject of information; opening up an info-structure of permutation in the expressive exchange between systems of production and exhibition.

The concluding chapter considers the aesthetic horizon for the 'art of subjectivity' by developing new lines of subjectivation that are open to possibility, in local and unstable constellations of practice. The currents of doctoral research are channelled into emerging creative environments, which are introduced through a third and final phase of artworks in various stages of development. The works in progress are proposed as fragments, suggestions and intimations, working within the established frame of the doctoral research. Distilled as variations on a theme, the artworks pass through degrees of concept and composition in the search for new differences. The combination-composition for unlocking practices onto critical territories of production is identified as a key feature of doctoral research. The 'art of subjectivity' is in turn evaluated as the decoded mode of existence, a creative register and critical tool for challenging limitations on sense, which remain a necessary condition for the production and reproduction of reasonable individuals. Artistic practice is opened up as the experience of critique, the realization of possibility that enables unthought lines of subjectivation to emerge, just as techniques for the rationalization of life are increasing and intensifying. The power of art may reside in its capacity to experiment, to do things differently without reason, but not without purpose.

1. Rationalization and Modernity

The doctoral research addresses the development of instrumental rationality[7] as a social, economic and cultural process. Instrumental rationality is characterized by increased systematization, organization, objectification compartmentalization, standardization, bureaucratization and intellectualization of everyday social life[8]. These terms are indicative of the subject matter as those used most frequently to describe the major traits of rationalization, reflecting the ultra mundane practices of secular societies, which have a tendency to level down all aspects of life into economic ratios,

> The calculating exactness of practical life which has resulted from the money economy, corresponds to the ideal of natural science, namely that of transforming the world into an arithmetical problem and of fixing every one of its parts in mathematical formula (Simmel, 1971, 327).

This chapter begins to interrogate a modern sense of 'individuality' that is paradoxically based upon the increasing economic and technical standardization of the subject. The sensibilities of the individual are subjugated to the external demands of a social-technological mechanism, to the extent that all social interaction is geared towards the conversion of individual qualities into useful quantities. The modern schematic of exclusively numerical values, fixes the individual into a system of accountability, the valuation of personal potential in terms of productivity and performance, in the supra-subjective exchange of a commodified labour market. The productive worker is expected to bracket individual traits of personality in order to become an instrument in the organizational apparatus, where personal aspirations are tailored to the requirements of the job. The inevitable fact of work, often as something that the employee would prefer not to do, is *the* activity that guarantees the operational status of the individual as a useful social being. In the reasonable deferment of the self, work paradoxically provides a model for self–fulfilment based primarily on the efficient completion of a pre-determined set of impersonal tasks.

1.1 Weber's Model of Rationalization

The social historian Max Weber (1864 – 1920) develops a theory of rationalization as the driving force for the development of industrial capital. Weber was particularly interested in the effects of instrumental rationality and believed that the development of a standardized market economy could only be achieved through the construction of instrumental social machinery, which is immanent with the levelling down of life into an individuated aggregate of goal orientated actions. The increased division and specialization of labour would require a useful individual as the typical character of work. The individual is configured as a function of society in the historic convergence of Protestant Asceticism and industrial capital. Weber (1903) analyses how the 'Protestant Ethic' provides an existing code of conduct and moral justification for mid nineteenth century capitalism's emerging form of economic and social relations. As industrious but not self-serving the 'objectively purposeful' (Goldman, 1988, 45) individual becomes the model citizen. The art of wealth creation attains moral respectability as a worldly pursuit through the reconciliation of money and religious belief,

> The worldly ascetic produced by such tension becomes a systematic rationalist. He not only rejects the ethically irrational, aesthetic or emotional …his goal is above all wakeful (wache) methodical control (Beherrschung) of his own life conduct. (Goldman, 1988, 151)

As a model of restraint, the 'systematic rationalist' forecloses on aspects of the personality that are seen as 'spanners in the works', useless anomalies like emotion that interfere with rationalized systems of production. The control mechanisms of the socio–technological machinery inhibit self–expression by overriding independent thought and action. In particular the machine like character of bureaucracy is designed to iron out anomalies in the employee, subjecting individuals to continuous measurement of their performance as the basis for making quantitative assessments of their proficiency in a minutiae of tasks that make up a 'position'. The bureaucratic apparatus is essential for the mass administration of political economy, providing day to day support for commercial and legal transactions; 'the objective discharge of business according to calculable rules and without regard for

persons.'(Weber, 1970, 215) People are not considered as valuable in themselves, as most personal traits do not accord with the utilitarian requirements of the system. The ideal bureaucracy would reject people as flawed mechanisms, whereas the actual one must incorporate and objectify them as approximations of precision. The absolute 'model of efficiency' denotes a functional individual devoid of all qualities, the de-personalized automaton of the bureaucratic machine.

A key historical development in the production of the useful individual was the American system of scientific management. In scientific management Weber saw a pernicious form of social control beginning to take hold in the rapid expansion of disciplinary mechanisms, 'methods of measurement… rational conditioning and training of work performances' (Weber, 1970, 261). This disciplinary infrastructure of mechanization, geared towards the external demands of an expanding technical economy, results in the dominance of instrumentality and the disenchantment of the secular, modern experience. The socio-economic subject becomes an 'individual function' (ibid, 261), adjusted to the specific requirements of modern rationalization. The historical significance of this practice lies in the degree to which it proved possible to codify thought and action in a prescribed model, through the break down of tasks into specialized and routine operations. Time and motion studies were carried out as a basis for optimizing the 'work design' (Morgan, 1997, 23) of any given organization. The social engineering of the workplace amounted to the abstraction and pre–formation of experience, independent of the actual work situation. A new type of pre-destination would enable factories, offices and commercial outlets to function smoothly as machines with interchangeable parts, where performance could be measured against the pre-form of an idealized system.

According to Weber the methods of scientific management, especially those pioneered by Frederick Taylor (1856–1915), lead to the refinement and intensification of the bureaucratic machine. The regime of the 'office factory' (Morgan, 1997, 24) is refined and intensified between the First and Second World Wars in a gradual shift toward mass organizations of interchangeable parts. The scientifically managed workplace exerts a double hold over the

employee who is captured in a section of work, specifically designed to process the minute details of the organization's internal administration. The various administrative regimes are directed outward, first to monitor and evaluate the performances of other individuals in different parts of the same organization and then into wider society, as techniques for the government of subjects, recorded, documented and processed in a growing network of bureaucratic documentation. The fully developed, modern bureaucracy

> stands in a specific sense, under the principle of *sine ira ac studio*. Its specific nature, which is welcomed by capitalism, develops the more perfectly the more the bureaucracy is dehumanized, the more completely it succeeds in eliminating from official business love, hatred, and all purely personal, irrational, and emotional elements which escape calculation. This is the specific nature of bureaucracy and is appraised as its special virtue. (Weber, 1970, 215 – 16)

The specific nature of bureaucracy subjugates the individual to a disciplinary infrastructure, adjusting and fine-tuning everyday experience in accordance with instrumental purpose. The immediate goal of life is to *create* order and routine through technical improvements to the organization's efficiency, limiting the scope for open ended, independent action. This 'parcellization of the soul' (Weber in Schroeder, 1992, 116) produces diluted forms of subjectivity that are easily activated in a socio–economic grid of objectives. The automaton of the office factory has a prehistory in the early templates for modern institutions, as every move and every intention is accounted for in the developing administrative regime. An excess of social control far outstrips what is required to serve the needs of economic development. It represents a peculiar *desire* for numerical precision in personal affairs, the irrational underbelly of rationality that begins to assume an autonomous power to scrutinize every particle of the individual's existence.

Weber's analysis of modern institutions is a pessimistic vision of the objectifying effects of scientific-technical knowledge. There is above all a marked discontinuity between a privileged rationality dating from the Enlightenment tradition and the mechanized process

of modern scientific rationalism. The very concept of knowledge is 'reduced to know how and transformed into an informational commodity' (Scaff, 1989, 233). All meaningful public spaces for the cultivation of collective understanding and dynamic cultural exchange are gradually erased, as the experience of modernity becomes synonymous with a singular materialism of technical progress and economic value. The real cost of modernity is the price the subject pays in accepting a primarily quantitative nature, a personality system, formulated in the discourse of individuality as the symbolic triumph of *one*. The functional concept of the individual unit, slides across the potential subject almost unnoticed as a reasonable and fitting coverage, the equation of the two, subject–individual, in the naturalized valuation of one. As a consequence, modernity places a heavy burden on the shoulders of the individual who becomes subject to an all-pervasive discourse of self-responsibility. On one side bound by the rules of institutional procedure, on the other tied to the social contract, the individual is invested with a duty to act responsibly as a model citizen. In every domain of life there is a proliferation of containment and restraint working to codify psychological space, lest unreasonable action should suddenly break out.

The 'heroism of modern life'[9] (Baudelaire, 1863, 395–422) is encapsulated in the artist's desire to transgress boundaries, overturn conventions and to live passionately by creating an aesthetic attitude toward the impersonal effects of institutionalized modernity, 'Appropriately art turns into the model for experience, for the disassociated subject driven back upon itself'. (Scaff, 1989, 133) The sense of the individual prevails as the dominant programme for a specifically modern experience in which the subject has a 'social life' but has little experience of a life that is social. As a non-rational force for questioning the condition of ones subjectivity, artistic practice might realize its potential to transform a political state of affairs, which has fallen foul of its overvaluation of the rational ego. The power and purpose of art is defined as its ability to delimit situations and beliefs even when there appears to be little room for manoeuvre. In this respect it is feasible to conceive of the social function of art as a *rational* response to an Enlightenment project gone awry. Art is a legitimate act of transgression for empowering a disenchanted modern individual, for restoring a new sense of subjectivity, once again able to grasp modern life in all its

complexity and creative potential. The artist contributes to a cultural and critical interrogation of instrumental reason, whose objective is work against its unreasonable acts.

Theodore Adorno develops a critical position for art in the historical materialist tradition, in which the artist's role is to remind society of what is repressed in the subject through the advancement of instrumental reason and its technological supports. Art configures a dialectical image by making us aware of the personal costs to the subject whose desire is governed by the optimum deployment of discursive reason, which itself perpetuates the individualized self as the objectified form of experience. Art is a modality of practice operating within the same form of experience but is not completely subsumed by it; what is particular to art is both continuous with and critical of a scientific rationalism of progress that commenced with the Enlightenment project. Art can at least approach a re-evaluation of the subjective condition by re–negotiating the problem of agency in an increasingly objectified world,

> Concepts are indispensable to art as they are to language but in art they become something other than shared characteristics of empirical objects… Art is as little a concept as it is an intuition and just for that reason does it protest against their separation. The falsehood opposed by art is not rationality per se but the fixed opposition of rationality to particularity. (Adorno in Berstein, 1992, 200)

By implication art is a form of affective cognition that operates as a material force capable of exceeding the conventions of empirical perception. Art's cultural value is to be found in its realization of the non-rational, non-cognitive visual experience, a 'field of decoded perceptions' (Johnston, 1999, 27) with the capacity to put things into process and exceed historical limits of intelligibility. Adorno's theory of art further qualifies the constructive criticism of the doctoral research as approximate to the production of affective non–concepts, with the power to move us outside a historical frame of mind. A similar problematic of subjectivity can be posed for critical forms of contemporary art practice; to what extent is it possible to conceive of emergent forms of artistic practice capable of re-

composing the experience of a modern individual divided and fragmented in the deterministic grid of instrumental knowledge. How to compose the art of 'rationality' as a condition of experiential possibility, a condition whose potential is paradoxically made possible by a scientific–technical paradigm of quantifiable relations, that in the first instance would appear to have no need for the anomalies of artistic thinking.

In this socio-cultural dynamic between knowledge and experience, Weber's analysis of instrumental reason and its various disciplinary mechanisms, situates him somewhere between the dialectical materialism of Marxist critique and Foucault's 'critical history of thought' (Foucault, 1998, 459). Weber's sustained critique of rationalization is undoubtedly shaped by the principles of historical materialism, but also has the effect of destabilizing them as a dogma of 'progress'. He questions the possibility of a revolutionary freedom and instead argues for an evaluation of 'the force of beliefs and ideas – or, more generally, *culture* - in shaping history' (Gane, 2004, 1). In this respect Adorno's position on aesthetics resembles that of Weber's in its proximity to Nietzsche's genealogy of reason, albeit in a model of social science that would strive to interpret a meaningful artistic practice as a critical reflex of rationality. As the first component in the 'art of subjectivity', Weber's critique of the objectifying mechanisms of modern rationalization destabilizes the already precarious position of the individual as both subject and object of knowledge, and as such anticipates Foucault's genealogy of the modern subject, captured, regulated and produced through local and multiple networks of power-knowledge.

1.2 Foucault's Model of Power

The 'specific nature' of rationalization is for Foucault to be located in a multiplicity of disciplinary techniques, which are not identical with their institutions. We may speak of rationalizations rather than rationalization as a unity of modern practices. Institutions are necessary for the state government of subjects but they are not centres of power in the traditional sense. Instead, power should be analysed as an immanent material force like gravity, its differentials the effects produced through infinite and repeated encounters with knowledge. In this respect power gets to know its subjects and is diffused through them in a

bottom up model, characterized by its contingent and local distribution. Discipline in its modern form is a type of power that may be approximate to a *style*,

> a modality for its exercise, comprising a whole set of instruments, techniques, procedures, levels of application, targets; it is a physics or anatomy of power, a technology (Foucault, 1977, 215).

According to Foucault this matrix of power relations is both individualizing and totalizing because 'the disciplinary space is always basically cellular' (1977, 143); a feature of power that provides it with the informational quality of a programme. The articulations of power stand in relation to institutional practices as software does to the hardware of the computational machine. The drive towards specialization and the emergence of discrete medical, scientific, educational, military and legal disciplines precludes the analysis of rationalization in general. The relationships between power and rationalization should be interrogated as interfaces, site-specific applications in a state of assemblage with institutional machinery. This 'microphysics' of power (Foucault, 1977, 149) is comparable to energy in a dynamic state, a 'mobile field of force relations, wherein far-reaching but never completely stable effects of domination are produced' (Foucault, 1978, 102). The discrete formation of agencies and institutions are the 'cumulative result of a thousand tiny performative struggles peppered throughout the social field' (Massumi, 2002, xix). It follows that discipline needs resistance as a type of friction for power to gain traction in new compositions of subjectivity. Resistances are immanent with various forms of power that manifest themselves as disciplinary techniques, which to some extent must 'look after' subjects individually, as power can only be expressed through them. The arts of rationalization can be analysed as the expression of modern techniques of subjectivation; 'the soul is the effect and instrument of a political anatomy, the soul is the prison of the body'. (Foucault, 1977, 30)

1.3 Power Produces Subjects as Individual

With reference to the motif of the 'soul model' we can begin to imagine a force so prevalent and so dependent on the subject's being that it seems to possess a metaphysical quality like that of God's will, continually informing and reforming the life of the individual. In modernity, the power of salvation is dislocated from its traditional domain in the church and redistributed in the ecclesiastical function, as the basis for its re-administration in and through the new religion of 'the individual'. We move from the fixed domain of the Ministry to the interchangeable mechanism of administration, from the cleric to the clerk who holds not religious office but the office of the bureaucratic official. The saying 'God is in the detail' is emptied out of its original sense, consistent with Nietzsche's 'old housing' of religion. A secular bio-logic administers a life of individual details in the bureaucratic government of the soul. The calculable individual exists only as an effect in the minutiae of facts and figures, the measured 'distribution of the living in the domain of value and utility. (Foucault, 1978, 144)

The accumulation and intersection of identities we adhere to as 'individual' are techniques for the procedural division of both subjective and collective experience. The new religion of individuality emerges with modernity as its condition of possibility, installed in the device of the rational ego as a precarious psychology, increasingly divided within itself and from others. The 'individual' is a positive production of power who in a particular sense is always subject to, that is, realized or imagined in a 'mode of subjectivation' (Foucault, 1998, 459). The frame of individuation is never completely closed though, allowing critical practices, in this case the 'art of subjectivity' to produce the potential of what remains unfinished, anomalous and problematic for experience, through the creative re-composition of the…

> ensemble of more or less regulated, more or less deliberate, more or less finalized ways of doing things, through which can be seen what was constituted as real for those who sought to think it and manage it and the way in which the latter constituted themselves as subjects capable of knowing, analysing and ultimately altering reality. These are the "practices"

understood as a way of acting and thinking at once, that provide the intelligibility key for the correlative constitution of the subject and object. (Foucault, 1998, 463)

Critical aesthetic practices can be *remade* as intelligibility keys, artistic combinations designed to unlock the rationale of closed systems and open them onto differentials of knowledge and experience, rendering visible what is implicit in their constitution and reproduction. Art can show how easy it is to stop thinking critically and begin reciting discourse, becoming the object of ones discipline and in turn subject to its specific rationale. The force of knowledge, its facility to produce the individual as knowing subject and known object, is experienced as the power to create truths over and over again in the making of sense. The authority of the alreadymade[10] artist, scientist, teacher, bureaucrat, is premised on the ability to perform correctly, to reproduce oneself in the pre-formative code of practice. The individual's constant inability to make differences, to exceed limits of intelligibility and produce the new is a problem of creativity; given the infinite possibilities for making sense how do we account for the stability of forms?

It is important to note that subjects are made stable *in* the discourse of individuality, the aggregate form of personal responsibility as a technique for the subtle management and correction of subjects. Individuals are positioned on the side of a 'pastoral power' (Foucault in Dreyfus & Rabinow, 1982, 213) that looks after them and gets to know them by dint of their *becoming* individual. Individuality is an effect of rationalization whose very aim is to expand the social machinery in which the government of the individual continues to unfold. A growing discourse of information as both an instrument for the creation of individuals and a means for identifying them, takes hold in all areas of life,

> A vast meticulous documentary apparatus becomes an essential component of the growth of power. Dossiers enable the authorities to fix a web of objective codification… more knowledge leads to more specification. (Dreyfus and Rabinow, 1982, 159)

Foucault argues that the modern device of the file or dossier making up the individual 'case', gives rise to a whole mythology of pastoral power. The *X Files* motto *The Truth is Out There* contains within it a new metaphysics of detail embedded in the hermeneutic of conspiracy theory; one need only search hard enough and the clues will manifest themselves. Like a knight in the quest for the Holy Grail, Fox Mulder keeps searching for the truth that remains elusive, as if finding it would reconstitute a meaningful sense of subjectivity. The supernatural entity of God is exchanged for a modern metaphysics of the UFO, enabling the discourse of conspiracy theory to replace a religious hermeneutic or in the case of *The Da Vinci Code* to approximate a religion, in the absence of a meaningful system of belief. To offset the possibility of the unbelievable, the rational ego of scientific logic is characterized in Mulder's partner Dana Scully whose doubt can only be assuaged by proof. In the early episodes we glimpse the UFO poster in Mulder's office with the caption '*I want to believe*', the motto of a televised faith based on a belief in an object that is yet to be revealed.

As a 'technology of vision' (De Laurentis, 1989) the *X Files* is an example of how power-knowledge is transferable between the technical apparatuses of different socio–cultural institutions. It forms part of a visual economy, in this case for the cultural exchange of the 'mystery function' by providing an escape from the confines of the bureaucratic apparatus in the imaginary apparatus of the television. In a world short on both adventure and events, the televised adventure is re-negotiated in the technical creation of a psychological space. In a similar vein the universal popularity of the *Lord of the Rings Trilogy*, stems from a return of the epic adventure with Biblical proportions, in which no individual is more significant than the culmination of narrative events. Such complex relations of power: economic, cultural and political, do not offer the possibility of an essential freedom or the promise of an escape from disciplinary mechanisms. It is more a question of the modes of subjectivation we are prepared to accept or even create, through an ongoing series of manoeuvres between knowledge and power.

As both subjects and objects of knowledge, individuals are *expressions of* different regimes of sense, determined by the types of discourse they encounter and the knowledge they inform themselves with and transmit to others. There is no universal expression of power and no overarching political regime, rather we are constituted in regimes of sense where 'forms of rationalization become embodied in practices or systems of practices' (Foucault in Dreyfus & Rabinow, 1982, 133), drifting over time into less easily defined and fluid areas of social activity, including the cultural sphere. The cultural institution of the artist may itself be seen as a rationing, an injunction on creativity enshrined in copyright law and subject to the demands of the market, 'the ideological figure by which one marks the manner in which we fear the proliferation of meaning'. (Foucault, 1998, 221-222) Constellations of sense like 'the artist' and 'the author', in which individuals are produced and reproduced as practitioners of knowledge, show creativity to be working in all directions at once in and through the subject as a locus of comprehension, expression and resistance. The artist assumes authority as a cultural function for setting aesthetic values, which may sometimes have the effect of producing limitations where we expect creativity, because discrete disciplines compete for the rights to make sense, and always at the expense of restricting the emergence of other less established practices.

As the second component in the 'art of subjectivity' Foucault's model of power builds on Weber's critique of rationalization and its consequences for subjectivity. Like Weber and the Frankfurt School thinkers he addresses the problem of reason and its production in rationalization, through an ethical–aesthetic dimension that lends itself to the subject matter of the doctoral research. Although he is working from within a different philosophical tradition, which posits a partial and discontinuous history, Foucault's isolation and identification of the mechanisms of power offers a 'finer grained analysis' (Dreyfus & Rabinow, 1982, 133) of rationalization, which amplifies and further develops Weber's institutional critique. The final component in the theoretical framework is Deleuze & Guattari's materialist psychiatry (1984, 22), the primary operating model for constructive criticism, which at points in the productive cycle connects to conceptual components in Weber, Foucault and on occasion Heidegger. As a 'desiring machine' (ibid, 32), the

abstract machine of art combines with the socio-political machines of rationalization, in a mode of visual critique for situating images as material fabrications of discourse, 'sites of struggle… where powers converge but are also produced' (Tagg, 1988, 148).

1.4 Machinic Production - Desiring Subjects

Eugene Holland identifies 'three materialisms' (1999, 4) in Deleuze & Guattari's schizoanalysis, all of which come into play during the productive phase of the doctoral research. The materialisms are those of Freud, Marx and Nietzsche: Freud's concept of libido, Marx's concept of labour–power and Nietzsche's concept of will to power. It is arguably Nietzsche's 'transvaluation of difference' (ibid, 4), one might say the differential that operates in the evaluation of differences, which functions as a type of conceptual gearing device for engaging the concepts of Marx and Freud. Instead of attempting a synthesis of the three materialisms, Deleuze & Guattari treat them as 'reciprocally corrective… forming a pattern of interference with one another rather than a combined conceptual edifice' (ibid, 14). Schizoanalysis is useful for constructive criticism because it opens up spaces of material production in which the subjectivity of the artist can operate as a pattern of interference; the compositional pattern of the productive process that may be considered as art's objective, and the interference pattern of the composition, which acts simultaneously as a critical patterning or modulation of processes of subjectivation.

The critical pattern of an artistic schizoanalysis is first determined by the nature of the objects it engages, which are subsequently destabilized and broken down in mutations of productive energy. The differential and critical space of engagement in which the 'art of subjectivity' takes place, resonates with Deleuze and Guattari's conception of the machinic interface. In terms of aesthetic engagements with the social machinery of rationalization, the machinic interface can be defined as a 'relationship of production' (Broeckmann, 1997), which in the doctoral research becomes a working relationship between practices, expressed in creative assemblages that become operational as mixtures of technical/organic, biological/mechanical, scientific/poetic compositions. The machinic presupposes that relations of production and reproduction, including creative processes are always already in

working combinations of materials, techniques, technologies, discourses, knowledge and desires, never completely stable and with varying degrees of instability. Simple machinic assemblages include the artist and the pencil, the dancer and the floor, but even these combinations operate in a wider complex of connections; the stage and its machinery, the gallery and its public, the economy and its institutions. In terms of subjectivity, the machinic is the dynamic and productive relationship that expresses creative agents as mixtures or aggregates of social, technological and historical processes.

The 'art of subjectivity' becomes machinic when it engages the creative process as an object of investigation, in which the subjectivity of the artist becomes both unstable and destabilizing in the act of composition. Art 'goes critical' in the machinic differential between established practices, the practice making differences out of practices, in the search for new forms of expression. The creative register is already critical in the productive currents of schizoanalysis, critical at the boundary between sense and non-sense as it operates on the boundary and across it at the same time or to put things another way, it is inside and outside of the frame while negotiating the production of its edges. The machinic production is moulded into a critical operator, enabling the artistic process to dislodge and destabilize its objects of investigation by producing what is already unstable and unfinished in their composition. Machinic art throws its objects into the mix by drawing them into a differential point from where differences are made. This making of differences is proposed as research into the potential for emergent forms in terms of how they work and what they do, critical states realized in a 'materialist semiotics' (Holland, 1999, 21) of production. The machinic interface is a productive combination of art (creative possibility), artist (the differential in creation) and artefact (the difference created), the 'in the making' of artistic production at one with itself as a critical procedure.

Machinic art generates creative configurations, which 'in the making' resist definition. 'By machinic they (Deleuze & Guattari) mean functioning immanently and pragmatically, by contagion rather than comparison, unsubordinated to the laws of resemblance or utility' (Massumi, 1992, 192). In this respect, the artist's function is not to represent but to produce

connections, to unlock creative potentials from within existing disciplines, to realize new practices without the instrumental straightjacket of a specific rationale. Creating proliferations of sense involves the machinic breakdown of the rational subject through utilizing the artist's non-sense as a 'screw loose' within the machine of rationalization. At the machinic interface, production is at once creative and deconstructive, engaging discrete forms of practice as unfinished compositions of rationality that remain intelligible only through the continual encoding and reproduction of their sense. 'The machinic tends toward permanent opening' (Raunig, 2006), 'a field of decoded perceptions' (Johnson, 1999, 27) for experimenting with hegemonic practices, turning both art and its objects into new productive territories, freeing them from themselves and freeing up creative dimensions of possibility.

Art in this sense is an 'abstract machine' (Deleuze & Guattari, 1988, 496), a distinctly non rational, non instrumental practice that is immanent with the connections it produces, evolving, mutating and reconnecting with other machines (scientific-technical, educational, bureaucratic, economic) which are themselves always changing,

> the abstract machine operates at the interstice between finite and infinite, it deterritorializes the concrete world, breaking matter out of its overcoded forms, to put it back into contact with its vitality …this is art's infinite material dimension… constructing flows of matter force into expressive sensations. Here art will become a politics of lived experience, a realm of experimentation that opens life up to alternative modes of being, affirming new realities, new communities and new methods of self-organization. (Zepke, 2005, 8-9)

While maintaining its objects under construction, art multiplies the potential for expressive action and in the process becomes a critical space of contestation, a method for putting realities into states of composition, throwing them into relief as experiences already created and recreated in practice.

The following chapter will make connections with the machine aesthetic of art history, forming creative alliances or filiations that facilitate machinic engagements with the

productive power of rationalization. The 'art of subjectivity' will begin to take shape in the interstice between the quantitative techniques of capital and the compositional practice of art. The purpose is to re-situate practice on the side of production and de–emphasize the representative functions of art. The productive process itself will become the object of investigation in terms of its development as a critical technology of vision. The conceptual components outlined in the introduction are formed into a machinic assemblage[11] of the machine aesthetic, a critical operator that emerges as the quantitative attitude of constructive criticism. In activating the machine aesthetic and connecting it to new productive territories art will be developed as an instrument of critique, a compositional method for manufacturing new practices in a materialist semiotic that makes no rational distinction between established orders of production.

2. The Machine Aesthetic

The machine aesthetic traverses a vast field of investigation, which falls outside the research frame of the doctoral research. The aim of this section is to provide a reference palette specific to processes of rationalization in which the reader can begin to make connections between discourses on machines, subjectivity, and artistic production. The connections anticipate the technique of 'information processing' in Chapters 4 and 5, realized in artistic assemblages of laboratory science, information technology, art and architecture. The machine aesthetic introduces the art historical background of the research, which is then extended into the socio–historical apparatus that gives rise to a multitude of rational techniques. The artworks under discussion in Chapters 3, 4 and 5 find their visual consistency in an eclectic mix of diagrams, models, plans, blueprints, documents, drawings, paintings, film and literature; expressed in material–productive complexes formed and reformed in the 'irreducible materiality of discourses, actions and practices' (Montag, 1995, 67). In the material development of practice, the machine aesthetic enables critical artworks to contaminate the social mechanics of rationalization, as art becomes both a mode of critique and a resistant form of subjectivation. The artist's subjectivity is immanent with the machines of rationalization, but simultaneously retains the capacity to interfere with them; unfolding *in practice*, expressing production, art begins to realize the possibility of making differences.

Rutsky's *High Techne: Art and Technology from the Machine Aesthetic to the Posthuman* (1999) provides a starting point for rethinking the relations between technological development, technological discourse and mutations in postmodern culture. The machine aesthetic is elaborated as a way of life in which 'high tech' is defined culturally in relation to instrumentality but is irreducible to it,

> the ability to technologically reproduce, modify and reassemble stylistic or cultural elements becomes not merely a means to an end, but an end in itself. This process of

technological representation, of reproducibility, alteration and assemblage can be said to define high tech. (Rutsky, 1999, 4)

According to Rutsky, aesthetics in general and more specifically artistic discourse are integral to cultural conceptions and experiences of technology. In modern histories of art and technology, rationalization and standardization do not lead automatically to 'form follows function'; it is more a question of producing the aesthetic as a technique of culture, hence the mutations of 'techno–culture' as lived relations to ones sense of subjectivity and subjugation to complexes of rationality. The 'art of subjectivity' then, qualifies as a modality of experience, articulated in the desire to make something new out of ones place in an increasingly complex world. The machine aesthetic, reassembled into modes of machinic production is the style for an agency in process; extending beyond the field of art it never ceases to be artistic in the creation of technique.

The machinic use of the machine aesthetic is developed as a tactical mutation of instrumental rationality, whereby the interfering mechanism of the artistic component is used to upset the balance of established practices. The mechanism of interference is characterized as the artist's breakdown, the critical technique of breaking down and decomposing a dominant knowledge system while simultaneously upgrading the artistic by product. The critical re-composition retains various elements of the authoritative discourse as a form of camouflage, whereby the artist's interference pattern is not immediately distinguishable from the object of investigation. In this indeterminate space of the non-composition, codes and conventions of sense are re-negotiated and re-combined in critical lines of production. Art becomes an evaluative programme for reformulating practices, as it foregrounds the premises upon which certain types of knowledge come to be established and valued above others. A machine aesthetic of evaluation utilizes the artist's 'know how' as a critical operation of extraction and insertion. Extraction involves a considered abstraction of the object of investigation, a deterritorialization or decoding of perception which forces a practice just outside its frame of intelligibility, breaking down its component parts into a compositional field of potential. Insertion moves toward reterritorialization and

recoding and involves reproducing a mutated form of practice from the field of potentiality, the interference pattern of compositional knowledge freed from the constraints of the instrumental rationale. As Rutsky argues, reassembly becomes the technical objective as reproduction outstrips cultural comprehension and becomes an end in itself.

The artistic treatment of instrumental practices, their reassembly and reproduction, is delivered through the diagnostic assemblage. The critical procedure is composed and administered in the machine aesthetic as the art historical style whose aesthetic frequency resonates with that of the arts (techniques) of rationalization. The critical technology of the machinic composition or interference pattern is designed to retune the historical imbalance between the technical–instrumental and aesthetic–human components of rational assemblages. At the same time, the artistic frequency interferes with the production of subjectivities that are immanent with the practices of instrumental rationality, drawing them into experiential and experimental modes of composition. A gradual shift in emphasis toward the informational aggregates of rationalization enables constructive criticism to develop as a form of informational craft[12], infecting over-coded rationalisms as a friendly virus and reproducing them in the critical frequencies of machinic vision. The machine aesthetic goes critical in its revised mode of informational craft, a productive register for deconstructing the products of rationalization. The following section will evaluate the art historical device of the theory machine, as a potential delivery system for critical techniques of informational craft.

2.1 Theory Machines

Art historical and wider cultural influences on the stylistic development of artworks in the doctoral research are assembled under the umbrella of the 'theory machine' (Kemp, 2006, 117). Kemp develops an art historical interpretation of Leonardo's artworks, which re-evaluates them as theory machines not distinct from the thought processes that give rise to their construction. In a broader sense, the figure of the theory machine offers an aesthetic model for expressing thoughts in material actions, composed and registered as material practices. The theory machine of 'constructive criticism' is developed as an aesthetic and

critical instrument simultaneously, through the assemblage of conceptual and artistic components. The multiple lines of composition that materialize at the critical interface of this assemblage have a tendency to overwhelm established conventions of influence, drenching artworks in semiotic flows that are difficult to define as linear progressions which accord with conventional art historical or educational models. The theory machine of the doctoral research is installed as a contingency in production for processing 'the influential', a device for overriding the art historical discourse of individual artists and their oeuvre. The following art historical influences relate to specific aspects of current practice in the doctoral research, which draw upon the machine aesthetic as a complementary operating model in art history.

Kemp (2006) considers Leonardo's drawings, plans, sketches and diagrams[13] as experiments in thought, the material processing of concepts that may or may not be rendered in three dimensional form; 'there is no safe generalization to be made here as to whether the theory machines were virtual or real' (ibid, 117), Leonardo provides us with models, 'speculative designs' (ibid, 116) that have the potential to transform a situation in assemblages of physical forces and materials. Sometimes the theory machines worked in practice, sometimes they broke down or malfunctioned, and most never came to fruition. All were expressions of possibility, experimental forms available for testing in and through the act of production. The *Mainframe* (2005) theory machine makes production available to the viewer who becomes a component in the machinic assemblage by opting to join in with artistic process. The Renaissance spirit of ingenuity, fuelled by a desire to *make* plans informs the information architecture of *Mainframe* in Chapter 5.

Duchamp's enquiry into the relation between machines and creative process provides a resource of models, diagrams and technical drawings[14], which sustain a critical discourse on mechanical reproduction and its consequences for the modern subject. He develops a supplementary role for the artist in modes of reproduction, showing how the machine 'expresses in its content what it has already made clear by its form: a way of producing production, a willing of further machinic agencies' (Gaffney, 2006, 31). Duchamp's

techniques for tapping into the desire of the machine, treat the artist as a contingency and simultaneously undermine the principle of self-expression; it is more a case of how expression modulates the self as a component in machinic assemblages of production. Duchamp's *Readymades*, which interrogate 'the conditions for the existence of art in a given cultural formation' (de Duve 1996, 101), have informed the diagnostic theory machines in Chapter 4, in terms of testing the expressive possibilities for *making* emotional sense.

Francis Picabia's 'machinic blueprints' (Gaffney, 2006, 55) have clarified the role of the artist as a builder of assemblages, in which he is both producer and produced,

> the role of the artist is not so much to copy the object, but to form an alliance with it; it is the identification of a particular pattern or movement – not its representation – that joins the object to a related movement in the artists association of ideas. The work of art is no more than a bit of code that has been separated from the order of production by the intervening gesture of the artist. (Gaffney 2006, 89)

Picabia's mechanomorphic pictures (**Figs. 1, 2**) develop a visual language from technical manuals and scientific revues, adapting artistic techniques to emergent forms of creative utility. The machinic formations take shape in a semiotic energy that finds expression in organic-mechanical configurations of the electrical. Unlike the Futurists, Picabia, Duchamp and other Dada artists were not trying to depict the machine as definitively modern. Instead, their machine aesthetic draws attention to already immanent forces of the machinic, the energetic of desire composing and conducting in the artistic becoming of machines.

The natural inheritor of the Dada tradition is arguably Fluxus. Fluxus productions were movements of affiliations, alliances and networks in which contingent events took precedence over the conventional exhibition of artworks. The disposable nature of the artwork tapped into the semiotic detritus of everyday life and turned it into something new. Although a naive attempt to do away with the institutional practice of art, Fluxus did raise

questions about the status of the artist as producer in a culture already saturated with productive processes. George Maciunas's *Learning Machines*, (**Fig. 3a**) are of particular interest as a series of diagrams 'intended as the first surface for a three dimensional storage and retrieval system' (Saper, 1998, 142). Maciunas's *Fluxus Box* (**Fig. 3b**) condenses the expressive potential of the 'art movement' into the utility of the artist's tool box, that once opened by the audience as producers, takes on a life of its own regardless of the artist's intentions.[15] In a similar vein, George Brecht's *Universal Machine* (1965) was a device for producing variable combinations of information 'not as part of a descriptive system (as a cognitive work), but as part of generative interactions' (Saper, 1998, 145). Fluxus machines produce chance combinations of information and documentation just at the point in history where they begin to merge into a plethora of rational systems. As an interactive model for 'information processing', *Mainframe* (2005) is a variant of the Fluxus information aesthetic.

A diagrammatic style takes shape in the latter stages of the doctoral research from within the territory of the theory machine. As a potential for material production 'the diagram… seems to have a distinct role, irreducible to either the icon or the symbol' (Deleuze & Guattari, 1988, 531). The diagram is utilized as a shape potential for combining discourse and materiality into new models of practice. A procedure for organizing relations between words, images and objects, the diagram acts as a differential between the art of rationalization, (management systems, information processing, mechanisms, functions, techniques) and the art of subjectivity, allowing the latter to occupy the former as a critical practice that remains within its object of investigation and simultaneously opens up the potential to make differences out of it,

> The diagram is different from the structure in that it refers to a system in disequilibrium, rather than a closed system of equivalence and exchange… This image is best thought of as that of the problem or the problematization (Marks, 1995, 75).

In differing from established systems of practice the diagram becomes an abstract machine for producing them differently. The problematic becomes a productive energy for opening up closed systems and breaking them down in constructive criticism. In Chapter 4, diagrams in the neuroscience of emotion are reproduced as diagrams in the 'art of subjectivity', unhinging the cognitive model with a diagnostic of creative excess 'it is as much a political as a scientific affair: science must not go crazy' (Deleuze & Guattari, 1988, 143). The visual language of these critical diagrams has in turn been informed by the abstract drawings of Sol le Witt (1993) and the diagrammatic styles of Stephen Willats (1973, 1976,), Peter Greenaway (1999), Simon Patterson, (2002), Langlands & Bell (1996, 2002) and Keith Tyson (2002). Historians of graphical information such as Gerritson, (1979), Pedersen (1988, 1997), Richards (2000) and Tufte (2001) have provided a wider image resource, connecting the instrumental diagrams of rationalization to the diagrammatic aesthetic of art history.

Finally, the socio-cultural products of rationalization provide the primary subject matter to be reworked and reproduced in the 'art of subjectivity'. Readymades in the Duchampian sense, the diagrams of neuroscience, graphs from the physiology of affect, technical manuals and instructions, motifs from information technology, systems analysis, diagnostics, management theory and cybernetics, not to mention the economic products of the 'creative industries', films, television, books, magazines, advertisements, websites and popular music, all provide a reference palette of knowledge, skills and materials to be used and re-used in the 'art of subjectivity'. The first readymade though, is an artwork produced as part of my MA research into the rationalization of emotion. The *Heart Calculator*[16] (2002) forms part of Boots the Chemist's *Learning Through Play* range of educational children's toys. Initially the object was cast in twenty different materials and re-branded with various logos in the *Shelf Life* (2002) and *Still Life* (2002) compositions. In the doctoral research the *Heart Calculator* is reworked and reproduced as a product of the text, transitioning from soul model of representation to soul modulation of production. The task of 'providing an image' is re-conceived in the textual reproduction of the *Heart Calculator*, the machine aesthetic put into practice on the production line of 'machinic vision'

(Johnson, 1999, 27). The reworked *Heart Calculator* is pressed into action in the search for a differential style of rationalization, which finds expression in the artistic disposition of the 'quantitative attitude'.

2.2 Providing an Image: From Representation to Production

> What the modern (non) artwork seems most to lack in Benjamin's eyes is the ability to provide an *image*. (McMahon 2002, 4)

The philosophical and artistic problem of how to provide an image has been at the heart of my artistic practice from the outset. Prior to starting an MA in Contemporary Art in 2001, I had never made what are called artworks. I had writing, sketches, drawings, thoughts, perceptions, knowledge, skills, intuitions and desire, in short practices and experience but no artworks. Somehow art had never quite entered the frame, although in retrospect I had been deploying techniques of analysis and critique from the fields of critical theory, cultural studies and art history that were approximate to contemporary artistic strategies. The transition into artistic practice was therefore a material extension of theoretical frameworks of critical enquiry, and an opportunity to address the intellectual limitations and potentials of those frameworks in critical modes of visual practice. The search for a form of visual practice that could combine my existing knowledge of critical theory and a developing interest in artistic practice was initially an attempt at providing an image of an artistic practice capable of integrating philosophical, critical and compositional techniques.

In 2002 an initial series of artworks, produced as part of my MA research into the modern rationalization of emotion, approached the task of 'providing an image' with the aim of locating a point of reflection for mediating between language and materiality in communicative aesthetic models. The artwork as soul model was designated a poetic representation of a subjective state of affairs, the 'how things are' of modernity, produced as a form of protest against the increasing power of rationalization. The artwork 'figured out' the consequences for subjectivity by exploring the similarities and differences between

historical–materialist and archaeological critiques of the Human Sciences, with particular emphasis on their relationship to the productive processes of rationalization. In a series of artistic case studies engaging with historical representations of emotional sense, visual practice played itself out a compositional pattern of interference between dialectical materialism and discursive formation, a constructive-critical analysis of the relationship between number and emotion in modernity.

My MA thesis prised open a space between meaning and materiality that allowed art to function as a switch between the two. In the critical 'writing up' of the practical process, the artwork acted as a conduit between discursive analysis and dialectical materialism. Artworks formed a critical discourse on the commodification of emotion by apprehending the social production of 'truths' about the interior life of the individual. The *Heart Calculator* (2002) was re-evaluated as an apparently benign function of pastoral power and subjected to an intensive discursive analysis that would interrogate the conditions of its possibility as a meaningful cultural object. How did the *Heart Calculator* emerge as an objectified form of emotion and how did it come to *make sense* as that which can signify something about the emotional life of the individual? As a caption point for the extension of thought into materiality the *Heart Calculator* 'provided an image' for a condition of subjectivity and unexpectedly became the catalyst for mapping the complex intersections of power-knowledge which gave rise to that condition as both modern and individual.

Material productions of the *Heart Calculator* series were made prior to the writing of the M.A. thesis and so remained *reflective* of a starting point that addressed the commodification of emotion. The artworks were rendered as material representations of the process of reification, the 'historical replacement of meaning by abstract calculation, as the basis of social order' (Holland, 1996, 241). In an attempt to produce an interdisciplinary critique from artistic, historical and philosophical components, the artistic event as production and exhibition lagged behind current thinking, which emerged retrospectively through the aforementioned discursive analysis of the object. Although the enterprise focused on making artworks, art lost its material centre of gravity in the intellectual

rationale and was left with only its communicative function as a thing recognized and 'finished off' by the reader of the image. The discrepancy between theory and practice resulted in the material production of a dialectical image that maintained the convention of a critical distance between subject and object. The artist situated as an aesthetic sensibility in opposition to the machine of rationalization, the idealized position of the Romantic 'alienated not from the present but from life, from its present and future' (Young, 1992, 144). Conversely, the latter section of the M.A. thesis collapsed the critical distance of the dialectical image by situating the artist as always already a component in various types of socio–technological machines or the productive matrix of power relations described in the introduction to the doctoral research.

Artistic and philosophical components remained out of sync and proved insufficient for addressing the indifference of modern mechanisms and their disregard for persons. 'Faced with seemingly boundless homogeneity, *how* do you make a difference?'(McMahon, 2002, 3) The doctoral research brings practice up to speed with current thinking, through the development of a compositional method designed to restore the material centre of gravity to art as a non–rational, creative mode of conception. It will be argued that this can only be achieved by experimenting with subjectivity as a contingency in the production of artworks, 'depriving the subject (or its substitute) of its role as originator and of analysing the subject as a variable and complex function of discourse'. (Foucault, 1998, 221) Making differences will conceive of the artist's relation to the process of rationalization in positive terms as the basis for producing the 'art of subjectivity'. The frame of the rational ego as a point of stability and cognition will be put in process, it will 'go with the flow' in any given situation, event or circumstance of practice and open itself up to the permutations of possibility, which arise *from* the abstract forces of political economy.

Melissa McMahon's insightful essay *Beauty: Machinic Repetition in the Age of Art* (2002) identifies this contingency as Kant's 'any moment whatever' and compares it to Benjamin's 'here and now', as different aesthetic responses to the indifferent and abstract mechanisms of modernity. The responses reflect the discrepancy between the subject positions of artist

and theorist in academic research, and as such have acted as a template for thinking through the conditions for expression in modernity as a 'properly artistic problem' (McMahon, 2002, 5). Benjamin's 'here and now' takes rationalization as a general state of affairs in which the alienated individual is unable to grasp - make sense, recognize, contemplate - the totality of the modern condition. Impotent in the face of a 'gormless modernity' (ibid, 4) the artist struggles to retrieve something of lived experience, to provide an image from the abysmal debris of a fragmented modern existence,

> the aesthetic as a synthesizer of values, relations and forces…a point of reflection, identification and orientation for the subject in relation to its community and to the world. (McMahon, 2002, 4)

Benjamin does not conceive of the potential for affirming the modern condition, but rather negates it as something inhuman and de-humanizing. This subject position is literally cast in the *Heart Calculator* in an act of representation. A functional motif for the functional individual, the alienated soul accumulates in the *Heart Calculator* as a figure for the instrumental machinery of modern life. The rational ego also 'finds an image' there in the mirror of experience; the machine aesthetic reflected in the art of representation about a rationalized state of affairs. This subject position is recognized on the other side of the artwork as text, where meaning is paid out in the productive reading of its significance, both positions being identical with each other in the symbolic exchange of communication.

As a representative model for experience, the *Heart Calculator* is identified in the M.A. research as a heavy sign, laden with the weight of cultural significance. The image was grasped in terms of Benjamin's 'here and now' and unpacked in an artistic process that qualified as an extension of the textual practice tradition, a tradition characterized by an analysis of the play of signs. Everything that happened to alter the object was geared towards changing its *meaning* as a 'sign of life', enabling it to refract an oppositional artistic knowledge. The reader of images was addressed in a communicative model, based on the premise that artworks and texts were interchangeable as signifying systems. The art

object catalysed a wider critical and historical reading of the relationship between modern subjectivity and representation, an expansion of the singularity of the work into the multiples of its text. Without exception, the creative modifications, adjustments and assemblages involving the *Heart Calculator* were designed to maximize the potential for a textual diagnosis, in which the artistic production was of less importance than the quality of readings it would produce.

The art of representation was like an adapted programme for making the transition into a critical visual practice. The purpose of the *Heart Calculator* was to mediate between the disciplines of art and critical theory, using the language of the latter as an application that allowed the former to get started. A momentum of sorts was created but with hindsight the desire for a stability of form in the framework of the 'here and now' as opposed to the fluid composition of contingency in the 'any moment whatever', captured the artwork in a logic of representation that added another strata of rationality to the layers already under investigation. The arbitrary character of the sign may appear to offer an infinite potential for signification but in fact it becomes a trap,

> The entire linguistic system is founded upon the irrational principle that the sign is arbitrary… applied without restriction, this principle would lead to utter chaos. (Saussure in Chandler, 2002, 29)

Utter chaos seldom ensues, because comprehension is a necessary restriction internal to the workings of coherent signifying systems, all of which have a rationality of their own as socially and historically motivated coding machines. The social injunctions on signs stave off chaos by allowing them to cohere into communicative systems, which are never completely arbitrary because total abstraction would destroy the meaningful and communicative function of the sign, in other words things would go mad in explosions of signification.

Techniques of representation move against an explosion of sense because they are derived from the dogma of the represented and representing individual. Representation serves rationalization as the general principle governing the unpredictable, chaotic forces of modernity in flux. Through the imaginary apparatus of representation (the media), the individual is the representing and represented formula of modern democracy. A critical and artistic *Heart Calculator* can only be sustained as an oppositional image through the conflation of media and communication in a synthesis of representation. To identify the 'provided image' is to create its effect through the negation of the conditions that give rise to it. The privileged position of the critical observer immobilizes art's potential as an aesthetic force by reducing it to an object of contemplation, the effect of individual recognition contracting expressive potential and restricting the possibility for the emergence of the new. There is nothing vital or affirmative in the machine aesthetic of the *Heart Calculator* because like the modern subject of representation it signs up to a long and drawn out analysis in the mirror of self-reflection.

In contrast to Benjamin, McMahon's reading of Kant's 'any moment whatever' allows for a decoding of subjectivity in the aesthetic interface of modernity, refusing the Romantic and Humanist distinction between nature and mechanism. An aesthetic attitude is formulated in the modern complex, with a capacity for producing revitalized forms of subjectivity; an experiential shift from a recognized sign of representation to an encountered sign of affect. The artistic encounter with the forces of rationalization will foreground the immediacy of the aesthetic event, which 'produces the dynamism of the beautiful and its capacity to provoke thought' (McMahon, 2002, 7). Thought is always already in the material event, as that which is taking place and producing new thought. Effect precedes cause in the act of creation because new practices must unfold materially with themselves as actions not pre–determined by existing relations of sense. The transition toward an encounter with the new is therefore also a movement from one kind of subject position to another through creative re–engagements with the machines of rationalization. It is a movement from a produced individual, represented as the effect of a calculative universe to a subject in process, whose art is the state of transformation itself. The art of self-process is expressed in the movement

between different orders of sense production, taking place in the differential that generates distinctions between things, 'Modern individuality constructs itself *au courant* ('on the run') in a heightened sensibility to the actual that is inseparable from a movement of actualization'. (McMahon, 2002, 7)

McMahon's reading of Kant appropriates his concept of the aesthetic in the *Critique of Judgement* as a third term between the mechanical and the organic. The beautiful is manoeuvred into a contingent and mobile relation with the continual unfolding of events. A desire for the 'big picture' able to transcend the mundane and fix a point of reflection is supplanted by desire in process, which is immanent in modernity as that which produces above all else a movement of expression 'on the run'. The fragments of modernity cannot be restored to a whole *and* the sum of its parts are greater than the whole, a doubling of contingency that situates the artist as an agent of transformation, producing indeterminate compositions or assemblages from a multitude of changing situations and things. A specifically modern aesthetics flourishes in the small and serial act in which the beautiful becomes the process itself. In the expressive sequence, the 'art of subjectivity' is put into process, the differential space of aesthetic practice as ground for a tectonics of thought and action. The infinite capacity for continuous engagement and disengagement, fuelled by a desire to exceed a state of affairs, is 'the critical imperative' (McMahon, 2002, 8), and it continues to reverberate in Deleuze & Guattari's concept of the machinic as a philosophical attitude toward modernity. The remainder of this chapter develops the machinic into a critical style, suitable for addressing the practical content of the doctoral research.

John Johnston's essay *Machinic Vision* (1999), adapts Deleuze & Guaatari's concept of the machinic to create the potential for a visual interface between the technical and the organic. Johnston develops this visual interface as a 'field of decoded perceptions' (ibid, 27), a differential space of composition in which art becomes subject to machinic processes of production, taking place in the breakdown of historical boundaries between mechanical and organic registers of sense. The opposing terms maintain received cultural differences between the human and the non-human or between nature and rationality as described in

the Romantic tradition. In order to overcome this somewhat artificial distinction, machinic vision engages the modern machines of rationalization in working combinations of the human-technical, in which the subject is always already a component in machinic assemblages. Subjectivity as such remains under construction and open to possibility, even as it meets repeated and systematic attempts to close it down; potentials of creative agency are available but only as social and historical differentials of experience. Johnston goes on to suggest that the machinic artist must continually connect with and transform the object of investigation, if art is to sustain the vital force it needs to be a life affirming, creative activity.

Machinic vision provides an image not of things in themselves but of things in production, by conceiving of bodies and machines as ever changing aggregates of both organic and mechanical functions entering into 'machinic relationships' (Johnston, 1999, 28) with each other. What is interesting from an artistic point of view are the types of agency that may emerge in the interstice between mechanistic and organic modes of activity, creative processes that are the emergent possibility of machinic assemblages. In terms of artistic production, the machinic affords art an opportunity to encounter mechanistic, over determined and instrumental forms of rationality on their own territory, as opposed to the critical ideal of art, which is presented as the only viable alternative to Weber's 'iron cage' of modern rationalism. In creative engagements with the practices of rationalization, the 'art of subjectivity' adopts machinic production as an expressive energy that is irreducible to the humanist ideal of 'self expression', and *in the process* destabilizes the sense of the rational ego as the necessary condition for calibrating the knowing subject as individual.

The ratio of the modern individual is geared up to reproduce combinations of forces that work to control the productive desire of the subject in particular 'set ups', but they do not form a fixed or inevitable sequence of regulation. No matter how fine-tuned the forces are as mechanisms of capture, anomalies are never completely ironed out and something always escapes. Uncertainty prevails at the interface of the machinic relationship, an upsetting of the balance between two opposing processes;

at points of instability, where a functional equilibrium gives way to movements of change and becoming, there … is a decoding or deterritorialization; but on the opposed face of the assemblage, in contrast to these 'lines of flight' there are processes of stratification, involving redundancy and recoding, or reterritorialization. (Johnston, 1999, 28)

The 'points of instability' are windows of opportunity for the artist. Creation initially moves in the direction of chaos, a radical disturbance in overcoded, overly rationalized regimes of sense. Gradually, by various degrees of giving way to meaning, a recoding finds traction fuelled by the desire to make sense again. As a consequence the artwork as process is to some degree recaptured as the product of a partial sedimentation in meaning. The most affective 'spanners in the works' restrain certitude and maintain the charge of uncertainty, a charge that culminates in the force of the encountered sign. By definition it is the sign that moves us through its capacity to displace our desire to know and interfere with our sense bearings as 'all present and correct'. In contrast, the representative sign points in the opposite direction toward a corrective, regulatory ground of cognition, which adheres to the formation of a rational ego. The machinic artist experiences the sense of losing oneself to the creative process, and is in the same movement revitalized as a component in the machinic composition, capable of deterritorializing the arts (techniques) of rationalization in the practice of a non-rational art. The machinic process stresses what needs to be done in order to convey movements of sense that become discontinuous with the representation of existing states of experience. By becoming a little less rational and a little more abroad the task of 'providing an image' is transformed; the problem is 'not to render the visible, but to render visible.' (Klee, in Smith, 1996, 40)

In the interstice between words and things, material and meaning, is a vital and dynamic space for re-rendering the *Heart Calculator* in process with the power of rationalization. The first artworks in the doctoral research therefore, are expressed in the written thesis as possible forms of production, material potentials that are yet to be realized. The purpose of this heart operation is to configure a subject position for a machinic engagement with the

text, designed to subvert its effect as a stabilizing force of cognition, a coding machine for the identification and explanation of previously made artworks. The traditional role of the academic thesis is to provide a retrospective sense for the artworks as representations, to take readings that describe and qualify them according to various intellectual discourses. A deliberate loosening of the academic straightjacket frees up an expressive energy, an *art movement* for powering up a singularly artistic machine with the capacity for processing research in the compositional method. The 'art of subjectivity' and the productive critique of rationalization are brought together as interchangeable processes in the assemblage of constructive criticism; 'art… grasped in terms of creators and producers, not recipients' (Heidegger, 1979, 70).

The thought process moving into material action is conceived as already within the act of material expression. Expression is apprehended as an immanent creative force, distributed in and through material complexes, which express the conditions of possibility for the subject whose subjectivity is both affect and effect within the material complex. As forms and contents of expression, subjects experience and may also experiment with their ideas and values as immanent in the irreducible materiality of discourse, actions and practices,

> material actions inserted into material practices governed by material rituals which are themselves defined by the material ideological apparatus from which derive the ideas of that subject. (Althusser, 1971, 169)

The artistic reflex is activated with the production of the doctoral 'research subject', as both academic artist and subject matter at the same time. There is a convergence between forms of rationalization, forms of subjectivity and forms of activity, in modes of expression which emerge as transformative compositional spaces, where forms and contents are continually moving in and out of each other and are themselves continually changing. The diagnostic space becomes an expressive space, becomes a critical space in Chapter 4; the informative space, becomes a productive space, becomes a space in formation in Chapter 5.

As a precursor to those chapters the *Heart Calculator* (**Figs. 4-6**) will now enter into a machinic relationship with the power of number. The *Heart Calculator* instructions (**Fig. 7**) provide a readymade machinic blueprint for devising new lines of expression, which draw upon the productive energy freed up by the abstract and calculative relations of exchange value. The destabilization of meaning in capital, its material fluxes and schisms are treated as moments of opportunity for re-materializing the *Heart Calculator* in conjunction with a radical decoding of experience,

> the decoding linked to axiomatization, the process central to capitalism whereby streams of quantified factors of production (materials , skills and knowledge) are conjoined in order to extract a differential surplus: decoding both supports and results from axiomatization, transforming meaningful qualities into calculable quantities. Deleuze and Guattari disagree radically with both Weber and Lukacs however, in considering decoding not as sterile disenchantment or mystifying fragmentation but as the *positive* moment in the dialectic of capitalist development: as the potential for freedom and permanent revolution, opposed by the forces of recoding and capitalist authoritarianism. (Holland, 1996, 241)

The 'positive moment' in the formation of artistic method for the doctoral research arises from a creative re-evaluation of the differential between qualitative and quantitative values in the socio-cultural field. The quantitative territory of the rational ego is introduced as a problematic state of affairs, only insofar as it contains a historical condition of possibility for art. Practice is re–engaged in the power of number, through an intensive reworking of the *Heart Calculator*, a preliminary artistic audit of rationalization. The concept of quality (a term for differences of meaning) passes into quantity as that which has a greater affinity to materiality, in this same movement the difference between quality and quantity is destabilized, as terms standing in opposition to each other. The machinic production sits between the two and leans toward the quantitative, a quantitative attitude of overproduction conceived as a material breakdown of meaning. The 'differential surplus' is the art*work*, the significant quantity that paradoxically resists qualitative definition as a productive process. Hence, as Holland suggests, the artwork begins to emerge from a 'stream of quantified factors' (1996, 241) in which the strategic composition of materials, knowledge and skills,

yields not a product of contemplation but a critical production. Where previously the subjective encounter with the quantitative was experienced in negative terms, it will find new expressions through the productive power of rationalization. The *Heart Calculator* instructions provide not an image but a potential formula for producing the *Heart Calculators* as a quantity of art. The formula becomes an experiment of discourse, a recipe for the shaping and reshaping of things in and through the act of expression.

2.3 Overflow Calculation: Producing the Quantitative Attitude

In the shaping and reshaping of rationalization, the *Heart Calculator* instructions (**Fig. 7**) can be used to reformulate a differential object. In the machinic register, the image of calculation gives way to the infinite desire of number, engaging the productive power of rationalization to send the *Heart Calculator* in unexpected directions. Following the quantitative trajectory described above, the calculative excess of the instructions is utilized as the key component in an artistic assemblage of calculation, powered by the quantitative attitude. The *Heart Calculator* loses its stability of form and gets drawn into a 'stream of quantified factors', which together resist the meaningful framing of a produced 'work'. Work precisely becomes artwork in the continued expression of an object that eventuates, an object *taking place* in a semiotic stream of materiality, the referent of permutation infused with the quantitative attitude. Knowing about the *Heart Calculator* has no rational connection to how it can be materially expressed, revealing at the same time the permeability of meaning as that which must be materially reproduced in never completely stable formulations of sense.

Meaning taking place as a factor of materiality produces the artistic 'overflow calculation' as semiotic flow, creating instability of form in the visual economy of machinic process. The *Heart Calculator* of the retail economy was for sale as an educational children's toy in Boots the Chemist's *Learning Through Play* range, the peculiar excess of calculation in the operating instructions going far beyond the requirements of a young child. The *Learning Through Play* discourse is an economic function of pastoral power, designed to reduce the numerical force of capital to individual proportions, as it draws the child into an apparently

benign relationship with the unmotivated objectivity of calculation. Incorporated into number the child is 'taken in' by it, becoming acquainted with the meaning of calculation through 'a schemata of constraint, applied and repeated… exercises not signs' (Foucault, 1978, 128). In assuming the subject position of the child the machinic artist can destabilize the constraints inherent in the instruction and produce a surplus of action by adopting a positively indifferent attitude to the statement 'learning through play'. The injunction on the productive force of number is lifted by tapping into the process of the 'overflow calculation', a leakage of numeric excess through the meaningful boundary of disciplinary arithmetic. In the artistic 'overflow calculation', indifference equates to neither disinterest nor the alleged 'objectivity' of arithmetic, it is the expression of a quantitative attitude. The result, outlined below, is a material process that exercises the discourse 'learning through play', the practical content of the overflow calculation exceeding the instructive limit of its expression.

The *Heart Calculator* cast in the machinic style delimits the calculative rationale and simultaneously decodes meaning in quantity, leaving only the aesthetic force of manufacture. The 'overflow calculation' displaces the semiotics of meaning with a semiotics of flow, streaming the *Heart Calculator* into the material event of expression. Breaking the mould so to speak, involves making a series of plaster casts over a short period of time. The silicon rubber mould, used for a total of just thirty casts to date, would be pressed into action in an intensive cycle of production, designed to test its physical capacity to retain a stability of form. In theory the mould is good for about one thousand casts before it begins to lose its integrity, at which moment a transformative point is reached that continues along a trajectory of defacement and deformation, until the image of the calculator would no longer be recognizable on the surface of the heart. Difference would emerge in the positive indifference of the quantitative attitude, which finds a material affirmation in the accelerated creative act of overproduction. Furthermore, the subject position of the artistic function would also be cast as interchangeable with the place of the viewer. Individuals would *take place* in the creative process as a situation becomes vacant, the continual cycle of production phased over four weeks, producing well in excess

of two thousand casts. The casting of an artistic subject position interchangeable with that of the viewer becomes the basis for recasting the material condition of that position in the serial *Heart Calculator,* until it suffers a break down in form. The artistic overflow calculation achieves both the instability of form and the composition of a more permeable subjectivity in the soul *modulation* of the *Heart Calculator.*

The unlimited edition of the overproduced *Heart Calculator* collapses the spaces of production, consumption, distribution and reconstitution into one productive sequence. Viewers/producers would be invited to take their *Heart Calculators* away with them as their own products, distributing the artwork into a thousand tiny fragments of discourse, circulating as a conversation of value in other social domains. 'I did that' would at least yield the response, did what? Expressed in new terms the disseminated *Heart Calculator* would force a small but significant sideways shift from economic determination to poetic reproduction, achieved paradoxically in the quantitative sequence. Art emerges in the doing of art, subjectivity de-merges from a discernable individuality in the same process, the breakdown of individuated experience in the creative questioning of the agreed terms and conditions of socio-economic value. The *Heart Calculators* left in the productive space would be stored in modular stacks like those found in warehouses to dry out, before being moved to a wall covered in shelves. The strategic recalibration of *Shelf Life* (**Fig. 5**) would aim to reconfigure the 'gallery' as a sight line for the destruction of the surplus casts. Excess calculators are thrown at those on the shelves as artistic value is broken into pieces, the fragments ground down into raw material and thrown into the mix again for the casting process. 'In the making' the meaning of value is deposed, to the extent that it remains undecided in relation to the established terms of symbolic exchange.

Reproduced in the hegemony of all things calculable, the meaning of the art object is *made* to exceed a rational limit. In the critical breakdown of meaning art is not about things it produces them; it is more a question of how to make the differences of constructive criticism. The semiotic flux of the overflow calculation breaks the existing conventions of value at every point in the productive sequence, making it difficult for a meaningful system

to adhere. *Heart Calculators* in process, render visible the indifference of the quantitative attitude, experienced as the fleeting possibility of an emergent and deterritorialized experience, the non–reality of the 'Symbolic register's radically fluid form of semiosis, free from identity fixations as 'schizophrenia' (Holland, 1996, 243). In the dynamic between fluidity and fixation metaphor 'provides an image', metonymy produces a movement. The sequential force of metonymy displaces the desire to frame things by inhibiting the formation of cognitive scaffolds, which support artworks in acts of recognition and discussion. The trade off between making a difference and making a meaning is played out in the formation and dissolution of identities, between expression and comprehension, between action and description. There is an inverse relation between movement and meaning, producing stability of form in metaphor and instability of form in metonymy. Machinic vision is the analogue of this slippage, rendering visible the gaps between registers; the asymmetry of images to words, of signs to substance, of experience to knowledge. The quantitative attitude is realized as a formula of machinic vision, expressed in the technology of desire it does not attempt to bridge the gaps but finds a productive energy in them.

The machinic formulated in the quantitative attitude does not adhere to the machines and mechanisms of instrumental technology in the usual sense. As a malleable concept it opens onto a field of possibility for adapting rational techniques to artistic purposes. In this regard, there are similarities between the machinic and Heidegger's account of the Greek term *techne*, generally translated as art, skill or craft. In Ancient Greece, instrumental technology was bound up with 'know how' in a milieu of cultural practices which offered a more manifest experience of life,

> Greek techne is a form of unsecuring that is non-instrumental, and thus more closely related to artistic production (poiesis) than to the production of modern technology, which regulates and secures the world in instrumental terms. The world is thus set in place [gestellt], which is why Heidegger figures the essence of modern technology, its mode of representation, as a kind of Enframing [Ge–stell]. While Enframing stresses setting in

place, regulating and securing, the emphasis in techne is on setting free, on unsecuring, on allowing the world to be brought forth in non–instrumental terms. (Rutsky, 1999, 7)

In *The Question Concerning Technology and Other Essays* (1977) Heidegger opens out a dynamic space between the scientific–technical and ethical–aesthetic paradigms, in which art does not simply stand for what is considered human in opposition to instrumental means. Machinic vision introduces desire into the composition of techne, as a premise for 'going critical' in semiotic breaches of historical situations and boundaries. In the 'any moment whatever' of its socio-economic situation, art must make new values if it is not to be marginalized in the passivity of aesthetics or rationalized in the 'rigour' of other disciplines. The non-aesthetic, non-rational artistic production is able to engage the scientific–technical complex and reveal its limitations, only if at the same time it resists being classified as an object of aesthetic reflection. In other words, the institutional desire to quantify, calculate and classify objects of knowledge produces a frame of mind, which sustains art as a marginal practice. In the periphery though, art plays an important critical role because it also sustains the centre; it is used to secure a boundary between rational and non-rational subject matters, reasoning and unreasonable subjects. Insofar as this specifically modern threshold must be continually stabilized and reproduced it remains a tenuous fixation, which at 'any moment whatever' can be put into process in creative negotiations of subjective experience.

In the following chapter the quantitative attitude produces the 'research subject' (the artist as researcher) through forms of institutional techne, which remain open, unsettled and irreducible to instrumental knowledge, only by dint of being modes of visual critique. The power of machinic vision is expressed in the re–evaluation of artistic thought, as it is conceived in accordance with the academic regulations of the University machine. The status of the research subject as producing artist and produced artwork begins to merge into a critical mass, by moving the noun of art into its verb. A productive momentum yields a researcher under tension, who negotiates a course between the academic constraints of the knowledge regime on one hand and the desire to make artworks on the other. This tension

is again made manifest in the quantitative attitude, which aims to dislodge the place of legitimate knowledge, as it strives to become stable in a 'subject who is supposed to know'[17] (Lacan, 1998, 230-43). Consequently, the power of rationalization is identified at points where it gains traction through the containment of the knowledgeable artist in the intellectual apparatus of the University. In a counter measure, a loosening of the academic straightjacket engages the intellectual imperative in the 'agonism', (Foucault in Dreyfus & Rabinow, 1982, 222) inherent in the twisting of artistic practice into academic discipline. The creative energy in this contortion is utilized as a mode of expression in the art historical model of institutional critique, which allows for the growth of artistic territory within the institutional machine. The anomalies embedded in the artistic 'research question' are considered against a wider background of creative responses: literary, artistic and cinematic, to the historic institution and expansion of instrumental regimes.

3. Institutional Machine – Research Subject

Institutional critique is a genre of art history describing the work of artists who interrogate the practices of art institutions: galleries, museums, organizations and agencies, which sustain the production of commercial and public artworks. With certain exceptions, the artists tend to adopt an introspective approach, limiting their critique to reprimanding the bourgeois patrons and institutions that provide necessary financial and cultural support for their practice. The artists informing this phase of research operate across a broader political spectrum, investigating the material terms and conditions placed on artistic production. Hans Haacke's (2004) interrogation of systems and processes of signification, and his collaboration with Pierre Bourdieu in *Free Exchange* (1995), explores the relations between art and political economy in terms of their constitution as cultural capital. Also informing the research is Andrea Fraser's aesthetics of administration that make no distinction between the formation of artists and institutions in complexes of psychological space (Fraser, 2005). A significant stylistic influence is the technique of 'insertion' in *Carey Young Incorporated* (2002), developed as the practice of merging the Bueysian notion of social sculpture with the 'creativity' of a corporate avant-garde. Young's critical strategy is based on the principle of camouflage, in 'becoming corporate' the artist is 'creating chaotic structures within this flow (of corporate influence), making insertions into ideological circuits rather than interventions' (Young, 2002, 43).

The critical frame of reference is informed by *Institutional Critique and After* (Welchman ed, 2006), an anthology mapping the art historical and social co-ordinates of Institutional Critique, from the Conceptual Art of the 1960's to contemporary visual practice. The critical potential of art is reassessed in terms of its capacity to subvert institutional practices and stimulate social and political change. From within the Conceptual Art tradition, Buchloch's *Conceptual Art 1962–69: From the Aesthetics of Administration to the Critique of Institutions* develops a critical engagement with institutional forms through a post Duchampian model of practice. Marcel Broodthaers is perhaps the prime example of an artist who fully develops Duchamp's critique of all that is implicit in arts curriculum, as the

instituted right to produce and evaluate objects in aesthetic terms (de Duve, 1996a 384–87 & 420–25). The wider political dynamic between the institutional critique of art history and the socio–political 'arts of governing' are theorized in Raunig (2006) and Sheikh (2006) whose essays inform the 'art of subjectivity' in their treatment of institutional critique as 'an analytical tool, a method of spatial and political criticism and articulation that can be applied not only to the artworld, but to disciplinary spaces and institutions in general.' (Sheikh, 2006, 3) In this respect, the 'institutional critique' of art history is reviewed as part of a wider history of subversion, a subset of political expressionism whose currency is equivalent to the 'art of subjectivity'.

Emerging from this wider history is a 'character' of documentation who takes shape in 20th Century bureaucratic structures as the subject of information. As Hayles (2005) argues, the subject is increasingly streamed into digital–material processes that are best understood as compounds of information. The artworks in the doctoral research find consistency in the historic character of bureaucracy *becoming* the character of information, a 'bit part' in the machinic assemblage for producing and distributing semiotic flows of code. The ubiquitous 'Ministry of Information'[18] in *Brazil* (Gilliam, 1985), sets the expressive tone with walls of filing cabinets, an excess of forms, memos and procedure, and overflowing 'in' trays, all totemic of irrational bureaucratic machinery gone awry. In the same cinematic genre of tech-noir, *The Matrix* (Wachowski & Wachowski, 1999) exemplifies a cultural shift from bureaucratic to informational aesthetics, in the becoming information of the main character; the transformation of Mr Anderson from corporate programmer by day into his alias Neo, a computer hacker by night who seeks the answer to the question 'What is the Matrix?' In answering the question, the film offers an imaginary way out of the office and ultimately an escape route from *The Matrix* by turning the mental space of the subject inside out. Zizek's (2002) reading of *The Matrix* impacts on the critique of the 'subject supposed to know', through an analysis of the virtual character of knowledge toward the end of the chapter.

It is perhaps no coincidence that there is a management theory of 'matrix organizations' designed to introduce more free flowing forms of micro–politics into the bureaucratic

structure. (Morgan, 1997, 45–52)   In the doctoral research, the machinic character of bureaucracy makes differences out of this movement, negotiating the 'molar and molecular' (Deleuze & Guattari, 1988, 213) terrain of the informational matrix, a figure cutting across the boundaries of the institutional regime,

> there is a whole bureaucratic segmentation, a suppleness of and communication between offices, a bureaucratic perversion, a permanent inventiveness or creativity practiced even against administrative regulations. If Kafka is the greatest theorist of bureaucracy, it is because he shows how at a certain level (but which one? it is not localizable), the barriers between offices cease to be a "definite dividing line" and are immersed in a molecular milieu that dissolves them and simultaneously makes the office manager proliferate into microfigures impossible to recognize or identify (ibid, 214)

Kafka's technique of 'bureaucratic perversion' is deployed as a mode of constructive criticism for reprocessing Herman Melville's character *Bartleby the Scrivener* (1853). Bartleby occupies the subject position of the *Heart Calculator* (2002) as synonymous with the non–person of institutionalized capital. The reprocessed character of Bartleby predisposes the critique of the doctoral 'research subject', enabling the quantitative attitude to be rendered from Bartleby's machinic engagement with office regime. His subversive indifference undermines the rational authority of the office manager, a financial lawyer whose character is the embodiment of the 'subject who is supposed to know'. (Lacan, 1998, 230-43) In taking up the subject position of Bartleby, the machinic artist is able to produce an aesthetics of administration designed to destabilize the 'research subject' in the studio–office assemblage. In practice, the 'art of subjectivity' finds positive expression by reproducing Bartleby in the bureaucratic 'know how' the artist, who assumes academic office in the anomalous position of the non–expert.

3.1 Modulating the Bartleby Machine

At present I would prefer not to be a little reasonable (Melville, 1853)

In Herman Melville's *Bartleby the Scrivener: A Story of Wall Street* (1853) we encounter a man without qualities or references; 'no materials exist for a full and satisfactory biography of this man…Bartleby was one of those beings of whom nothing is ascertainable' (Melville, 1853, 3). The text has been described as 'Melville's Critique of Reason' (Gupta, 1974, 66) and is generally considered to be an indictment of American capitalism's absolute reduction of all values to those of economic formulae. Bartleby in this respect is the figure of that system, a soulless automaton, who by all accounts is beyond redemption. The *Heart Calculator* finds a character in Bartleby, who at first performs like the model of Weberian bureaucratic efficiency,

> Bartleby did an extraordinary quantity of writing. As if long famishing for something to copy, he seemed to gorge himself on my documents… He ran a day and night line, copying by sunlight and candlelight. I should have been quite delighted with his application, had he been cheerfully industrious. But he wrote on silently, palely, mechanically. (Melville, 1853, 11)

In the narrative, the lawyer is the embodiment of Weber's 'systematic rationalist', as he continually takes account of Bartleby in terms of a bureaucratic economy of tasks and outputs. Bartleby's performance and character traits are evaluated against those of the other office clerks; he does twice as much work and with greater accuracy, albeit without a trace of emotion or anything 'ordinarily human about him'. (ibid, 12) It is only when Bartleby begins to break down, when he refuses to copy, that the symbolic limits of reasonable behaviour come into play.

The friction between Bartleby and the reasonable lawyer, unfolds as the impossibility of meaningful exchange, in which the scrivener underwrites his own irreducible logic in the statement, 'I would prefer not to'. Deleuze considers this refusal to copy and collate as the

embodiment of a 'limit function' (1998, 68), a symbolic threshold of intelligibility produced and reproduced in the 'agrammatical formula' (ibid, 68) 'I would prefer not to'. Bartleby's formula infects the system like a virus. The functions of pastoral power are subject to a routine cancellation in Bartleby's positive refusal, causing a breakdown of the office and disruption to the daily administration of business. Bartleby's formula, produced at the threshold of sense, diffuses the individuating procedures of rationality because in Bartleby the mechanisms of power have no discernable individual to 'to get to grips with'. At the precise point where power would gain traction, Bartleby neither refuses nor accepts his employer's appeals to reason, advancing and retreating in the same sentence the irreconcilable preference for the non-preferred. The Bartleby formula is a singularity, flowing between sense and situation in a smooth logic of dissolution. A law unto himself, Bartleby *is* the formula disconnecting the bonds between words and things, discourse and action, he remains severed from language and all the particularities it confers. Bartleby produces himself from a place outside the power of reference ("I am No One") and in doing so maintains a position of indeterminacy as the unthought subject yet to be known.

Melville realizes the quantitative attitude in the radical indifference of Bartleby, an early form of institutional critique, designed to undermine the 'objective discharge of business without regard for persons' (Weber, 215, 1970). Routine business is exposed as historically founded on the forcible imposition of a subjective will, which comes to reproduce itself (copy) as the legitimate form of social relations. Bartleby's arithmetic is to become the figure of number by accepting his fate as a 'species of productive property' (Gilmore, in Thompson, 2000, 395–6). No longer discernable from the soulless mechanisms which give rise to his condition, Bartleby exists completely for the Other, expressing his morbid desire in an excess of non–proliferation, the drive to become no– one,

> the Figure that exceeds any explicable form…a question without response, an extreme and non–rational logic. Figures of life and knowledge, they know something inexpressible, live something unfathomable. They have nothing general about them and are not particular –

they escape knowledge, defy psychology. …There is nothing particular or general about Bartleby: he is an Original. (Deleuze, 1998, 82-83)

The Original is like an effect without a cause, the immanence of the absolute objectification that resists identification as the 'foreign body' moving within the system but also affecting it as already a part in its mechanisms. The system fails to identify Bartleby because he is instantaneous and identical with its model, just at the point where he begins to break down. In the event of breaking down, Bartleby wobbles the system, at once the spanner and the works, a glitch in the matrix, he becomes the critical subject of information, allowing the system to completely overwrite his ego programme with the code of symbolic exchange.

Over-coded and isolated by the financial machinery of Wall Street, Bartleby stands at the 'threshold of modern American anxiety' (Thompson, 2000, 397) about the objectifying effects of free market capitalism. His act of will presents a problem for the calculative machine, but in the end it eliminates him as just another anomaly. Faced by walls on all sides, Bartleby disintegrates into a 'dead wall revery' (Melville, 1853, 25) until he is forcibly removed and imprisoned. As Leo Marx notes in *Melville's Parable of the Wall's*, 'the difference between Wall Street and the Tombs was an illusion of the lawyer's not Bartleby's'. (Marx, 1987, 23) Bartleby comes as close to the wall as possible, revealing that within the legitimate borders of rationality the ideal of freedom is always particular; it confers subjectivity through the social imperative *to be* useful, the autism of specialization, which first objectifies and then compartmentalizes the soul. To go beyond the wall is to exceed the particularities of symbolic divisions, an impossible fate that can only lead to death. 'Strangely huddled at the base of the wall' (Melville, 1853, 40), Bartleby dies of exhaustion.

Melville's anomalous subject of Bartleby, like Kafka's bureaucratic anti–heroes after him, intensifies the competing energies of a political economy in transition, sending creative forces along unforeseen trajectories in the power of bureaucracy. In this mode of expression, the 'character' is not distinct from life, as art is never apart from its situation on

the historical plane of composition, as is evident in the Belgian Government setting up a website (www.kafka.be) for public complaints about officialdom and absurd regulations, saving the taxpayer a total of $281 million dollars in the process[19] (Light, 2005). Equivalent creative possibilities are available in the art of bureaucracy, as an extension of the continual re-organization of the social machine. Emergent figures are produced as the by–products of bureaucratic excess, going beyond the specific distributions of sense that govern a particular system. Both Melville and Kafka anticipate the ambivalent subject of the institutional regime, 'the paradox that a formally rational system produces substantively irrational results' (Derlien, 1991, 12), and in the same instant use the semiotic energy invested in this position to undermine its logic of over determination. The result is a creative dynamic that works itself into the office, as the prevalent modern domain for the cultural distribution of pastoral power. This interference pattern in the politics of the office is worked into the dynamic composition of the 'research subject', a critical character in the 'art of subjectivity' for investigating the limitations of the academic machine.

3.2 Holding Academic Office

In the aesthetics of academic administration, Melville's 'critique of reason' is worked into the studio–office assemblage, generating bits and pieces of practice that begin to build a method for the coherent expression of constructive criticism. The resumption of academic office re-encounters the tension between the production and comprehension of artworks in the University codes of practice.[20] Where the *Heart Calculator* was filtered back into the creative process as a figure for artistic over production, the discourse of Bartleby translates the quantitative attitude into a subjectivity that yields a productive interface between the office and studio. Although creativity is to some extent compromised in the academic rationale, the points where the institution tightens up on artistic practice can be exploited as joints in the desire for precision, procedure and industrious research. The purpose is to materially override institutional conventions, which adhere to standard models of educational discipline for regulating and communicating knowledge. The materiality of the office info–structure, in particular the documentary apparatus, is rerouted back into the productive process, pressing Bartleby into action through irregularities of excess,

displacement and distortion; 'desire baffles knowledge and power.' (Lyotard, in Gane, 2004, 107)

The University 'codes of practice' favour scientific–technical methods of collecting, documenting and verifying data. Repeated attempts to define art as an object of knowledge, tell us more about the institutional threshold of sense, in terms of how we arrive at valuable 'research outputs' in a culture governed by systematic rationalisms, rationalisms that are the effects of interconnected mechanisms of knowledge production. As both producer and produced, the academic artist is evaluated through procedures of measurement, testing and performance, in which reliable notions of objectivity are proved within certain conventions of knowledge production. The dominant research model accounts for art as an anachronism within the University system, lacking a standard methodology or reproducible mode of investigation. Instead, the academic artist develops forms of investigation that are continually renewed in composition, resistant objects, non-rational but not irrational, which must devise their own purposes or succumb to the codes and conventions of existing discursive practices. Contorted and often ill-conceived attempts to annex artistic practice to 'rigorous' academic disciplines result in a devaluation of artistic thinking in favour of secondary intellectual readings of the artwork. In succumbing to various intellectual models of comprehension artists borrow methodology as a crutch, as if they cannot proceed alone and without recourse to an expert authority. Art remains an academic discipline by default, as artists do not become academic experts in a strict sense even if they achieve a high level of technical proficiency, because intellectual expertise is grounded in a scientifically orientated form of objective research. Experience and experiment may share the same root, but it is only quantifiable data from the experimental method or field study that sustains the legitimate form of 'disciplinary objectivity'. (Porter, 1995, 3)

As an interference pattern in the 'disciplinary objectivity' of academia, institutional artists can retain ownership of practice and invent new ones by deploying 'the strategy of the *sive*, the strategy of remaining inside the dominant conceptual regime while carrying out an operation of theoretical transformation and translation.' (Montag, 1995, 66) Art can 'render

visible' the blind spot of ones own subjectivation to a complex of institutional practices, and in the process make differences out of established positions of authority, throwing them into relief as social and historical subjectivities. The artist's code of practice is designed for continually working at thresholds of sense without being completely co-opted by the systems it engages. In order to avoid copying, the artist must to some extent copy, that is, acknowledge his actions as an alternative 'code of conduct', a creative modulation of academic subjectivity. Creative decisions are negotiated by foregrounding the investments that are already made in a semiotic energy that regulates possibility on the basis of *being* objective,

> A decision made by the numbers (or by explicit rules of some other sort) has at least the appearance of being fair and impersonal. Scientific objectivity thus provides an answer to a moral demand for impartiality and fairness. Quantification is a way of *making decisions* without seeming to decide. Objectivity lends authority to officials who have very little of their own. (Porter, 1995, 8) [my italics]

Discourses underpinned by techniques of quantification, produce knowledge from a position of apparent objectivity at the expense of traditional scholarly pursuits such as philosophy and art. The scientific model of the world has achieved primacy in the University migrating from the physical sciences to occupy new territories in the human ones, presenting itself as the only viable 'objective' method of investigation. When artists take up their research posts with the *Arts and Humanities Research Council*[21] they enter into an immediately ambivalent contract, the interminable problem of finding an appropriate 'artistic method', which in retrospect appears as a contradiction in terms. The opposing positions of instrumental researcher and artistic thinker, emerging from an initial diagnosis of the institutional artist, resonate with Heidegger's distinction between the traditional scholar and the modern researcher. He argues that the expansion of instrumental rationality in the form of scientific-technical knowledge has lead to the dominance of methodology in the University,

the making secure of the precedence of methodology over whatever is (nature and history), which at any given time becomes objective in research. This making secure of research in turn guarantees that research always remains industrious and productive – a drive that involves self-perpetuating ongoing activity. (Heidegger, in Day 2001, 97)

Maintaining the primacy of the artistic process while qualifying it as academic entails a new working out of the scholarly attitude in the subject position of the academic artist. If the artwork *assumes* value only through the assumption of academic office, is it possible to know objectively what makes an effective artwork as research? Does the very rationale for making distinctions between artworks and academic artworks erode what is unique to the productive mode called art? The problem turns on issues of valuation and validation. The Latin root of validity means "power", and it may be that discrete knowledge formations are attributed the greatest value as the disciplines that most forcefully and convincingly 'make their case' on the basis of their proximity to what is produced as objective. In contrast, artworks crystallize in a fractal grid of aesthetic and academic values as *cultural formations*, crossing institutional boundaries and connecting University disciplines to other forms of social practice. Aesthetic production *makes sense* in channels between the varied intellectual practices of knowledge-based economies, the intelligent artwork assuming fluidity of form, crossing institutional and social boundaries as it undergoes a cultural trans-valuation; switching between registers, it accrues both academic and social value as a differential of knowledge and experience.

The institutional artist is in knowledge but not fully of knowledge, the atypical expert, a scholar of the anomalous and a maker of differences. Academic office is a partial franchise or investment in the regime of objective methodology, even though a distinctly artistic purpose takes hold in the industry of production. In the scholarly rendition of the quantitative attitude, there is a breakdown of 'the subject supposed to know' (Lacan, 1998, 230–43) or the supposed subject of knowledge. Like Bartleby, the artist breaks down an academic subject position in constructive criticism, refusing to copy but in this instance

continuing to work out scholarly reproductions of the research subject. In creative regulations of the University's code of practice, the 'art of subjectivity' becomes a deferral of the knowing subject in the making. Producing the scholarly attitude displaces substance as meaning with the material substance of composition, in an attempt to provide an image for the research subject in process. The following 'object lessons' produce an artistic subject at the perimeter of 'the intellectual', revealing the partiality of the supposed subject of knowledge, who by taking up the role of the academic expert refuses the subjectivities on the out–side of that territory.

3.3 Office Management Systems

File Manager (**Figs. 8, 9**) forms part of a sequence of procedures for re-negotiating the academic info–structure of the University. The territory of the office is deterritorialized in the studio, leaving only material quantities of data to be manipulated in the object lesson of the critical procedure The electronic procedures of *Microsoft Word* are made concrete in a series of informatic gestures, working 'performance art' into a critical code of practice that eventually reterritorializes in the composition of *Paperwork* (**Fig. 10**). *Paperwork* is a photographic record of a knowledge volume (the data collected during my MA and the first six months of doctoral research). The image is extracted from the *File Manager* series as totemic of the 'in tray', the excess of paperwork that accompanies the computerization of the workplace. *Paperwork* produces the document as the ball and chain of signification, in which subjects are administered and administrating in a labyrinth of bureaucratic excess. *Internal Document* (**Fig. 11**) puts *Paperwork* back into administration, turning a quantity of emotional data into a form of self-diagnosis. *Paperwork* mainly consisted of articles, essays and references on the psychology of emotion and as such was already something of an aesthetic object. The reproduction of *Paperwork* in the style of a Rorschach inkblot test, transforms emotional data into the artistic composition, the *Internal Document* produced in the merging of materiality with psychiatry. This artistic rendering of the institutional neurosis experienced in the bureaucracies of Melville and Kafka, anticipates the diagnostic machines of schizoanalysis in Chapter 4.

Bureaucratic paintings were also produced from 'post its', in which the repetition of memos act as a pixellation of intent. The 'post its' are assembled as signifying units, each one like an artwork in itself but always in a state of serial production. The first composition was produced from blank 'post its' of various colours to suggest a decoded image of the kind we see when identities are blanked out on television. The remaining two compositions in the series were composed from the statements *I has moved* and *To Do* (**Fig. 12**), in a clerical excess of repetition. Additional bits and pieces of clerical practice were produced but not documented and include the corrective fluid of the Tippex signature, photocopies of pencil shavings, a drawing of a pen entitled *Memory Stick* and a sheet of A1 sheet paper with the words 'Position Closed' across the middle. The fragments accumulate into the artist's 'information management system', enabling the art of bureaucracy to go into overdrive as a critical response to the documentary excess of data collection, claim forms, registration documents, annual monitoring forms, surplus emails, literature reviews and so on. In practice, institutional knowledge goes into administration, liquidating the assets of the 'subject supposed to know' in the semiotic flow of the artist's 'know how'.

The emerging institutional craft of the artist reterritorializes in the critical character of the *Emotion* Officer[22] (**Fig. 13**). The *Emotion Officer* stabilizes a subject position for the creative processes of the *File Manager* and becomes a temporary locus for techniques of bureaucratic resistance. Created from a simple reworking of a conference badge, the *Emotion Officer* adapts the discourse of 'the artist in residence' to the terms and conditions of academic tenure. The *Emotion Officer* is an institutional non-persona, the anomaly of the academic artist and the positive materialization of this position in the creation of academic subjectivity. In the *Emotion Officer* art is charged with the official authority of academic creative licence, modulating the indifference of the Bartleby machine in the tactical materialization of the artist's subjectivity, a character of bureaucratic excess working with and against the grain of the institutional rationale. Where Bartleby began in overdrive and receded into inertia, the *Emotion Officer* negotiates limitations and creates a sense of productive momentum. Knowledge in the making finds an image in the objective of critical composition, 'the art of decomposing the actual political context in order to see the

movements from which the specific context emerges.' (Colebrook, 2006, 29) The artist's expertise is to render visible the partiality of 'the academic' in an overtly material practice of intellectual labour. The 'subject supposed to know' becomes a non-expert in the subjectivity of the *Emotion Officer*, a figure for reproducing 'the academic' in critical forms of knowledge. The ambivalent authority of the *Emotion Officer* is at once advanced and retracted like Bartleby's preference for the non-preferred. Academic office makes a public display of itself in the cultural relay of the artist, who experiments with possibilities of institutional experience in a subjectivity retrieved from the 'disciplinary objectivity' of the expert.

In *The Matrix: Or, The Two Sides of Perversion* (2002), Zizek identifies a historical paradox of reason in the Lacanian split subject,

> The objectivized language of experts and scientists which can no longer be translated into the common language accessible to everyone, but is present in common language in the mode of fetishized formulas that no one really understands, but which shape our artistic and popular imaginary universes… The gap between scientific insight and common sense is unbridgeable, and it is this very gap which elevates scientists into the popular cult figures of the subjects supposed to know. (Zizek, 2002, 247)

The objectivity of scientific knowledge cannot serve a symbolic big Other or what we might call the shared social order of experience. The *drive* for objectivity inherent in the complex of the rational ego reveals that there is no objective objectivity, only the desire to *create* it as a symptom of a historical condition of subjectivity. In *The Matrix*, Neo as 'the One' becomes the flip side of Bartleby's 'No One', 'his exceptional role is that of transference' (ibid, 256) occupying a place in signification that is constructed (pre–supposed) by others. 'The One', in becoming information becomes identical with the system and so has the potential to produce a critical 'instability of form', to break it down by foregrounding the virtual or codified nature of symbolic knowledge. Reality 'as we know it' is an artificial construct governed by rules and regulations that at any moment 'can

be suspended or at least re–written' (ibid, 257). In the doctoral research, the machinic artist reassembles the subjectivity of 'the One' into critical information machines for breaking down systems in unstable and destabilizing acts of constructive criticism.

In the next chapter the productive trajectory of the *Emotion Officer* is modulated in the desire of the scientist, as the 'subject supposed to know' of the laboratory. An artistic method emerges in the suspension of the difference between scientific experiments in affect and the artistic experience of emotion. The 'grid of intelligibility' (Foucault, 1978, 93) that gives rise to a complex *sense* of emotion, provides a matrix of expression for questioning the difference between the 'scientific image of emotion' (Dror, 1999b, 355) and its aesthetic counterpart. As not dissimilar to artistic compositions, the graphs and diagrams of laboratory emotion are investigated as scientific creations of affect. Emotional reality 'as we know it' is recoded in the artist–experimenter, a diagnostic machine for rendering critical artworks in the material info–structure of the graph and diagram. In the following section, artistic experiments in emotion reterritorialize the traditionally aesthetic territory of the artist, which since the late nineteenth century has increasingly been occupied by the rational–technical models of the scientist. In the making of emotional sense, the subject and object of knowledge are critically synthesized in the transitory event of emotional experience.

4. Laboratory Machine – Emotional Subject

> When the Society for Psycho - Physiological Research inaugurated its new journal in 1964, A.F. Ax argued that the chief theoretical problem in psycho–physiology was still to 'break the code' by which the organism translated between experience and physiology. (Ax in Dror, 2001, 363)

The objective in this chapter is to 'break the code' by which the scientist translates between knowledge and emotional experience in the scientific study of affect. The chapter reworks the initial title of the doctoral research; *The Artist as an Antidote for the Modern Rationalization of Emotion*, which provided a way into subjectivity through an investigation into emotion as one of the most subjective specifications of the individual. Emotion, or more precisely affect, has to date proved a highly problematic object of knowledge for the scientific 'subject supposed to know', to the extent that it reveals something of the scientist's desire for objectivity in the persistent drive to isolate, quantify and rationalize emotion under laboratory conditions. The primary interest in emotion therefore, is the sheer quantity of definitions it yields in the excessive production of emotional sense. As a category of experience, emotion proliferates in all directions at once, fragmenting into an unstable and destabilizing object of knowledge. The intensive over-coding of laboratory emotion in physiological graphs and neuroscientific diagrams, provides the visual terrain for engaging the 'scientific image of emotion' (Dror, 1999b, 355), as a basis for reproducing the desire of the scientist in the diagnostic assemblage of the aesthetic experiment.

The role played by emotion in the formation of subjectivity has a long and complicated history. In modernity emotion is usually equated with knowledge of individual experience and yet the shifting ground of what counts as emotion makes it a highly problematic subject. Emotion is something of an anomaly in the life of the rational individual but is not simply in opposition to 'the rational', it is central to the formation of subjectivity providing the individual with an affective sensibility, which resides at the outer edge of

comprehension. In psychological terms, the rational ego must strive to stabilize emotion inside its reasonable edge in order to signify the meaningful limits of cognition. Since the late 1940's, emotion has become a primary subject for scientists who carry out research into personality mechanisms, especially in relation to theories on creativity, intelligence and cognitive processing. The following survey of emotion insofar as it relates to the concerns of the doctoral research, reveals how it cuts across boundaries, folds back on itself, subverts meaning and disrupts cognition in the repeated attempts to make emotional sense. The problematic referent makes emotional knowledge difficult to frame and comprehend in instrumental terms as a discernable part of the physical world, and yet it is experienced as an embodied force in the unpredictability of affect. The numerous and contradictory attempts to explain emotion, both internally within disciplines and externally across different fields of thought, situate it as a highly ambivalent object in the formation of modern subjectivity.

Since ancient philosophers first began to think about the world, emotion has been annexed to thought in various forms: 'The emotional state is characterized by a mixture of body parameters' (Heraclitus 500BC), 'Men think and feel with their body' (Empodocles 490 BC), 'Emotional states are characterized by brain temperature, moisture and aridity' (Hippocrates 460 BC) (Salk Institute, 2005). Since Plato there has been a philosophical division of body and soul in which base emotions are of a physical body and higher aesthetic sensations are of a transcendent immortal soul. Plato's designation of material and immaterial of qualities of being allows a causal relationship to be established between mind and body, whereby 'the soul affects the body and the body affects the soul' (ibid, 2005). In *The Republic*, Plato is suspicious of the power of affect and sees poetry as a source of social disruption, 'the poet…wakens and encourages and strengthens the lower elements in the mind to the detriment of reason' (Plato in Van Peer, 1997, 216). Aristotle anticipates emotional-mental processes in terms of faculties; 'capacities and predispositions which precede the potential of emotional experience' and 'formed habits' of disposition or character, which pattern the experience of emotion in terms of knowledge and social conditions (Salk Institute, 2005). Contrary to Plato, Aristotle praises poetry for its emotive

interference in reason, 'as that which leads one's condition to become so transformed that his judgement is affected, and which is accompanied by pleasure and pain' (Aristotle in Kelly ed, 1998, 103).

The precursor to modern scientific theories of emotion is the Cartesian Cogito, which marks the beginning of a formal separation of mind and body. In *The Passions of the Soul* (1649) Descartes intuits a theory of emotion that is scientific in intent, proposing an object that resembles the modern affective mechanism. In isolating things that bodies can do on their own, Descartes attempts to show how 'the body can react to stimuli without any cognitive activity whatsoever' (Lutz, 2001, 75). The 18th Century philosopher David Hume declared that 'reason is and ought to be the slave of the passions' (Hume in Kelly ed, 1998, 103). Hume situates the 'sentiments' as central to an understanding of experience but balances this position by arguing for a more thorough conception of emotion as a basis for developing knowledge of aesthetics. Also in the 18th Century, Kant's theory of aesthetic judgement emphasizes imagination over cognition in the emotive experience of what is beautiful, 'the judgement of taste therefore is not a cognitive judgement and so not logical, but is aesthetic – which means that it is one whose determining ground *cannot be other than subjective'* (Kant in Dickie ed, 1977, 643). Kant formalizes the distinction between 'reason and what he called the inclinations' and yet his *conception* of feelings remains integral to an analysis of aesthetic experience (Kelly ed, 1998, 102-105).

By the late 19th Century, Nietzsche reinstates the aesthetic in a central role where passion becomes a foil for rationality, which he regards with deep suspicion. As both disruptive force and a type of cultural physician, the artist must strive to take up the mantle of the philosopher in the 'art of creating values as the direct expressions or symptoms of will to power' (Zepke, 2005, 13). Heidegger in a similar vein associates aesthetics with preverbal practices, arguing that it was through such practices, and not the pursuit of articulate philosophy or knowledge, that the world is 'disclosed' (Heidegger in Kelly ed, 1998, 105). Art is apprehended as an emotive force, not only of expression but as a means for shaping the world, causing a 'rift' to open up between ordinary experience and the sudden

perception of an extraordinary potential (Inwood, 2000, 122). The Deleuzian version of affect is primarily in the Nietzschean tradition, to the extent that the expression of the artist's desire is synonymous with Nietzsche's will to power (the creative force of willing), in a concept of sensation that attempts to 'overcome the Kantian duality' of conscious subject/perceived object in an affective-perceptual theory of the artwork (Smith, 1996, 29–56).

Nineteenth Century science continues along the trajectory established by Descartes with an accumulative breakdown of emotion into mechanisms, processes and functions of the human being. Charles Darwin's *Expression of the Emotions in Man and Animals* (1872) and William James's *Principles of Psychology* (1890) evaluate emotion as a mechanism in the biological human in terms of the felt experience of bodily changes. Emotion is determined as a 'function' of physiology and is explained according to the 'organismic model' (Hochschild, 1987, 205–211). Alongside James, the psychoanalyst Sigmund Freud is the most notable exponent of the early organismic model of emotion, which is defined in terms of physiological affects. Affect in psychoanalysis presupposes an unstable individual who is subject to *unconscious* desire, emotion being one outward expression of libidinal energy in a state of discharge. Emotion in cognitive psychology has been understood as a mode of subjective experience in the *conscious* individual who has the capacity to distinguish affect as a change in a bodily state; a feeling is the conscious recognition of that change. The cognitive psychologist Paul Young's 1943 definition of emotion as 'an acute disturbance of the individual as a whole, involving behaviour, conscious experience and visceral functioning' (Young in Lutz, 2001, 139) is indicative of discourses in cognitive psychology gradually displacing those of behaviourism, although retaining and adapting many behaviourist techniques. With the growth in cybernetics and information theory, cognition was increasingly conceived in terms of 'circuits, appraisals and calculations' (Lutz, 2001, as research shifted toward the field of neurophysiology.

Running parallel to early organismic theories of emotion there emerged an emotion of the laboratory, isolated from external factors it was explained in terms of its measurement and

quantification as an object of knowledge. In the late 1860's the first graphical representations of emotion were produced as physiological affects. Claude Bernard used the cardiograph to 'read in the human heart' (Dror, 1998, 173) in 1865, while twenty years later in the 1880's and 90's Angelo Mosso traced temperature fluctuations as transcriptions of emotional patterns. From the 1920's onwards, a plethora of 'affect gauging technologies' (Dror, 2001a, 367) were developed including the Ego–Meter, Mechanical Freud, Emotion Meter and the Emotograph, which provided 'a complete emotional diagnosis, inscribing emotions in the universal language of numbers or curves' (ibid, 367). As the bodily sensations of the modern individual are formulated as objects of knowledge, laboratory emotion is increasingly defined as a patterned physiological affect, rendered in the visual numeric of the graph.

Neuroscientific theories of emotion emerge as an interface between physiological models that were incorporated into the stimulus–response tradition of Behaviourism, and those of Cognitive Psychology, especially Cognitive Behavioural Therapy (CBT), which 'presupposes mental states and processes existing independently of their manifestations in behaviour' (Sloman in Bullock & Trombley eds, 2000, 521). The diagram is prolific in neuroscientific models of emotion as the preferred figure for expressing the complex interaction of neural mechanisms. In neuroscience, emotion is currently defined as 'affective process… a patterned collection of neural responses to an emotionally competent stimulus' (a perception of an actual object/situation or the recollection of one from memory). (Damasio in Manstead ed, 2004, 50) This element of the affective process concurs with the aforementioned physiological models in the form of behaviourist reflex responses. A feeling in neuroscience is 'the mental representation of the physiological change that occurs during an emotion… but feeling an emotion also includes the mapping of changes in the cognitive processing style, as well as the evocation of thoughts that are congruent with the feeling state' (Damasio, 2004, 52). Emotion paradoxically is a mental process as much as a physiological affect because the mind in neuroscience is not distinguishable from the body, the amygdala and insula being the key interfaces in the brain for processing emotion. (Damasio 1994, 1999, 2003; LeDoux, 1996)

Against the historical background of an accumulating weight of explanation, *What is an Emotion?* The psychologist William James first asked the question in (1884) and it seems that the answer is no clearer and more complicated than ever before. The 'art of subjectivity' rejoins the question at the point where science tries to resolve the problem in the objectivity of number by 'counting the affects' (Dror, 2001a, 357). Dror argues that numerical emotion is a scientific *creation*, allowing for the circulation and expression of emotions in a form that does not threaten the objectivity of the laboratory as the 'emotion free space' (ibid, 359). The attempt to isolate emotion and subject it to the scientific gaze comes up against a fault line in the production of knowledge. Objectivity is maintained along this line in techniques for the quantification of emotion, but at the expense of producing emotional facts that are inconsistent with the unpredictable emotional event as experienced outside of the laboratory. Emotion is extracted from life in order to try and explain it objectively, 'the vivisection of the human heart according to scientific terms' (Mosso, in Dror, 2001b, 643).

The systematic and calculated abstraction of subjective experience from the experiencing subject, involves the complex operation of measuring affects as numerical data and translating them into the geometric curve of the graph. 'Quantification as a social technology' (Porter, 1995, 49), connected to the visual techniques of the laboratory, becomes the machinic assemblage of the scientific emotional experiment. The desire of the scientist resurfaces in the emotograph as the supposed portrait of objectivity, in which emotional mechanisms are cut off from subjects and their social conditions,

> Framing - the nature of modern technology holding sway in all directions - commandeers for its purposes a formalized language, the kind of communication which "informs" man uniformly, that is gives him the form in which he is fitted into the technological – calculative universe. (Heidegger, in Day, 2001, 100)

Framed in quantification, emotion is transformed into information in order to replicate itself in objective, exchangeable formats for distribution and use within the wider scientific

community. The creation of techniques for capturing verifiable emotional data, anticipates the development of emotional laws or formulae, which might be used to predict and modify the behaviour of subjects. Not only was it necessary to translate emotion into the common language of mathematics, the object itself has to be re- modelled for study in the laboratory. Emotion 'under observation' is difficult to measure due to the technical problem of inducing the required emotional state, unaffected by environmental factors or the presence of the scientist. The search for 'true' emotion paradoxically involves the surgical removal of the experiencing subject through a procedure that extracted either the cortex or cerebrum from the brain of an animal. Cannon's 'truncated brain' (Dror, 2001b, 653) was introduced into the laboratory as an experimental model for generating virtual emotions as more objective than the compromised emotions of living subjects. It would now be possible to create 'objective' affects that could be abstracted as emotional functions in the complex variable of the organism. For the purpose of studying emotional functions as mechanisms of affect, 'emotion' without a subject is constructed in its dissection, containment and codification as data.

Emotions upgraded to the status of 'hard facts' are made increasingly abstract in their purified forms as physical material reflexes, obtained through the 'experiential priming of the organism'. (Dror, 1999a, 223) Laboratory emotion is situated in an exclusively biological model of human experience that for the time being marginalized psychological forms of knowledge for the sake of accuracy,

> The experiencing subject…still the hallmark of psychological studies on emotions, was transformed into a somatic machine that produced emotions without what Sherrington had characterized as inward feeling. Cannon transformed the physiological laboratory of emotions into a space where psychological forms of knowledge were not only not recorded, but simply did not exist. (Dror, 2001b, 653)

The objective methodology of the physical sciences have proved very effective at providing us with 'hard facts' hence bridges don't fall down, ships stay afloat and rockets take off on

most occasions. It is only when the experimental method drifts into the human sciences that the 'subject supposed to know' of science comes up against ambivalent boundaries in the division of knowledge that are difficult to maintain as objective; when the human being emerges 'as both subject and object of knowledge, but even more paradoxically, as the organizer of the spectacle in which he appears'. (Dreyfus & Rabinow, 1982, 29) The scientist's authority to make sense out of emotion is destabilized by the shifting ground of a problematic referent, causing the 'scientific image of emotion' (Dror, 1999b, 355) to stray inadvertently into the aesthetic territory of the artist. The historical composition and re-composition of emotion lends itself to a machinic reconfiguration of the diagnostic machine, which 'primes experience' in the artistic production of emotional sense. Distinctions between scientific and artistic formalizations of emotion are put into process by exerting pressure on the fault line in knowledge that differentiates the 'affect of experiment' (Dror, 1999a, 205) from the affect of the artwork.

4.1 Becoming the Mechanical Freud

In the studio–laboratory assemblage, the artistic practice of doctoral research enters into a machinic relationship with the graphical apparatus, as a basis for over producing the sense of emotion in the quantitative attitude. The historical critique of laboratory emotion is reproduced in the 'materialist psychiatry' (1984, 22) of Deleuze & Guattari, in order to 'break the code' that distinguishes between the subjectivity of artistic experience and the objectivity of scientific experiment. The visual experimenter turns experience into the research objective and steers desire into the productive experiment, putting into process the differential quantity of laboratory emotion. The differential quantity is the artwork making differences out of affect in the act of expression, the objective methodology of constructive criticism. The subjectivity of the artist and the objectivity of the scientist get mixed up in the making, a slippage in the planes of knowledge forcing the sense of emotion outside the limits of rational explanation.

The practice of critique and the perspective of the artist are drawn together in the diagnostic machine, making the quantifiable emotional facts appear as derivative of truths and 'truth

the element from which the value of value derives' (Zepke, 2005, 30). Objective emotional knowledge, realized as scientific perspective, in the same instant becomes transformative, as the artistic diagnosis reproduces a critical emotional reality experienced *in* the recreation of compositional affects,

> The conditions of a true critique and a true creation are the same: the destruction of an image of thought which presupposes itself and the genesis of the act of thinking in thought (Deleuze in Zepke, 2005, 19)

In displacing the 'subject supposed to know' of science, art generates a trans-valuation and becomes in its own right a creative method of evaluating. In order to achieve this objective, it must first strive to become identical with its object of investigation, to get it to show itself by taking its place and nudging it slightly outside of its frame. The artistic exposure of a system's partiality breaks it down in the positive destruction by making it permeable to outside influences, in which it is recomposed in a new frame of reference. The emotional breakdown is made positive in the productive unconscious of machinic expression, which finds an outlet in the artistic re-calibration of the 'Mechanical Freud' (Dror, 2001a, 369)

The 'Mechanical Freud'[23] (**Fig. 14a**) was one of many affect gauging technologies that began to proliferate during the inter war years, as the clinical apparatus of the laboratory spread into the social infrastructure. The Mechanical Freud operated as a device for converting 'affective experience into graphic or numeric inscriptions in real time' (Dror, 2001a, 367), which in the territory of the doctoral research is appropriated as an auto-expressive subject position, a default painter who critically translates between the affects of the laboratory and the affects of the studio. If the rational ego is a machine for making sense in the arts (techniques) of rationalization, the drive to objectify emotion can be evaluated in the 'art of subjectivity' as the productive unconscious operating in the scientist's desire *to be* rational. Resetting the Mechanical Freud enables the artist to engage in a threefold act of composition, self-diagnosis and critical production. In machinic relations between subjects and objects of emotion, 'going critical' creates the compositional

plane of the rationalesque, (affective rationalization minus a stability of form), in combinations similar to those of the Dada machine. Adjacent to the characters *Heart Calculator*, *Bartleby*, and the *Emotion Officer*, the artistic *Mechanical Freud* of constructive criticism re-materializes on the same historical plane of composition, a performative technique for manufacturing the artist's desire as a productive attitude,

> the characteristically irrational fashion in which the Dada machine moves out of joint, short circuits or misfires is only a strategy for establishing connections beyond the limits of the rational subject. The leaky machine is the image par excellence of this agency that is no longer an agency, but an *I feel* of the machinic assemblage reunited with its flows (Gaffney, 2006, 104)

The 'I feel' is streamed into a semiotic flow of emotional data generated in the artist's expression of the rationalesque. The laboratory–studio assemblage reworks the art historical precedent of the 'fluxus laboratory…using the trappings of the science experiment' (Saper, 1998, 137) to deterritorialize the *Mechanical Freud*. It is then recoded in the affect of artistic expression, a machinic interface for producing unstable emotional compounds, a deferred sense between the territories of art, physiology and psychiatry, turning all three disciplines into each other around the singular axis of affect. The possibility of identifying an integral artwork is placed *in* formation by emphasizing it as expression and not object; in the same movement, the rational individual loses identity in the serial production of affect, the artist as a force 'under construction' and not an individuated subject. The art of subjectivity is a leaky machine because it finds its place in the chaotic flows of sense that move between systems.

4.2 Data Capture System 1: Emotographs

In the following sequence of images (**Figs**. **16-22**), the *Mechanical Freud* is modulated as the leaky (emotional) machine of constructive criticism, a subject position for introducing interference patterns into the graphical rationalization[24] (**Figs. 15a, 15b**) of emotion. As artistic variations of Dror's historical critique of scientific affect, the artworks draw upon

the calculative info-structure of laboratory emotion, as a basis for setting up an automatic rendering of the artist's subjectivity in creative adaptations of the *Mechanical Freud*. In becoming the *Mechanical Freud* of the doctoral research, the artist assumes an auto-expressive mode of production translating scientific affects into artistic ones, and at once suspending the difference between the two. The artist's pencil becomes identical with the needle on the graphical apparatus, producing 'emotional outputs' from a machinic interface of artistic/scientific affects. The graphical re-compositions open up a differential affective space for destabilizing the calculative rationale of laboratory emotion in the artistic expression of affects.

Although it is not possible to conduct the simultaneous practice of irreducible disciplines like art and science, there are significant 'points of interference' (Deleuze & Guattari, 1994, 216) between different planes of expression[25]. An excess of sense can escape the restrictions of the signifying harness to which all practices are predisposed. Semiotic energies will sometimes breach systems and move between them in sense flows, which may have the power to prise the planes apart and cause different 'regimes of signs' to slide over each other with unpredictable effects. When troublesome combinations are produced,

> the interfering discipline must proceed with its own methods…these slidings are so subtle… that we find ourselves on complex planes that are difficult to qualify…[for example] partial observers introduce into science sensibilia that are sometimes close to aesthetic figures on a mixed plane. (ibid, 217)

In the machinic assemblage of the artistic *Mechanical Freud*, art proceeds as the 'interfering discipline' as graphical re-compositions emerge as 'aesthetic figures on a mixed plane', in this case the mixture of scientific and artistic variations of affect. When scientists try to create mechanisms/functions of affect or when artists create affective concepts or mechanisms, a situation arises in which science turns into art and art turns into science. The artistic graphs as data capture systems are not simply parodies of scientific rationalism but rather attempt to make something new out of it in the art of subjectivity.

In Heidegger's sense of 'a turning' (Heidegger, in Rutsky, 1999, 8), the artistic 'know how' of doctoral research is used to re-programme the *Mechanical Freud* as a device for redirecting the flow of what is unconscious in the subject of science and art. The artist's subjectivity reports itself in machinic outputs of emotional data, auto-poetic assemblages for generating sequences of informational expressionism. The informational craft of the artist draws the aesthetic into the technical and the technical into the aesthetic, a critical combination for unlocking emergent figures by 'unsecuring them from fixed meanings or values – including both use value and aesthetic value'. (Rutsky, 1999, 105) The alreadymades of art and science, that is, of the established discourses of 'the artist' and 'the scientist', are released from a stability of form and put into process in the data capture system of the artistic emotograph[26]. Reproduced as a data stream of emotion they emit particular feelings at particular times, the 'any moment whatever' of real time sensation, formed and reformed in the expressive sequence of artistic production. Neither art nor science is becoming each other, but both are becoming something new, and in the process unsettle their established frames of reference.

In *Self Belief* (**Fig. 16**), a creative trajectory is initialized in the test run, as the artist's initials are drawn into the graphic flow of information. Art is camouflaged in the authority of science, a transformative point where the idea of self-conviction slips into a discourse of self-discipline in the auto–corrective mechanism of the rationalesque. The act of transgression is instantaneously regulated as it gets drawn into the self-belief of the artistic data capture system. *Belief* (**Fig. 17**) is a modulation of *Self Belief* and questions whether there is a religious hermeneutic still present in the scientist's desire to witness the inner life of the individual. The rationality of pastoral power is reformed along the vectors of 'hope' and 'salvation', expressed in the modernist experiment that maintains belief in the promise of a better life. *Smile* (**Fig. 18**) continues the geometric turn in a play between the indexical and iconic registers of signification. The graph as an index of happiness becomes its own smile in the production of the positive charge, 'you have taken over the job of creating desire and have transformed people into constantly moving happiness machines' (Edgar Hoover, 1928, in Curtis, 2002). Hoover was referring to Freud's cousin Edward Bernay's

who invented the arts of persuasion in advertising and public relations in the United States, with selective use of psychoanalytic techniques in the media.

(**Figs. 19-22**) recode the theme of self–regulation as a positive trait in the artist's profile. An auto-corrective function is installed as a check on creative behaviour, whereby the spontaneous expression is immediately drawn into the control grid mechanism. *The Duration of an Angry Moment* (**Fig. 19**) temporarily disrupts the system in a sudden act of aggression. The loss of temper is at once off set by its immediate re–capture in the graph, as if the emotional outburst is no longer a legitimate form of public expression. It may be worth mentioning that this was the most popular of the exhibited images and eventually sold to a private collector. *Controlled Anger Cycle* (**Fig. 20**) modulates the outburst and restores it to a normalizing frequency, the subject 'on a level' in the geometry of the straight line; (experiments in laboratory emotion use the quantity or intensity of affect as an index of excessive mental excitation, which implies the subject's deviation from a mean or normal state. *Purple Patch* (**Fig. 21**) and *Happy Accident* (**Fig. 22**) recompose the linearity of reason in the art direction of the affective trend. The deviation between the trendsetter and normative trend produces a geometric space in the graph, which emerges as the figure of the 'interference pattern', the non art and non science of the rationalesque. *Happy Accident* renders the *Purple Patch* into a three-dimensional image, the soul model as diagnostic info–structure and emotional relief. In 2006 *Happy Accident* was submitted to The Queens Medical Centre, Nottingham as a proposed commission for a new treatment centre. In line with the hospital's brief of 'well being', the graph was worked into a sculptural design for the *Seat of Happiness* to be lit from the inside and sited on the forecourt as public seating.

In the gap between the graphical compositions discussed above and the emotion diagrams of the following section, (**Figs. 23, 24**) are two prototype diagrams of the rationalesque, based on the minimalist style of modernist painting. The images are a reflexive response to the graphical compositions, a reduction of the serial outputs into basic expressive units. *Positivism* (**Fig. 23**) recomposes the happiness of rationalization as a paradox of scientific

knowledge, a form of happiness that above all must be proved through observation and verification. The 'happiness' expert, whose badge is the output box of the composition, correlates with the *Emotion Officer* as the official of abstract experience, an authority on 'well being' sustained by the objective power of scientific discourse. *Socialism* (**Fig. 24**) develops a similar visual procedure in the reduction of revolutionary potential to the output box of 'anger management'. The official expert of anger is paradoxically the agent of social constraint, as the life of the individual is increasingly tied to institutional discipline and control. The prototype diagrams set up a creative dynamic between knowledge and experience, cognition and expression, instruction and construction explored in the following section through a series of artistic encounters with the emotion diagrams of neuroscience.

4.3 Data Capture System 2: Emotion Diagrams

The emotion diagrams arise at the juncture in doctoral research where the 'art of subjectivity' and the arts of rationalization merge into a discernable critical method. Experiments in neuroscience 'provide an image' of the affective mechanism in the diagram of emotional experience, the encoding of emotion as informational flow in which 'consciousness is the interface between affect and cognition' (Balleine & Dickinson , 1998, 57). In reproducing 'consciousness' the machinic artist draws upon and gets drawn into the semiotic energy of the diagram. The interference patterns of the critical diagrams operate at the threshold of cognition, short-circuiting the scientist's desire to know in the non sense of the affective production. Artistic experiments in affect reterritorialize the 'scientific image emotion' (Dror, 1999b) in the semiotic (informational) flow of expression, the productive energy of the unconscious turning into the aesthetic process. In the diagram of affect there exists a readymade figure for 'art as abstract machine' (Deleuze & Guattari, 1988, 496), which subsumes the operations of the *Mechanical Freud* into the auto-critical diagnostic production. The artist's emotion diagram becomes a generator of semiosis, overflowing into a plethora of cultural functions and productive forces in the diagnostic of the non-expert. The emotion diagram as informational flow provides a creative currency, a conduit for channelling the semiotic method into the expressive event. Emotional, semiotic and

creative flows become interchangeable through an overtly material rendering of affect where *in the making* process and product are composed as one.

The *Diagram of Method* (2005) discussed below, is the product of a transaction between art and science in which the currency of affect undergoes an aesthetic transvaluation. The scientist's desire to turn the subjectivity of emotional experience into the objectivity of the affective mechanism is redirected into the abstract machine of art. In the artistic process diagram, art becomes like its object of investigation only to exceed its cognitive sense as a basis for making differences out of affect. The reconfigured diagram thereby becomes a device for generating new trajectories of emotional expression that are resistant to meaning by dint of joining in with a metonymy of asignification, 'the diagrammatic or abstract machine does not function to represent, even something real, but rather constructs a real that is yet to come, a new type of reality'. (Deleuze & Guattari, 1988, 142) The artistic diagrams are shape potentials, which at 'any moment whatever' can be rendered from the semiotic flow and materialized as critical compositions.

4.4 Producing Information: A Diagrammatic Method ►

The *Diagram of Method* (**Fig. 25**) composes a state of semiosis in which diagrams from the neuroscience of emotion are streamed into the critical-differential space of the doctoral research, prior to their possible rendering as three-dimensional objects in unstable combinations of sense. Machinic vision takes shape as the aggregate of semiotic flows between thought and material, hence the necessity of integrating the artistic diagrams with the complementary data streams: critical histories of laboratory emotion, neuroscientific diagrams and diagrams from the history of art and design, which are subsequently combined in the artistic methodology of information processing. In practice, the diagram of method becomes an artwork for generating other artworks, which take the form of critical objects materialized from an infinite number of potential outputs. The diagnostic procedures of artistic method become an expression of the 'imaginative intellect' (Sullivan, 2005), the knowledge of composition with the capacity to transform both experience and understanding. In the artworks discussed below, method and image are composed in the

diagram as an expression of a method–image assemblage, the 'how it works' of the abstract machine just at the point where it becomes operational in the 'what it does' of critical production.

The *Diagram of Method* demonstrates how an artistic diagram becomes a machinic differential of a neuroscientific diagram, in this case the *Le Doux Circuit* (**Fig. 26**) taken from the Salk Institute online. The neuroscientific diagram is introduced into the conceptual assemblage, which consists of the theoretical components outlined in the introduction. Working as a type of thought filter, the conceptual assemblage primes the neuroscientific diagram with a semiotic potential that proliferates along creative trajectories in connection with the other three data streams of the machinic differential. The corresponding artistic diagram forms an interference pattern with the abstract space of the neuroscientific diagram. Powered by critical histories of laboratory emotion and the diagrams of art history, the machinic differential generates a compositional relay between the *Le Doux Circuit* and its decoding in constructive criticism. A transformed *Le Doux Circuit* emerges in the re-composition of *Soul Model 16: Amygdala* (**Fig. 27**), recoded in the liminal space[27] of the 'feeld'. The feeld describes an abstract space of indeterminacy, a discursive non-space of feeling or 'field of decoded perceptions' (Johnston, 1999, 27) for deconstructing the emotional interior of the reified laboratory subject. The artworks overproduce the abstract potential of the diagrammatic space, in contrast to its use as a space of representation in neuroscientific explanations of the affective mechanism. The machinic differential, expressed in the 'leaky machine' of the feeld, is immanent with wider cultural affiliations between movement and emotion: the Latin root of emotion being *ex motio*, 'to move outward or the outward action/gesture'. In the feeld, the dynamics of the material imagination keep emotional experience in process, the critical-differential space of the artist's emotion diagram extracted from the specific rationale and recomposed as the system in disequilibria; the producer of problematic images described by Marks on p.29 of the doctoral research.

Soul Model 23: Still Life (**Fig. 28**) rearranges the *Le Doux Circuit* (**Fig. 26**) as a component in the critical assemblage. The artwork is informed by the art historical genre of the still life and critical histories of laboratory emotion, which cite overly elaborate language as the enemy of precision. Conceived as a machinic differential of the still life genre, *Still Life* transforms the semiotics of imprecision – 'flowery language and dramatizations are out of place in scientific exposition…for the facts presented should be convincing without an appeal to feelings' (Cannon, 1945, 40) - into the precision flowers of the rationalesque. The art historical genre of the still life provides a discursive frame for the rejuvenated emotion diagram, in which 'flowery language' is expressed as the diagrammatic reflex, 'breaking matter out of its overcoded forms, to put it back into contact with its vitality.' (Zepke, 2005, 8) The arrows follow a critical trajectory that escapes the container of scientific-technical discourse; the deterritorialization of the scientist's desire for accuracy, reterritorialized in the 'leaky machine' of the *Still Life* diagram.

Emotional Breakdown (**Figs. 29-31**) forms part of *Inspectives*, a three-person exhibition for Architecture Week 2006 at the Bonington Gallery Foyer, Nottingham Trent University. The light-box installation is an example of an object based artistic output in the *Diagram of Method* (**Fig. 25**). *Emotional Breakdown* materializes the artistic diagrams of the machinic differential, through the installation of constructive criticism into the social fabric of the built environment. The 'leaky machine' of the feeld is realized as an electrical circuit diagram of light-boxes, the artwork *taking place* in semiotic flows of expression, which spill over into the public display of emotion. The first light-box in the circuit diagram is *Emotion Encryption* (**Fig. 32**) a scrambled image made from bits of the *Le Doux Circuit* (**Fig. 26**) *Soul Model 16: Amygdala* (**Fig. 27**), an *Emotion System* (**Fig. 33**) from the Sociable Machines Project (MIT Affective Computing Portal)[28] and its artistic re-composition as *Soul Model 17: Emotion Arbitration* (**Fig. 34**). The four scrambled images re-materialize in the following four light-boxes only to breakdown again in the following three. The 'leaky machine' of *Emotional Breakdown* goes haywire in a semiotic flotilla of visual components and combinations, the information architecture of the emotion diagram, rendered as the schizoid info-structure of constructive criticism. The info-structure of

Emotional Breakdown is constructed as a sculptural diagram whose stability of form is maintained only by the formal convention of the art historical relief. It remains impossible to make sense out of the composition itself, as the divergent visual components fail to gain traction in a process of recoding. The 'abstract machine' of *Emotional Breakdown* 'gives off' the asignifying energy of affect, the critical 'soul model' as semiotic sculpture *in formation*.

The diagrammatic plane begins to function as a productive intersection, a transformative space for combining and recombining the arts of rationalization with the 'art of subjectivity'. As approximate to the abstract machine of art, the emotion diagram is developed as a creative instruction, an image of production and a productive image, set up to work as the auto-expressive composition. Connectivity becomes both the object and substance of art, connections between practices, between subjectivities, between techniques, between materials, between perceptions, between discontinuity and disjunction. The conceptual-productive combinations of the machinic differential break out in all directions at once, the abstract machine as simultaneous with the creative info-structure of its framework: 'All boundaries are at risk. Since there are a growing number of problems without a discipline, this skill in seeing connections – a skill that fuses creative and critical modes of enquiry will become increasingly important.' (Hughes, 2005, 11) If art has a rationale it is to exceed the limits of its own practice and in doing so to outstrip the sense inherent in the formation of its objects of investigation. Pushed to its limit art begins to lose sight of its authoritative agent of expression (the artist) and instead becomes a creative agency abroad in the cultural milieu, the local and unstable institution of composition, the diagram differing from the structure and making differences out of it. The following chapter attempts to move beyond the limitations of art's rationale in the construction of a machinic info-structure, designed to open up the possibilities for problematic creative practices that operate without the frames of established disciplines.

5. Mainframe: Information Machine - Creative Subject

Mainframe (2005) was a solo show exhibited at Nottingham Trent University's 1851 Gallery as part of *Architecture Week 2005*, a national celebration of the connections between art and architecture supported by Arts Council England and RIBA. In every sense a prototype exhibition, *Mainframe* experiments with the creation of overtly material information architectures as an artistic response to the rationalization of information and the emergence of the information society. In this respect, the *Mainframe* concept has materialized gradually during the course of the doctoral research, which has tended to develop the informational facets of the machine aesthetic. As a documentary assemblage[29], *Mainframe* was developed as an extension of the bureaucratic critique developed in Chapter 3, an expressive locus for generating, archiving and disseminating artworks as a type of information. In its bureaucratic mode, *Mainframe* has developed into a site-specific institution of information, or to be more precise, the non-institution that moves between institutions as the artwork in formation, a machinic interface for the compositional diagnosis of the institutional machine. Mainframe's compositional space of diagnosis is also the material realization of the machinic differential in the *Diagram of Method* (**Fig. 25**). The artwork manifests a differential space of production by turning art into a series of creative programmes, enabling visitors to make compositions by occupying the operationalized subjectivity of the artist as creative agents in a material-informational complex of expression.

The 'art of subjectivity' culminates in *Mainframe* at the point in the doctoral research where processes of rationalization become synonymous with computerization and the developing info-structure of the information economy.[30] The info-structure of the intelligent artwork provides a productive plane for composing and redistributing the interference patterns of the rationalesque, enabling informational production lines like the *Heart Calculator*, *Emotion Officer* and the *Mechanical Freud* to operate as creative programmes in a wider info-structure of creation. A multifunctional subject position is opened up in critical modulations of subjectivity, in a shift toward the construction of

systems for remaking informational practices in overtly material registers of composition. The 'software packages' of the information production lines become devices for harnessing viral practices that are liable to go off in all directions at once, schisms and flows of production that continually open onto the semiotic energies of a much wider network of affects. *Mainframe* extends this productive network beyond the frame of 'the artist' into the information society, its architecture the image of the place and product in formation, a machinic blueprint for what is supra-subjective and beyond comprehension in the complexity of the social info-structure. The creative info-structure throws into relief the vast semiotic flows of the social-connective assembly, modulating artistic processes in modular combinations of practices, 'interference patterns' in the social production of information. My objective is to reproduce instrumental forms of information differently; first 'unsecured' in the diagrammatic space of information (see section 5.1), and subsequently reproduced in unstable info-structures of the *Mainframe* programme. The *Mainframe* architecture makes manifest the potential of information as a social substance in which the viewer participates and reproduces in ways yet to be imagined; critical navigations of established discourses in information management, technology and society.

The commodification of information[31] and its electronic delivery as a product of the information economy shifts the capitalist system of production ever closer to the 'desiring machines' of schizoanalysis discussed in section 1.4. Distributed across a rhizomatic info-structure of social 'communication', the radically interchangeable experience of information intersects with the schisms and flows of Deleuze & Guattari's 'productive unconscious'. (1995, 75) The critical subject of information takes place in the *Mainframe* assemblage as a modulation of the online individual, not the prescribed consumer of connectivity but a producing and produced component in communication with other components in the informational abstract machine. Art in-formation, powered by the semiotic energies of the information economy, contains an immense expressive potential within its compositional field, which art has yet to realize, primarily because artists are seduced by technologies of the machine aesthetic at the expense of developing machinic techniques. Discourses in digitization and the emergence of 'new media'[32], have drawn art

into instrumental rationale of compositional technique, a predictable stability of form where there should be a radical proliferation of practices without discernable disciplines. Instead, artworks all too frequently appear as demonstrations of what the technology can do, as opposed to experiments with what might be done with the technology, turning it into something emergent in terms of Heidegger's 'unsecuring' (Rutsky, 1999, 7) of the instrumental framework.

Mainframe turns information into a material practice in formation, deterritorializing its instrumentality in the machinic technique of informational craft. The informational 'know how' of the artist renders visible new potentials of information, making it work differently in the machinic register as an open ended social experience. The individual character of the 'digital artist' is re-processed into the creative subject of information, who enters into machinic relationships with the semiotic energies of the information economy. In its early rendition as a documentary assemblage, *Mainframe* was informed by Otlet's vision of the book-machine as an energetic exchange of signification,

> *The Book as an Instrument of Abstraction* – As this type of mechanism, the book is a condensed intellectual force that, in the manner of steam, electricity and gunpowder, which, with a small material volume, after ignition and release, produces a considerable expansive force in the brain. The mechanism of the book realizes the means for creating the reserves of intellectual forces: it is an accumulator (accumulateur: literally a battery). Exteriorization of the brain itself, the book develops to the detriment of the brain as tools develop to the detriment of the body. Man … has developed his brain by abstraction, the latter by the sign, and the sign by the book. (Otlet in Day 2001, 18)

Otlet's machinic assemblage of the book-machine posits an instrumental rationale for the conservation, accumulation and distribution of thought. Reproduced in the quantitative attitude the accumulator of the book-machine is 'unsecured' as information in the making, an affective programme for extending the limits of the individual creative experience. As derivative of Otlet's book machine, *Mainframe* harnesses the sheer force of information, an

artistic differentiator with an autonomous power to create new paths of signification in controlled explosions of sense captured in the compositional programme.

The sketchbook assemblage of *Mainframe* accumulates an energetic of sense designed to overwhelm the authority of the artist as a privileged site of signification. The creative possibilities of 'the artist' are made to proliferate by reconfiguring the artist's function as the function that creates creativity in the artistic assemblage. The compositional functions of art are rearranged in *Mainframe* as a connective force between practices, a quantitative attitude toward the sketchbook, developed as an instrument of the abstract machine. The machinic sketchbook sends production into overdrive, a differentiator for tapping into and transforming socio-cultural semiotic energies, 'a rhizome ceaselessly establishing connections between semiotic chains, organizations of power, and circumstances relative to the arts, science and social struggles' (Deleuze & Guattari, 1988, 7). The rationale of the artist as creative ego is first deterritorialized in the *Mainframe* assemblage, in which the sketchbook accumulator is set up as an operation of machinic vision. Early versions of the sketchbook assemblage[33] (**Fig. 35**) experiment with creative combinations extending the form into a modular palette of versatile connections with books, documents, plans, video, audio, the internet, materials, institutions, individuals. The creative subject takes place in a series of connections by working as one differential among many in the 'art of subjectivity'. The originator subjugated to a productive matrix becomes differentiator, the artistic function accumulating and distributing creative potential across a range of compositional possibilities.

The *Mainframe* info-structure draws together the artistic functions of composition, organizing them into a complex of Deleuze and Guattari's 'productive unconscious'. The schizoanalysis of the doctoral research is aligned with an artistic variant of systems analysis to produce the constructive-critical system. The interference pattern of the critical system contaminates the instrumental rationales of over-coded systems, breaking down and reconstructing them in the information architecture of the abstract machine. Systemic

components assume an instability of form, corrupted by critical connections that generate rhizomatic flows of signification,

> detachable, connectable, reversible, modifiable with multiple entryways and exits and its own lines of flight…the rhizome is an acentered, non-hierarchical, non-signifying system without a General and without an organizing memory or central automaton, defined solely by a circulation of states. What is at question in the rhizome is a relation to sexuality – but also to the animal, the vegetable, the world, politics, the book, things natural and artificial – that is totally different from the arborescent relation: all manner of becomings (Deleuze & Guattari, 1988, 21)

In the productive network, the artist's subject position is activated as differential mode and interchangeable creative space, the formalized intelligence key of the combination-composition for unlocking instrumental forms of informational practice, and opening them onto the instability of the abstract machine. The subsequent re-compositions of material-digital compounds remain resistant to the conventional frame of 'the artwork'. The artistic process remains in formation, connecting, disconnecting and re-connecting to parts in a socio-productive assemblage, a compositional continuum made possible by the schizoid fluctuations of the capitalist's information economy. The rationalization of information affords a radical intermingling of forms and functions, with lines of production (production lines) going off in all directions like Otlet's informational gunpowder.[34]

5.1 Creative Discipline: The Mainframe Diagram

Prior to the construction of the *Mainframe* prototype, the exploded sketchbook is re-stabilized in the holding station of the modular technical drawing. *Mainframe* is literally drawn back into the diagrammatic space of Picabia's 'machinic blueprints', a shape potential to be materialized and mobilized as the information architecture of the site-specific institution. The diagrams express artistic desire as the technologized will of invention, the leaky machine's potential for assembling and re-assembling permutations of the information machine - creative subject,

Assemblages are passional, they are compositions of desire. Desire has nothing to do with a natural and spontaneous determination; there is no desire but assembling, assembled desire. The rationality, the efficiency, of an assemblage does not exist without the passions the assemblage brings into play, without the desires that constitute it as much as it constitutes them (Deleuze & Guattari, 1988, 399)

The *Mainframe* assemblage functions as a control point for 'data capturing' the artist's desire in the process of going critical, becoming one with information streams and at once destabilizing them, generating new semiotic flows, re-channelling existing ones, connecting new lines of production to information technologies, materializing code in techniques of info-structure. The rationality of the assemblage is inseparable from the artist's desire to produce the multiplicity of the rationalesque in the 'art of subjectivity'. The artist's constitution is systematized in the differential institution *in* formation, (under construction), bringing into play and being played by the infinite combinations of expression, afforded by the abstractions of the informational machine.

The artistic assemblage of the information machine-creative subject can be further considered in relation to Foucault's analysis of Bentham's '*General Idea of a Penitentiary Panopticon*'. (1977, 200-209) Foucault critiques Bentham's plan for the Panopticon Machine as a potential architecture, which is both disciplinary and creative in its conception. The Panopticon intervenes in the established composition of the Juridical-Legal system to produce an experimental assemblage for a new expression of punishment. A new distribution of discourse, practice and materiality is potentialized in the plan for an architectural apparatus,

the diagram of a mechanism of power reduced to its ideal form; its functioning, abstracted from any obstacle, resistance or friction, must be represented as a pure architectural and optical system: it is in fact a figure of political technology that may and must be detached from any specific use (ibid, 205)

The Panopticon is an abstract machine because the actualization of its potential is not identical with any given rationale for its use, that is, relations of resemblance cannot be pre-established between the diagram and its social rendition in specific disciplinary apparatuses. The architectural apparatus is diagrammed in a state of expression irreducible to established forms, a disciplinary creation immanent in a matrix of productive forces that are re-distributed across the diagram. The panoptic diagram is in itself an experimental and productive space that is at once creative and disciplinary, connecting to practices and connecting practices to other practices and techniques, whereby a proliferation of uses become available including behaviour modification, training routines, the monitoring of medication and its effects, the implementation of untested punishment regimes, the management of tasks and all manner of pedagogical experiments. The Panopticon is a 'laboratory of power' (ibid, 204), and a mechanism by which its functions are autonomized.

A similar rationale is applied to the *Mainframe* diagram (**Figs. 36, 37**). As a visual technology conceived in the artists 'know how', it taps into a materialist semiotic which amplifies and disseminates power through an arrangement which 'programmes at the level of an elementary and easily transferable mechanism' (ibid, 209) *Mainframe* intervenes in established discourses on documentation, information technology and digital art in order to conceive of a studio - laboratory assemblage capable of functioning as a creative institution. As a product of the information society though, the *Mainframe* programme updates the disciplinary model to take account of emergent codes of control, forged in the informational currency of post-industrial societies. The arts of rationalization shifting away from traditional disciplinary mechanisms become increasingly dependent on digital processes,

> confinements are molds, different moldings, while controls are a modulation, like a self transmuting molding continually changing from one moment to the next, or like a sieve whose mesh varies from one point to another. (Deleuze, 1995, 178–89)

Pedagogic, scientific, bureaucratic disciplines do not disappear they are re-configured in accordance with 'intelligent' business models of the computational machine, operating

according to molecular principles of code and control. The subject of information is made increasingly dividual[35] (ibid, 180); fragmented and dispersed in the modulations of digital currency. Data profiles, data banks, data analysis, the password, the diagnostic, the virus, the hacker, identity theft, card cloning, browsing, surfing, sampling, downloading, uploading, warping, plug-ins, add-ons, pen drives, shared drives, hard drives, search engines, software packages, online, on message, a continuous information stream governed by the principle of access, which becomes the basis for creating value out of absolutely anything that can be coded and delivered electronically in the information economy.

The *Mainframe* diagram re-configures the documentary arts of bureaucracy into a site-specific institution for critically engaging the informational aggregates of the 21st century. The productive agenda follows that of Day's materialist critique that evaluates 'the history of information as a privileged site for understanding the intersection of language and political economy in modernity' (Day, 2001, 2). The artworks are streamed into a cultural currency of information in which the documentary disciplines have been gradually transformed into hegemonic rationales of computerization (ibid 38–59). The resulting dominant discourses of information technology, management and science, distribute language and materiality as one and the same product according to the capitalist's instrumental model of 'communication'. Techniques of communication, computation and rationalization are digitally synthesized[36], integrating the subject with a technological apparatus,

> new diagrams of control within open systems… the organization of control subject to messy local assemblages and dynamic compositions, to processes of bifurcation, resonance and interference between the corporeal and the incorporeal, the material and the immaterial, dissipation and accumulation and auto-organization. Open systems and open cybernetic networks are radically open to the Outside, that is they are relentlessly traversed by a flow of matter that is informationally compressed in logarithms, organized by algorithmic code and modulated by technical machines. (Terranova in Krysa, 2006, 12)

The *Mainframe* diagram creates an intelligent material that makes manifest the compressed abstractions of information as thoroughly social and material products, which at 'any moment whatever' can be made to work differently in aesthetic codes of practice and with unexpected effects. The *Mainframe* interference pattern is diagrammed as the information architecture of material practice, a public place of artistic production working as a type of control point, a holding station and creative exchange in the non place of the electronic network. The abstract machine of the diagram plugs into a field of productive potential in which the artistic function becomes operational as an auto-poetic differential, a machinic de-compression (reverse rendering) of code, which experiments with new combinations of material-digital compounds. The unstable compound as place and product in formation, the dynamic composition made possible by the rationality of the assemblage, provides a subject position of radical permutation in the shared drives of machinic information.

5.2 A Shared Drive: The Inn of Information

The *Mainframe* prototype (**Fig. 38**) reproduces the book machine of information, a site-specific institution of production, documentation, exhibition and distribution. The prototype moves the diagrammatic potential into semi-operational status, testing the rationality of the assemblage in the experimental exhibition. The exhibition's components (**Figs. 39-44**): *Mainframe* A1 diagrams, prototype 3D model, hardcopy A4 frames, hardcopy production room, digital projections and interactive CD ROM, are set up to work together as a possible machinic assemblage of the informational machine–creative subject. Visitors can join the assemblage by logging into the *Mainframe* programme, which at this point worked as an electronic device for storing/projecting artworks according to a themed drawer or compartment in the documentary assemblage. The *Animi Duco* drawer (see following paragraph) was used to calibrate production for this particular exhibition. The architectonics of the exhibition materialize the contents of the *Animi Duco* drawer by installing the electronic images as a sequence of hardcopy frames, establishing a continuum from the digital to the material experience. Drawing inspiration from both the electronic and wall based frames, visitors plug in to the exhibitionary info-structure by creating their own diagrams and graphs in the *Mainframe* production room. The collective semiotic

energy is then streamed into the 'start up' programme as visitors creations are used to modulate the initial sequence of the exhibition on a rotating basis.

Mainframe drawers and compartments are conceived as 'windows' of exploration and production that once opened by the user begin to calibrate the system with a productive theme. The *Plan* drawer for example, sets up an auto–adaptive mechanism designed to modify the *Mainframe* system as visitors explore its creative functions. The drawer contains past and current *Mainframe* plans, drawings sketches, blueprints, alongside an initial selection of machine drawings by Duchamp and Leonardo. The purpose is to explore the productive power of invention by connecting the abstract machine of the plan to the documentary assemblage. Viewers are invited to enter into a machinic relationship with the sheer potential of plans. Driven by the collective desire to *make* plans the drawer will accumulate into a vast potential of drafts, modifications, architectures, devices, blueprints; the skeletons of concepts any one of which could be rendered as a three dimensional artwork. In the 'shared drive' viewers begin to modify the *Mainframe* programme, as they submit plans for operating systems or productive processes for new drawers; connective extensions which mutate the system through infinite combinations of semiotic energy[37]. Viewers may also respond to plans stored by previous users, to the artist's ongoing adaptation of those plans, and to the gradual uploading of a much wider resource of plans: artistic, architectural, scientific, technical manuals, industrial designs; the material of possibility which at the point of conception is actualized in the production of abstract potential, 'plans are realized from the moment they are made'. (Anonymous)

The *Animi Duco* (*Heart Calculator*) drawer (Appendix G) was used to calibrate the productive register of the prototype exhibition. The drawer is an example of how 'production lines', in this case the graphs and diagrams from Chapter 4, can be streamed into the *Mainframe* hardware. A creative info-structure is set up in the *Mainframe Production Room* (**Figs. 42, 43**), which opens up the subject position of the *Mechanical Freud* to a shared drive, a public participation in and expression of the artist function in which the process of self diagnosis is maintained *in* formation in the 'art of subjectivity'.

The initial sequence of frames, comprise the majority of the images discussed in Chapter 4 as an affective production line materialized during the month before the exhibition. At the point where the semiotic energy of the artist is exhausted the productive process is revitalized by a new supply of creative energy. The quantitative attitude developed in Chapter 1 through the collapsing of the productive and exhibitionary space, is reproduced in a new phase of production. The overproduction of the breaking down *Heart Calculator* is re-modulated in the shared drive of the *Mechanical Freud*. The 'leaky machine' of the collective assemblage generates an excess of affect in which the individual producer is connected to a supra-individual force of production, expressed and expressing in the exhibition as event. The creative subject of the informational machine emerges as both experience and experiment of the assemblage, the auto-expressive artwork with a life of its own.

5.3 Intelligent Material: The Information Cube

The *Information Cube* (**Fig. 45**) is a work in progress, the future realization of the *Mainframe* programme as an auto-expressive architecture. The artwork is designed to host any individual regardless of their 'artistic tendencies', enabling the informational machine– creative subject assemblage to self-organize into a social platform of composition. The 'I feel' of the leaky machine facilitates a flow of semiotic energy through the machinic space of production, the creative cell revitalized and reproduced in the artist's network of composition,

> an autopoietic machine is a machine organized (defined as a unity) as a network of processes of production (transformation and destruction) of components which: (*i*) through their interactions and transformations continuously regenerate and realize the network of processes (relations) that produced them; and (*ii*) constitute it (the machine) as a concrete unity in space in which they (the components) exist by specifying the topological domain of its realization as such a network. (Maturana & Varela, 1980, 78)

The reconstruction of information as social material enables the creative subject to become a component in the info-structure *and* an agent in its non instrumental re-production. The *Information Cube* provides a structure, architectural and compositional, for the future realization of the *Mainframe* programme, a synthesis of the prototype components into a unified space of composition, documentation, exhibition and communication (in the productive network). What emerges from this synthesis is the intelligent material of the public sculptor as sculpture, the creative subject as object *in* formation, the artwork working.

The development of the *Information Cube* as public sculpture addresses the lack of non-instrumental public space, indeterminate spaces of social contestation and experience. In this respect, Couldry's (1995) analysis of Rachel Whiteread's *House* (**Fig**. **46a)** has informed the development of the *Information Cube* as an open-ended discursive space of expression. Couldry's analysis of *House* reveals how, 'in the gravity of an event' (1995, 112) the artwork assumed a life of its own quite apart from the intentions of the artist, as it became a public canvas (graffiti, poems, messages, drawings were scrawled on its walls) for the 'multi-dimensional intersection of discursive and non-discursive practices, each of them irreducible to each other…or to a single model' (ibid, 113). The *Information Cube* proposes a public merger of the 'art of subjectivity' and the informational arts of rationalization, re-composing existing lines of aesthetic subjectivation in the conception of production lines or lines of production that become embedded in existing and emergent social practices. The intelligent material of the *Information Cube* will situate creative subjects as components within the workings of the modular artwork (**Fig. 46b)**[38], providing semiotic energy for its reproduction. The object *is* the process, the never to be finished artwork whose purpose is to create possibilities for production. Intelligent composition is realized as a social relation and material relation in the making, 'a network of processes of production' (Maturana & Varela, 1980, 78) in which the 'art of subjectivity' takes place.

The *Information Cube* provides a standard creative unit, capable of functioning as a site-specific application, a viral institution of creativity. Art's capacity for cultural trans-

valuation is materialized in the *Information Cube* as a process that is also a place, constructed and constructing it finds domains between institutions by plugging into and contaminating their existing discursive practices. The host institution could be a museum, gallery, university, school, hospital or company whose practices would inform the calibration of the creative process, in the same way that the thematic divisions of the drawers in the *Mainframe* prototype were used to set up the experimental exhibition. The 'docking' process builds the machinic interface between established institution and the viral institution, the incubation period for mixing up practices and turning one thing into another, as was done with the experimental combination-compositions in preceding chapters. A new type of aesthetic connection emerges between the *Information Cube* (abstract machine, viral institution) and the institutional machine. The *Information Cube* goes to work on the host institution unlocking its practices with the intelligence key of the combination-composition just as the institution works the *Information Cube*, providing it with critical territory, semiotic energy, human resources, discourses, histories, procedures, documents, knowledge, skills, materials, experience and techniques. Social architecture becomes information architecture becomes constructive criticism with the artist as difference engineer on the production line between practices.

The *Information Cube's* production line unfolds in a continuum of activity. The first stage is comparable to 'field work', setting up the *Information Cube* as a mobile laboratory for performing artistic experiments on the host institution. For example, a constructive critical analysis of a gallery's exhibition programme, its rationale in terms of artist selection, audience development, participation, business strategy and education. The diagnostic (docking) phase provides support material for developing a parallel critical programme in the *Information Cube*, devised as a compositional framework for destabilizing the established practices of an institution The critical-compositional framework is incubated during the research period, and then literally programmed into the motion sensitive walls, the intelligent material of the algorithmic artwork.[39] The programme might involve a simple proliferation of creative energy, an application of the quantitative attitude directed against the institutional arbiters of aesthetic value. Visitors walk inside the informational

space as if inside a large pixel, activating and exploring and making additions to the programme, while simultaneously becoming a component in the intelligent material. A seamless flow of material-digital production eventuates in the place taking place, a mode of informational expressionism in which movement as semiotic energy (action, information, expression), becomes the aggregate in the dance of information.[40]

The programme is tailored to critically reproduce the institutional discourse in different directions, opening out lines of possibility that are closed down by, for example, curatorial authority. Visitors/users not only intersect with lines of production and curation, they also generate lines of emission. Compositions are instantaneously projected from inside the cube onto the surrounding architecture, turning the institution against itself in a critical fold of production. The boundaries between artwork, artist and institution are erased in the informal flow, as ever-changing projections maintain the exhibition in a state of flux, continually modulated by new visitors to the site. Furthermore, it would be possible to control the creative process online, enabling virtual visitors to either view the exhibition or occupy the cube to produce actual situations from online locations. The multiple and critical lines of production are in themselves enough to show the severe lack of creativity inherent in the art institution, precisely because the rationing of 'the artist' is their organizing principle. By replacing 'the artist' with a cultural programme of the artist function, production goes into overdrive in crossed lines, mutations, deviations, fractures, fissures and distortions in the discourse of composition. Artistic production is amplified in the materialist semiotic of schizoanalysis, transforming the bourgeois artist of neurosis into the subject of machinic expression. Shared drives are realized through intersecting lines of production and subjectivation, made available in the 'art of subjectivity' when the individual is overwhelmed at the threshold of creative possibility.

The standard creative unit of the *Information Cube* is designed to be reproducible on the artistic production line. Conceived as a reproducible system for producing artworks, *Information Cubes* could be manufactured as the cultural products of creative rationalization. Once embedded in the social fabric, the *Information Cubes* will initiate the

systematic mobilization of the abstract machine, allowing it to go to work on its material on a scale previously unimagined. At various times and places the *Information Cubes* will come together in a general assembly, interchangeable modules sharing information and communicating with each other in an evolving productive network The interconnected processes are a manifestation of what remains unavailable to experience on a particulate level. The microprocessor, the information highway, the computer programme are abstractions that elude both comprehension and experience, and yet they generate the dominant form of social relations. The degree to which the social info-structure is dislocated from its material situation provides art with a plane of permutation whose potential is yet to be realized; 'the more complex a system is, the more abstract its boundaries are' (Bolz, 2007, 121).[41] The *Information Cube* is a method for realizing abstractedness in concrete situations, through the construction of a material housing which makes manifest the productive potential of the information economy. The composition is made possible by the info-structure, but simultaneously remakes what is possible within its productive network; the experience changes with the production, the production is the experience of what changes.

The challenge for the 'art of subjectivity' is to make these new lines of production work. In this respect, a similar question emerges to that which informed the production line in Chapter 1; faced with infinite creative dimensions of material-digital complexes, the *Information Cube* being just one example, how do we account for the stability of form and experience? Art may find a purpose in undertaking research into the conditions of possibility for creative action, providing *cultures* for the generation of new modes of subjectivation in which those rare moments of self re-evaluation are made available,

> The Self is not knowledge or power. It is a process of individuation that effects groups or people and eludes both established lines of force and constituted knowledge. It is kind of surplus value (Deleuze, 2006, 341)

Art makes a surplus value of self-process, which consistently under performs in the rationale of 'the artist', a discursive limit on the productive potential of the creative subject. The subject of creativity is freed up as the agent of permutation, the intelligent material moulded, modulated and modulating in the soul model of the *Information Cube*. The rationalization of information gives rise to a paradoxical moment of opportunity; a release of creative energy dependent on the installation of the subject in a complex of auto-poetic expression; the opening of art onto the un-thought creative possibilities in Art. In diagnosing the conditions of subjectivity, the artist becomes a type of cultural physician, not healing the wounds but prising them open, embracing and revitalizing what is valuable in a life of flaws and fissures.

6. Conclusion: Rationalization, Art and Subjectivity

The 'creative unit' of the *Information Cube* may be perceived in the broadest sense as an artist's programme, but in what type of organization would it be welcome? As the intelligent but instrumental business model becomes operational in institutions both commercial and public, the social control of creative energy becomes a dynamic issue. The so called 'insurgent subjectivities' (Newfield & Rayner, 2007) of creative organizations are 'set free' to question authority, overturn conventions and adapt outmoded practices; employees as artists maybe, although their productive energies are released by the regimes that support their positions. The subjectivity granted to challenge established practices 'must be made to the extent that the apparatus allows it or makes it possible' (Deleuze, 2006, 341), even as it generates programmes of cultural change. The 'unstable environments of post industrial or informational capitalism' (Newfield & Rayner, 2007) are therefore a matter of contention, critical sites in which the production and reproduction of knowledge, skills and experience are continually under negotiation.

The doctoral research has strived to prise open critical spaces of contention in the tussle between artist and institution, developed as a tactical encounter with the semiotic energy of the 'agonism' (Foucault in Dreyfus & Rabinow, 1982, 222). What is perceived as unstable by one person is far from being unstable, let alone critical, in the eyes of another; as Chapter 3 argues, learning organizations do not equate to critical or even creative ones from the artist's perspective. As organizations learn how to learn, they devise creative work environments to continually adapt to the fluctuating market conditions of 21st Century life. When creativity becomes the buzzword in a global climate of intelligent business, a tension develops between order and disorder, compliance and critique. This cultural dynamic is consistent with the interference pattern, 'the material expression of the paradox of control' (Newfield & Rayner, 2007), operating at the threshold of a constantly modulated system that aspires to a state of 'controlled schizophrenia' (Hardt in Newfield & Rayner, 2007).

Against the schizoid socio-economic background of 'controlled schizophrenia', the doctoral research situates all practices, instrumental and non-instrumental, as productive modes of expression. Expressed in the interstice, the 'art of subjectivity' works in the spaces between disciplines and works itself into the flaws within disciplines, enabling art to emerge as a critical tool of differential composition, turning established practices into new territories of productive possibility. As a discipline in itself, art has established practices of its own with creative injunctions and rationales based on the rules that govern its expressive parameters. As Chapter 5 suggests, there is something of a discrepancy between the emerging potential of digital art and its effective mobilization as an agent of social transformation. The intelligent material is only as effective as its composite elements, including the artistic component. The idea of the artist as originator with a privileged relationship to creativity is eclipsed by the regularity of artistic production and predictability of its forms; faced with the infinite possibilities of composition how does one *make* a difference?

The creative rationale of the alreadymade artist is more of a repeat prescription than interference pattern with the inbuilt capacity to go critical and transform the object of investigation. In terms of pushing the boundaries of artistic practice, the 'controlled schizophrenia' of the machinic assemblage is a difficult state to sustain, requiring an absolute commitment to losing oneself in the object of investigation in order to destabilize its sense in a decoded field of perceptions. As was argued in Chapter 1, critical artists must first strive to extract themselves from established aesthetic regimes, especially those determined by discourses that emphasize the meaning of art objects above their creation. As a cultural and political enterprise, the doctoral project strives to recharge the artistic differential of subjectivity in the research of composition, the expression of the constructive critical framework, immanent with the productive experience of the research subject. Production in all its dimensions may then be restored to art as a basis for 'insurgent subjectivities', capable of making differences out of themselves and the world.

The contemporary artist strives to compose new differences from the currency of what is emergent and problematic in the experience of the social world. Constructive criticism has

adopted a similar objective, while acknowledging the limitations internal to art that must be worked through before it is able to produce effective antidotes to the insidious filiations of instrumental reason. In this respect, the effectiveness of the artwork is dependent on the researcher's knowledge of how to produce the optimum case study when identifying problematics as flaws in the objects of investigation. These patterns of interference are reproduced in the quantitative attitude as critical folds in established rationalisms, the turbulence of turning practices against themselves in techniques of over-production. Semiotic energies with deterritorializing potential that are internal to dominant practices and contained by them in their stability of form, are released into new ways of doing things and new lines of subjectivation, non-rational leakages as channels for emergent subjectivities,

> What Foucault saw as the current or the new was what Nietzsche called the untimely, the non current, the becoming that splits away from history, the diagnosis that relays analysis on different paths. Not predicting, but being attentive to the unknown knocking at the door (Deleuze, 2006, 346)

In the currency of doctoral research, artistic 'know how' has accumulated into the critical technique of the combination-composition, the 'art of subjectivity' calibrated as the intelligence key, the practice for unlocking practices, for making explicit what is implicit in their unstable constitution and reproduction, for releasing their semiotic energies along new courses into uncharted territories. The intelligence key of art relays experience in the critical conduct of decoded practice, configured as the instrument of the un-known taking place in the affective-perceptual course of action. The course of the doctoral research unfolds in practice as a soul technology of the interference pattern, a disturbance in the cognitive register, giving rise to new cartographies of experience in which the remaking of practices and subjectivities is one and the same process. Recently completed and current projects are variations of this creative frequency, as opposed to major departures from existing registers of production. This work in progress follows new lines of production that

cut across the parameters of doctoral research, fleeting renditions that for reasons of time, resources and consistency, form the outside edge of the academic research frame.

Recent artworks were made in Autumn 2006 for *Hinterland*, a site-specific project that engages with the social history of the River Trent, conceived and curated by the Nottingham based curator Jennie Syson. *Revitalized* (2006) and *Freeze* (2006) are compositions that work with the energy of the river, connecting the semiotic flows of constructive criticism to the bio-dynamics of the natural environment. The artworks are adjacent to Guattari's conception of the 'ecosophic object' (Guattari, 1996, 199–35), in this case the transplanting of artistic info-structure into the creative ecosystem. The biodegradable composition moves in the direction of decomposition, a discernable change of physical states, which enables a whole ecology of affects to come into play in the working relationship between geography and cartography. A critical symbiosis takes place in the aesthetic differential of ecology, in which the artist's creative environment acts as a counterbalance to the economic exploitation of natural resources. The compositions intersect with current discourses on regeneration, recycling, and sustainability, as art territorializes the rationale of the environmental subject.

Revitalized (**Figs. 47, 48**) is a wreath of the *Le Doux Circuit*, stripped of words and arrows the composition is derivative of *Still Life* discussed in section 4.4. The poetic vitality of 'flowery language', the enemy of precision, is celebrated in the ritual liquidation doctoral research, the forsaking of the need for academic rigour and mental reasoning in the conception of art objects. In a similar artistic relay between nature and culture, the motion capture system of *Freeze* (**Figs. 49, 50**) liquidates the 'controlled schizophrenia' of rationalization in the glacial transition from frozen arrow to artwork in suspension. The dissolution of the artwork resonates with the dissipation of the creative cycle of the doctoral research, the liquidation of a creative state based primarily on the dynamic composition of the diagram. The decomposition of *Freeze* melting into the river constitutes an intermingling of movements, a fluid semiosis of information, transformation, emotion and perception. The experimental and transitional states of *Revitalized* and *Freeze* will form the

basis for generating future cartographies of expression, in the cultural exchange between artistic and environmental movements.

Movement, in all its dimensions, has emerged in the latter stages of research as a key differential in the 'art of subjectivity'. Implicit in the composition of production lines, information streams and semiotic flows, is a deterritorialized subject of movement. *Moved* (Appendix F) is a project submitted in November 2006 to *Capture 5*, The Arts Council's platform for dance for film. The proposal attempts to produce movement differentials in the 'dance of information' by utilizing the emotion diagram as a choreographic template[42]. The purpose is to construct a non-narrative film about movement, overproducing it in a decoded field of perceptions that destabilize both dancer and viewer in the moving, moving image,

> If narrative subordinates becoming and image towards the fulfilment and realization of change *towards* some resolution, movement and change *itself* will free the perceiving eye and brain from the habits and genres of narrative, opening perception to a duration whose end is not given in advance. If this non-narrativity is possible it is because Deleuze regards the signs of cinema *not* as components in a structure, but as productive of relations (Colebrook, 2006, 50)

Moved breaks down movement and then remakes it in new complexes of 'controlled schizophrenia'. Movement shows itself in its difference through the splitting up of 'the dancer' into movement functions, playing out across various planes of composition. In the exchange between thought and expression, emotion and information is the slippery aggregate of the moving, moving image, the rationale of cinematic representation losing traction in the dynamic juxtaposition of discontinuous movements.

A different type of art movement has emerged in the creative affiliation of *General Purpose Consulting,* formed in April 2007 as a response to the cultural blurring of boundaries between art, business and consultancy. On one level the project keys into Zizek's comments in section 3.2 on the 'objectivized language of experts… which can no longer be

translated into the common language accessible to everyone'. The prevalence of management consultancy as a parasitical mode of expertise provides a common currency for working across disciplines, premised on the commercial and public institution's general acceptance of the intelligent business model. The creativity of the learning organization drifts into that of the artists' collective, who generate critical modulations of the consultant's discourse on the 'business algorithm for value creation' (Accenture, 2007). *General Purpose Consulting* modulates the business algorithm, shifting constructive criticism into the creative environment of 'value creation'. By tapping into the discourse of the 'insurgent subject', the GPC consultancy will materialize online with a multifunctional website and off line with stationery (business cards, headed paper, brochures), enabling the group to pitch for consultancy contracts relating to our skills base, thereby plugging into the consultant's business interface of external performance indicators and diagnostics of an organization's creative environment.

The 'algorithm for value creation' has itself become a generative procedure in the doctoral research. The cultural value of artistic practice, unfolding along the lines of rational procedures but at the same time sending them off course, in the 'controlled schizophrenia' of the modulating algorithm. The quantitative algorithm of the *Heart Calculator Instructions* (2002), the bureaucratic algorithms of academic procedure, the affective and choreographic algorithms of emotion diagrams and the institutional algorithm of the *Mainframe* (2005) programme, form a constellation of generative *instruct*ions in which the critical diagnostics of constructive criticism find expression in the 'art of subjectivity'. A more overt form of self-diagnosis has begun to emerge in the auto-creative instruction that is immanent with the artist's expressive state. The instructive portrait of (**Fig. 51**) turns the algorithm into the composition and the composition into algorithm; a combination of elements from previous artworks it smoothes out the interference pattern through the regulation of what remains anomalous in the artist. *Thought Processed* (**Fig. 52**) marks the end of the creative cycle, a year before completing the doctoral research. As a bridge between artistic and intellectual registers the artwork anticipates the written thesis as an after-thought of grey matter, the 'art of subjectivity' framed in academic thought as a

necessary pre-condition for realizing its socio-cultural value as a critical form of expression.

The creative relays between academic research and cultural practice, subjectivities and social structures, have informed the compositional dynamic during the latter phase of research. Through experience and experiment, the artistic assemblages of the doctoral research connect and reconfigure the components of the social assemblage, to generate art movements that cut across and transform the semiotic material of the social fabric. In this respect, the shared drive of the *Information Cube* contains the algorithmic potential of the art movement but is not predicated on the individual artist. The separation of art from its creative functions builds an exchange of knowledge, skills and materials in the critical performance of the rationalesque, as expression is freed from its ground in 'the artist' and new lines of aesthetic subjectivation connect with the productive power of socio-economic machines. The *Information Cube* is one example of how to programme the art movement, enabling the intelligent material to function as a visual technology for prising open permanent spaces of deterritorialization, the 'primed experience' which paradoxically is made possible by the instrumentality of social relations. The rationality of the assemblage 'unsecures' both art and instrumental reason in the critical form, the 'art of subjectivity' becoming the fluid existence of living creatively; the desire for life to become more like art and for art to become the condition of life.

The dynamic between life and art remains to some degree in a state of disequilibrium, art in its abstractedness never becoming completely drawn into the workings of the social assemblage. The historical antagonisms between art and society maintain its potential as a critical tool of composition, so long as artists continue to translate possibilities into new courses of action. In moving against its objects of investigation art finds poetic energy in the tactical engagement of critique, turning both its objects and itself into subject matters (subjectivities and practices), which take place in creative currents that are critical in the discourses that provide them with their energy. The critical engagement, if it has a

rationale, provides a reason for living as art is installed into life and life is re-installed as art,

> alternate forms of existential re-appropriation…may in future become the *reason for living* for human collectivities and individuals who refuse to give in to the death like entropy characterizing the period we are passing through (Guattari, 1996, 107)

If the reason for living is to create a politics of lived experience, art has a crucial role to play in the production of subjectivity. The doctoral research has rendered visible the aesthetic parameters that enable a subject of permutation to challenge what is established as rational. Art's capacity to astonish through the expression of previously unthought forms remains available at the threshold of exhaustion and renewal, (semiotic, social and subjective), but only if it strives to surmount the limitations of sense imposed by the reasonable subject. The task facing the thoroughly contemporary artist is to restore the potential for exceeding productive limits, to work out what it could mean to be creative in the precarious existence of 21st Century life.

Postscript on Conceptual Art: Critical Reflection

'What type of practitioner do you consider yourself to be?' Since embarking upon an MA in Contemporary Art in 2002 I have always struggled to answer this question in terms of existing subjectivities. Although this may appear a relatively straightforward question to the outside observer, from within the context of the doctoral research it remains a challenge to identify, name or categorize the types of processes that emerge in the relationship between theory, practice and research. I will therefore develop the answer as an issue of subjectivity, a response not only to that pertinent question as to the artist's specialty, but also as a pretext for engaging with a wider set of problems that emerge from this critical reflection upon the particulars of the doctoral research.

The art historical tradition of Conceptual Art will provide a framework for evaluating the relationships between thinking, making and writing in the doctoral research. Conceptual Art practice provides an existing discourse for situating my creative practice as a mode of expression driven by the aesthetic exploration of ideas. Conceptual Art emerged as a distinct form of art practice by the mid 1960's, partly as a response to the limitations of Clement Greenberg's highly influential *Modernist Painting* (1961). Greenberg develops a formal criticism that delimits a position of self-critical activity for the artist, a medium specific practice in which the modern abstract painting is accorded the highest value.

By the mid 1960's this critical position was being challenged on all fronts by a number of emerging Conceptual Artists of which I will consider three: Sol LeWitt, Mel Bochner and Joseph Kosuth who have helped define my aesthetic sensibility. The Conceptual Artworks of the 1960's established a precedent for using a wide range of media and materials, in conjunction with cultural, historical and political discourse from across the social spectrum. Despite the eclectic approach there were a number of principles being applied to the production of Conceptual Artworks. Firstly, concepts or ideas take precedence over the traditional issues of aesthetics, materials and technique. Secondly, as an effect of conceptual primacy language predominates in the production and perception of Conceptual

Artworks, to the extent that intelligent viewers were expected to 'finish off' the compositions at the level of understanding. Thirdly, Conceptual Artists were motivated by the problematic condition of the post-modernist artwork, interrogating its status as art, its social function and non-aesthetic properties. In this respect a key objective in Conceptual Art was to produce a *critical analysis* of the discourse 'art', as opposed to original forms of composition.

To this end, Le Witt, Kosuth and Bochner wrote influential essays that qualified the conditions of possibility in which Conceptual Artists might realise their artworks. In *Art After Philosophy* (1969) in (Alberro ed. 2000, 158 – 177) Kosuth explores the complex relations between language, image and referent by investigating how meaning is constituted in signs, as a basis for the representation of reality. Conceptual Art applies an emerging knowledge of semiotics as a tool for criticising Art's traditional signifying practices. The Conceptual Artwork is considered an arbitrary designation, which emerges in the *relationship* between the critically minded artist and viewer; there is no need for the Greenbergian critic as aesthetic middle-man and arbiter of good taste.

Sol LeWitt's *Paragraphs on Conceptual Art* (1967) in (Alberro ed. 2000, 12 – 17) defines the relation between idea and expression as it was understood by Conceptual Artists from the late 1960's into the early 1970's,

> The idea becomes a machine that makes the art. This kind of art is not theoretical or illustrative of theories; it is intuitive, it is involved with all types of mental processes and it is purposeless. It is usually free from the dependence on the skill of the artist as a craftsman. It is the objective of the artist who is concerned with Conceptual Art to make the work mentally interesting to the spectator…it is only the expectation of an emotional kick, to which one conditioned to expressionist art is accustomed, that would deter the viewer from perceiving this art. (LeWitt in Alberro ed. 2000, 12)

Le Witt's emphasis on the concept as generative, and the intuitive aspect of the artwork's formation resonate with the doctoral research in their affinity with Adorno's perspective on

the affective non-concept. Conversely, LeWitt's separation of an emotional and cognitive register is typical of Conceptual Art's demarcation of the senses, which in part results from the rejection of the Greenbergian aesthetic of material specialisation. In this respect the doctoral research aims to reconnect the mental and emotional in a revised aesthetics of materiality, based on the premise that a critical Conceptual Art generates its force in the immanent philosophy of affects.

Finally, Bochner's *The Serial Attitude* (1967) in (Alberro ed. 2000, 22 – 27) develops an art in which 'serial order is a method not a style'. (ibid, 22) argues that the variations in Conceptual Art practice must be determined by a serial attitude and not a style, which accounts for work that is at once systematic in its composition and diverse in its formal appearance. The serial attitude derives from a 'numerical or otherwise systematically predetermined process (permutation, progression, rotation, reversal)' (ibid, 23). As an example Bochner cites Milton Babbit's *Three Compositions for Piano* in which

> arithmetic is used as a compositional device resulting in a sort of programme music… The composer is freed from individual note-to-note decisions, which are self- generating within the system he devises. (ibid, 25)

The Serial Attitude has influenced the development of the 'quantitative attitude' in Chapter 1 of the doctoral research, which is an attempt to think qualitatively and critically about the numerical basis of social and political relations, by reproducing those relations in modulated forms. Hence the artworks function from *within* the system as oppositional, their radicality qualified as their transformative potential, which cannot be reduced to artistic intention. The emergent artwork is neither caused by the artist nor is it the effect of a discourse that is already practised as art; it is conceived as an expressive potential waiting to happen at 'any moment whatever'.

I am now in a position to critically evaluate what is unique in the relationship between theory, practice and research in the doctoral thesis. The evaluation is based upon the extent to which the doctoral research develops the art historical tradition of Conceptual Art, by re-

shaping key aspects of its practice into effective critical instruments. I will also evaluate Conceptual Art practice based on a wider critique of the relationship between philosophical theory, Conceptual Art practice and the specific methods of the doctoral research. Finally I will reflect upon the radical and politically motivated art forms that have grown out of 1960's Conceptual Art movement. I will situate my work in relation to these practices and will argue that it is radical in its *similarity to* as opposed to its difference from the object of critical investigation.

The doctoral research aligns itself with Conceptual Art practice, while at the same time breaking down some of its philosophical and critical tendencies. The purpose is to reconsider elements of Conceptual Art practice and assess their suitability as component parts in the critical assemblage. In the first instance, and from a philosophical perspective, it is debatable whether any conceptual artist has ever produced a concept. It would be more accurate to describe such practices as conceptual analogues; compositions that attempt to communicate ideas in and through artistic practice. In a similar vein the doctoral research does not strive to produce concepts but rather allows concepts to become generative of compositions. Furthermore, the concept manifests itself in Conceptual Art through a polarisation of mind and body, thought and material, word and image, to the extent that there is a move toward the de-materialisation of the art object in the perceived immateriality of cognitive experience. The doctoral research employs an immanent philosophy of creation in order to avoid the transcendence of the concept into the realm of the metaphysical. It has proved more productive to treat the concept as a material affect, emerging not from an individual source but in a set of changing material relations that give rise to both 'the individual' and 'the concept'.

There is no doubt that the doctoral research continues along the trajectory of Conceptual Art by realising artworks that are generated by thought as a creative force capable of instigating a compositional process. I also attempt to convey ideas 'in the process', by engaging with forms of practice that are approximate to Conceptual Art's affiliation with the discipline of philosophy. Unlike Kosuth and many of his contemporaries, there is no

attempt to construct a relationship of representation between a critically minded artist and viewer, in which a theory is made manifest as a pretext for exploring the mechanics of meaning. The primary meaning of 'convey' is to transport, move, shuttle or carry to a place; the communicative sense is secondary. In this respect semiotics is deployed in the doctoral research as tool for moving across the signifying practices of different disciplines in order to decode those practices and find similarities between them, *before* the artwork emerges in a new set of relations.

The relationship between theory, practice and research can me made explicit *as* the creating of relations between theories, practices and research. The creating of these relations is the artistic practice in process, emerging from the relations that are created and finding expression in them. In the doctoral research the diagram is a device for re-organising the creative lexicon of Conceptual Art into a semiotics of production. The diagram is approximate to a theory or concept insofar as it expresses an abstraction, a space of possibility for the emergence of practical encounters with actual material situations. The practical encounters can take on a multiplicity of forms and are situated across a range of established practices. The diagram transports elements of Conceptual Art practice into new domains and connects them to the signifying practices of other disciplines. In effect the diagrammatic approach frees Conceptual Art from the limitations of the transcendent concept and its formation in the artist as identity, facilitating a transversal practice of intersections that are contingent with the object of investigation *and* emergent in the transformation of that object.

What is a transversal practice? In the context of the doctoral research it involves a movement across different fields of research *and* a movement within a single field, as the disciplines of architecture, science, social science, economics, politics, philosophy, literature and contemporary visual art are all brought into play. The purpose is to develop singular practices that can be described as creative processes in terms of how they work and what they produce, but which cannot be easily categorized as identical with existing disciplines. In the singularity of the creative encounter, one type of practice does not take

precedence over another, it is more a case of *composing* a creative contingency between practices, as a basis for the emergence of what could simply be termed 'the new'. The new is therefore a material effect of an *original relationship* between theory, practice and research. Conceptual Art production was based on the representation of ideas, and was critical at the point of reception; quite simply it was an art that was about something. The doctoral research is critical at the point of production, the points where representations of things begin to take shape as meaningful or the points where things begin to lose a meaningful coherence.

In this creative exchange between theory and practice, research plays both a critical and constructive role. First in order to generate a productive momentum capable of meeting the demands of a properly transversal art practice, it is necessary to identify and connect specific research areas across a number of disciplines, in order to fully explore the possibilities for creating relations that give rise to emergent practices. This does not mean trying to be 'all things to all people', nor is it a case of being a 'jack of all trades and master of none'. It is more a case of sifting for components in different disciplines, extracting them from a range of practices and re-assembling them into productive techniques with a capacity for transforming the initial object of investigation.

In Chapter 4 for example, research was conducted into current aspects of the semiotic method with the aim of identifying semiotic applications that could facilitate a productive process. Semiotics is not in itself a theory, but is based on a theory of the linguistic sign proposed by the Swiss linguist Ferdinand de Saussure (1916). It is a method for the analysis and interpretation of signs, which has been used in different ways across different disciplines as a critical tool. Saussure's insistence on the arbitrariness of the sign has greatly influenced Structuralist and Post-Structuralist philosophy, which has in turn informed Conceptual Art practice since the mid 1960's, of the type we have examined in this critical appraisal. In visual practice and critical studies, semiotics is primarily associated with the reading of images as communicative structures. In the doctoral research the semiotic method is deployed primarily as a tool for decoding visual information such as

the graphs of laboratory emotion and the physiology of affect. The decoded information is extracted from its original domain ready to be connected to other method components in the differential space of composition. The 'decoded field of perception' emerges only when the semiotic material has been subjected to other methods of analysis discussed below.

The practice of discourse analysis is connected to semiotic analysis as a tool for critically evaluating the scientific and psychological texts that work to make sense out of the visual material. Recurrent statements provide a discursive parameter for understanding the visual codes as expressions of numeric objectivity. Breaking down this frame of reference to analyse its instabilities and contradictions involves a systematic critique of documents relating specifically to laboratory emotion, and to adjacent sources in the form of critical texts from the history of science. The identification of sense patterns in the shape of repeated statements and visual codes sets up the productive parameter for the composition of the 'interference pattern', described in detail throughout the doctoral research as the creative modulation of sense in the decoded field of perception. The interference pattern is a complex effect of travelling between disciplines and across methods, which is made possible by the research into method components, their assemblage into critical tools and their subsequent activation in the compositional process.

In Chapter 4 there is an additional method component of Lacanian Psychoanalysis at work, which in the doctoral research has focused on the 'subject supposed to know'. Like semiotics and discourse analysis psychoanalysis is very much a method, a clinical practice based on a theory of the unconscious. The psychoanalytic component gives the critical assemblage an additional facility for questioning the authority of the emotional scientist in the productive dynamic between knowledge and desire. The three method components of Chapter 4 are in a continuum with artistic practice insofar as all three address the mechanics of signification, through an emphasis on the production of discourse, desire and meaning respectively. The aggregate of signification allows the emerging form of art practice to stream into the other three method components in a fully functioning critical assemblage, designed for a specific inquiry into the 'scientific image of emotion' in

Chapter 4. Once absorbed into the critical and contingent method, it is no longer possible to identify art in the singularity of the compositional process or to extract it from the productive momentum of the creative event.

What is the role of philosophy in this complex dynamic of theory, practice and research, and why has a certain type of philosophy taken precedence over others? The immanent philosophy of Deleuze and Guattari has proved an effective thought framework because it emphasizes the creativity inherent in all practices, and consistently sustains an ontology of creation as a basis for remaking them. On reflection, Deleuze and Guattari's conceptual oeuvre has encouraged a fruitful exchange between the Conceptual Art movement, modernism and critical practice. A dynamic has emerged between the inter-disciplinarity of Conceptual Art and the intra-disciplinarity of immanent practice. The material reflexivity of modernist painting is to some degree evident in the singularity of the transversal composition, but paradoxically as a method it is not exclusively artistic in character and so resembles the eclectic approach of the early Conceptual Artists.

The attempt in the doctoral research to develop a palette of practices under the umbrella of 'art', and the subsequent territorialization of art's specific qualities may appear to be at odds with a transversal practice, which in generating its singularities must subsume discrete practices into a multi-directional process. Deleuze and Guattari's *What is Philosophy* (1994), was initially utilized as a means of holding apart the disciplines in order to temporarily abstract them from an environment of increasing interdisciplinarity and multiple intersections of practice. This has allowed a space to critically reflect upon their qualities in terms of fundamental differences, primarily as a means of evaluating art's specific nature as a creative process. Although differences between disciplines have been elaborated, in practice the similarities between them provide the compositional plane with a degree of consistency. In Chapter 4, the status of affect in art and science draws the two disciplines together in a discourse on sensation. The ground upon which the two intersect is an emergent creative territory where similarities are engaged to 'force the issue' of how differences are created and sustained. On the one hand, the artist-philosopher requires a

palette of techniques for mixing theory, practice and research into the types of method discussed earlier. On the other hand, if art bleeds into too many other disciplines its power to produce generative combinations of the sort that are manifest in the doctoral research will diminish. The 'affective non concept' is under tension and available for critical negotiation at the boundary between identifiable practices and practitioners, enabling the discourse 'art' to hold open the boundaries between disciplines for just long enough to allow new creative forces to escape and interact, in what might be termed Conceptual Art in the fullest sense.

Why have other philosophical positions been marginal to the creative process in the doctoral research? To answer this question it is necessary to reflect once again on the issue of establishing an artistic position and how that position can be interpreted as critical. Chapter 1 of the doctoral research works through the contemporary status of the critical artist in practice but neglects to provide critical reflection on this position, precisely because critical reflection had already been identified as an impediment to the productive process.

A more balanced view is required in order to make explicit some implicit assumptions that were in play while developing the 'quantitative attitude' toward artistic practice. In order to reassess the relationship between my practice and philosophy in general, I will adopt a critical position as if I were explaining to another artist the advantages and disadvantages of assuming a particular philosophical position or critical perspective. The externalising of this cognitive process, whereby one type of thought is taken up, another held in abeyance and another maintained as marginal, will reveal that the employment of a philosophical discourse is less important than the deployment and use of the concepts. It should immediately become apparent why this thought process was not fully documented in the doctoral research, as it could have warranted another PhD entirely.

It is worth remembering at this point that the primary objects of critique were rationalisation and rational subjects. I was therefore keen to avoid philosophical traditions

that in some way identify the reasoning, cognitive, psychological being in a privileged individual consciousness. The prime candidates for marginalisation are phenomenological perspectives where they have given rise to conscious identities, individual essences or intentions and human beings. The artwork in this respect has an inbuilt political dimension, which challenges the desire *to be* critical as a limited state of affairs when it comes to the vitality of creation in all its forms. The individual artist as creator was therefore an initial problem in the research, which proceeds to set up a subject position in production, as opposed to *one* individual who produces; thus forming a basis for rethinking the terms and conditions of Conceptual Art practice outside of an artist – critic – gallery system that continues to identify artworks as originating from artists often despite protestations to the contrary.

The critical position however is formed in representational structures that support a variety of cognitive identifications, semiotic readings of sign systems being one example, and as such is seldom free from reason and reflection. In this respect the reflexivity of the doctoral research – which to some extent activates its autopoetic and self-organising qualities - is a necessary condition of its intelligence. The reflexive position itself has roots in the phenomenological tradition and can be located in historical materialist philosophies that operate within their systems a broadly transcendental mode of thought. Embedded in the relationship between phenomenology, in particular Hegelian phenomenology and historical materialism, is a logic of subject–object relations in which the conditions for understanding are determined by a complex movement between identities and differences. Broadly speaking the practice of critical activity can be said to have its roots in Hegel's reading of Kantian dualism, where for Hegel the mind is in a dynamic state as it tries to conceive subjectively of the possibilities for objective knowledge. This process is both rational and critical as it involves 'standing outside of oneself' to reflect on what one knows, which entails drawing upon a historical body of knowledge that has accumulated over time and through the efforts of many people, in order to transcend that knowledge and reach a new level of understanding or consciousness.

In relation to the model of practice developed in the doctoral research, a critical tendency operates less on the level of cognitive reasoning than that of experience and production. The emphasis on art-*work* as a critical form of practice is informed by Marx's use of the Hegelian dialectic in his critique of political economy. The means and relations of production are the primary cause of an individual and collective conscious, a material effect of how work is organised and experienced. What remains transcendent in Marx is a belief in the truth of class consciousness, which once transformed by a new set of productive relations will lead to a social revolution in thought, perception and experience.

Although not mentioned overtly in the doctoral research, elements of Marxist philosophy are embedded in the critical tendency, as there would be no conception of 'desiring machines' without the critique of historical materialism. The emphasis on artistic production as a transformative potential is sympathetic to a Marxist perspective with regard to the material relations of production. What differs in the doctoral research is critique at the level of subjectivity, based on a departure from what is essentially an anthropological model of experience, a human science originating in the Hegelian dialectic of consciousness. It should also be noted that Lacan's 'subject supposed to know' of transference is located in a Hegelian dialectic of desire where an unconscious subject makes up for a lack by perceiving knowledge to be in an unobtainable, transcendent Other. In this respect Foucault critiques psychoanalysis as disciplinary and prohibitive in its negation of a desire founded on a lack, a moral regulation of the unconscious subject's potentially 'amoral' reality. This paradox of an anthropological unconscious is not lost on Deleuze and Guattari, who seek to re-ground desire in an ontology of creation, a primary force of production, critical and radical in its immanence with Life.

In illuminating the philosophical network of the doctoral research it becomes apparent that all philosophical positions are in some way *connected* to others, containing within them the potential to transform their concepts. In the doctoral research the transformation takes place in practice, as one theoretical tool is connected to the network if it proves to be more effective than another in the compositional process. At this level of 'developing

applications' it is more a question of where to stress, emphasize and intensify parts of the conceptual network, allowing the philosophical mix to emerge in practice and to merge with the treatment of content. The incompatibility of theories is not problematic on the plane of composition, the intersection of concepts being contingent with the specifics of emergent productive processes, which in the doctoral research are chapter specific in the assemblage of case studies. In the final section I will consider how specific modes of criticality emerge in my practice and how they have been influenced by the artworks of other practitioners who are seen as inheritors of the Conceptual Art legacy; evaluating how the doctoral research is similar to and different from practices which purport to be radical in conception and creation.

We Aimed to be Amateurs (Alberro ed. 2000, 442 – 8) is the title of a paper first delivered by the Conceptual Art group Art & Language (Michael Baldwin, Charles Harrison, Mel Ramsden) at the ICA in 1995. The paper is a critical reflection on the historical status of the Conceptual Artist and Conceptual Art practice whose identity it is argued is founded on a paradoxical position. The paper will form a background for reflecting on how the paradox shapes 'the type of practitioner I would consider myself to be', insofar as *being amateur* involves developing a specialism in contingency, and it is immanent philosophy more than any other that allows this paradox to become a fully productive position.

The paradox is elaborated through a consideration of the amateur as a partial non-identity, which derives from the problem of identifying Conceptual Art practice as a whole. The open, inquisitive and contingent nature of Conceptual Art, especially concerning its own self-description makes it resistant to categorization. In an exhaustive discussion of contingency in Contemporary Art (Buskirk, 2003), examines how Conceptual Art's legacy has influenced post-modern artworks that come to be defined as 'contingent by design'.

Art & Language view the paradox of the amateur's contingency as a strength, in that practices take on the characteristics of devices, applications that can perform a number of functions because they are not conceived with a particular end in mind. The rationale of

Conceptual Art is 'radically incomplete' (Art & Language in Alberro ed. 2000, 444) its instruments approximate to critical tools that operate in the 'gaps and connections …between the pictorial and the textual, spaces in which much cultural aggravation was and is possible' (ibid, 445). The amateur specializes in being out of joint with the times and therefore assumes a position between word and image that facilitates a critical production of prevailing conditions, which in its contingency does not become an identifiable picture of the world.

The photographer Jeff Wall adopts a similar strategy for conceiving of the photograph as a thing to be produced as a *critical analysis* of a socio-historical condition either subjective or objective. In terms of technique and production Wall is a highly skilled professional photographer who adopts a very deliberate and organised approach in utilising the contradiction in Conceptual Art of the document as simultaneously information and pictorial mode, which provides a basis for re-introducing the picture into to contemporary art practice (Edwards, *Photography out of Conceptual Art*, 2004). As part of his critical method Wall considers how photographs function as 'theoretical diagrams' (161, 2004) for restaging the realist conventions of modern visual experience in post-modern terms.

Citing the example of Wall's *Picture for Women* (1979), Edwards argues that it reworks the desiring gaze of modernity, shifting and adjusting the compositional parameters used by Manet in his famous *A Bar at the Folies-Bergeres* (1889). Manet's image is considered by art historians as diagrammatic of the complex relations between desire, sexuality, capitalist production and visual perception. Wall, influenced by the feminist film-maker and theorist Laura Mulvey's *Visual Pleasure and Narrative Cinema* (1975), modulates the phallo-centric gaze in *Picture for Women* by re-assembling the visual components of Manet's image into a photograph that signifies a critical analysis of the relationship between looking and being observed, the subject and object of the gaze. The photograph becomes a picture for a feminist viewer who by definition would be looking critically at how the camera reproduces the historical and culturally constituted gendered relations of visual experience. In shifting visual registers and positions, Wall's image subverts the to-be looked-at-ness of

the female figure, revealing how cinema and mass culture more generally, mechanise, direct and constrain patterns of sexualised looking' (Edwards, 2004, 163).

At the level of production the polished 'look' of the images is rendered deliberately, a stylistic signifier of a critical inquiry into the specular experience of capital, which takes place on its own ground of a mediatized discourse of naturalisation made possible by realist conventions of representation. The photograph as 'theoretical diagram' becomes a device for breaking down the subjectivity of viewer at the level of perception in the process of re-working the codes and conventions that support it. The result is a practical discourse of visual critique in which Wall plays a part and is apart from at the same time. Like the amateur position the photographer does not aspire to produce what one might expect or identify as a documentary or realist image, but instead makes an image out of sorts with dominant conventions of looking. Although the images are perfectly produced, the perceptual shift outside the prevailing visual register has the effect of exposing it on its own ground, whereby similarities to Manet's painting act as a type of camouflage for covert activity in the photograph.

The doctoral research formulates a critical attitude through a similar method, working with the non-position of the amateur while simultaneously supporting that position by importing various types of specialist knowledge (semiotics, psychoanalysis, philosophy, discourse analysis). In the case of Wall's *Picture for Women* an adjacent discourse which has its roots in a combination of feminist political theory and Lacanian psychoanalysis, gives the practice a radical edge, albeit one that remains embedded in phenomenological conceptions of subject–object relations discussed earlier.

At the level of production practices do not have to correspond with their original historical relationships to radical or critical theories from other disciplines. Wall's process has influenced the semiotic decoding and re-production of the visual register in the doctoral research, and resembles graphic techniques used in Chapter 4 which unfold on a ground of similarities between the category of affect in art and science, as a premise for developing a

differential mode of critical and covert production. The philosophical network in Chapter 4 is primarily Deleuzian but is informed implicitly by a critical tradition that adheres to a Lacanian feminist analysis of the male gaze, bringing to bear a gendered dynamic of desire on the subjectivity of the emotional scientist. In her book *Irrational Modernism: A Neurasthenic History of New York Dada* (2004), the art historian and theorist Amelia Jones develops an adjacent critique in the register of desire that has also informed the critical aspect of the doctoral research. Her analysis situates the leaky machine of male subjectivity in a wider critical framework for evaluating the relationship between rationalization, subjectivity and masculinity.

In this respect the radical potential of the *Emotion Officer* in Chapter 3 is not fully realized in the doctoral research. As an artwork its transformative potential draws upon a strand of critical art practice which develops out of Conceptual Art in the 1970's and 80's. In developing a broadly performative methodology, a genre of radical feminist art practice focuses on the material aspect of the body and its historical and discursive relationship to a range of social practices. Also informed by Carey Young's performative critique of organizational practice, the *Emotion Officer* is an attempt to formulate a non-identity in the manner of the amateur, supported by a range of specialist knowledge and inserted into the institution as a means for the covert distribution of affects. In this respect the character of the *Emotion Officer* could operate as something like the psycho-analytic abroad in the world, a model not of transference but of transversal practice imported into the organisation at the level of its similarities to the bureaucratic symptom, but differential and radical in the production of a critical diagnosis. The *Emotion Officer*, camouflaged in a discourse of 'human resources' and 'occupational health', conceives of a politics of affects played out in practice as radical and transformative in experience. Making the world a more emotional place would act a premise for making it more creative, as along the way histories and subjectivities are re-negotiated and re-produced.

To conclude, what emerges in the criticality of the doctoral research is a creative position of transformation, a subject between structure and dissolution. The similarity between this

subject position and others is what makes it distinctly radical. The facility of camouflage enables art to perform a transversal activity as it participates in other practices and disciplines through its assimilation as something recognisable and therefore useful. Once connected, art can unleash a transformative power to change the subjective experience of the other disciplines, and at the same time realise new potentials contained within its inexhaustible facility for composing critical methods, explored in detail throughout the doctoral research. In re-making practices the critical artist can build a new specialism as the ability to design creative instabilities into the experience of an already structured subject position, not from a point of view of its representation but through its critical reproduction. The doctoral research designs creativity as the experience of an identity in production whose only pre-requisite is a critical imagination.

Endnotes

[1] Throughout the text I refer to 'the artist' as opposed to 'my work', 'my intention' or 'my practice'. For reasons of clarity and consistency the reader can assume that 'the artist' refers in the first instance to works produced by Jonathan Willett (often in a productive constellation with others), for the purpose of the doctoral research. Implied in the use of 'the artist' though is a function of discourse that makes possible the historical construction of the individual as originator, founder or source with a privileged relation to cultural production. In this respect, 'the artist' of the doctoral research is also the effect of discourses on originality, the expression *of* aesthetic, artistic and wider cultural models of creativity. By considering 'the artist' in this way I am generally adapting Foucault's analysis of the 'author function' in *What Is an Author* (Foucault, 1998, 205-222) to a consideration of the subjectivity of the artist as a differential in discourse. By analogy the 'artist function' can also be considered as 'characteristic of the mode of existence, circulation, and functioning of certain discourses within a society' (ibid, 211) that are *reasoned* to be artistic. The 'artist function' culminates in the expression of *Mainframe* (2005) in Chapter 5, the explicit division and reproduction of compositional processes from any given 'real' individual that we continue to frame as 'the artist'. It is at the readers preference as to whether they work within the discursive frame of the individual artist making an 'original contribution to knowledge' in the doctoral research, or situate the artist as a contingent subject of creativity in the complex of rational processes that are themselves the object of investigation.

[2] The creative modulations in the doctoral research are approximate to the modulations of musical compositions, where modulation is 'most commonly the act or process of changing from one key to another' (Persichetti, 1961). The 'intelligence keys' in the doctoral research are combination-compositions or interference patterns resembling 'common chord modulations' whose 'closeness is determined by the number of notes in common between keys, which provide more possible pivot chords' (ibid 1961) for the structure of the musical composition. The artworks in the doctoral research function in a similar way to the 'pivot chords' of music where 'modulation in the common chord is labelled with its function in both the original and the destination keys, as it can be seen either way' (ibid, 1961). The 'original key' in the doctoral research is the yet to be modulated object of investigation, the 'destination key' is the interference pattern which retains aspects of the 'chord quality' (ibid, 1961), in this case the formal and functional qualities of rational processes of that object.

[3] Foucault (1998, 459-60) poses the question of subjectivation as follows: 'The problem is to determine what the subject must be, to what condition he is subject, what status he must have, what position he must occupy in reality or in the imaginary in order to become a legitimate subject of this or that type of knowledge [connaissance]. In short it is a matter of determining its mode of subjectivation…But it is also and at the same time a question of determining under what conditions something can become an object for a possible knowledge [connaissance], how it may have been problematized as an object to be known, to what selective

procedure [procedure de decoupage] it may have been subjected, the part of it that is regarded as pertinent. So it is a matter of determining its mode of objectivation…depending on the type of knowledge [savoir] that is involved.' In this respect the research subject in the 'art of subjectivity' is both a subject and object of knowledge, a creation in discourse and a creator of discourse. Butler's (1997, 83-84) reading of Foucault has further informed my understanding of processes of subjectivation as ongoing modes of production that are liable to remain unstable even in their repetition, 'Subjection is literally the *making* of a subject, the principle of regulation according to which a subject is formulated or produced. Such subjection is a kind of power that not only unilaterally *acts on* a given individual as a form of domination, but also *activates* or forms the subject. Hence, subjection is neither simply the domination of a subject nor its production, but designates a certain kind of restriction *in* production.' [original italics]. Art clearly has a role to play as a creative principle of deregulation, for at least in theory it should be able to activate experience along multiple lines of possibility, as the practice of least restriction.

[4] Constructive criticism refers to the critical role developed for art in the doctoral research, an affirmative mode of critique taking place in and through the act of production. Deleuze & Guattari's (1984, 1988) conception of the 'machinic' provides a productive register for the activation of constructive criticism in which it becomes amalgamated with the destabilizing force of desire.

[5] The artist's 'know how' is applied as an aggregate *form* of knowledge which is immanent in processes of composition. This know how approximates the philosophical 'know how' described by Sellars (1963, p 1-40) as a manifest form of knowledge derived from 'knowing ones way around' the disciplines, the 'seeing all things together' (ibid, 3) which becomes ever more difficult when faced with exponential quantities of knowledge and their breakdown into corresponding specialities. In making connections philosophers approach 'things in general', while to some extent developing a working knowledge of the specialities, in order to produce philosophical concepts in a 'stereoscopic vision' (ibid, 5) of the world. Constructive criticism develops artistic know how along similar lines but with one important difference: in the indeterminate space of composition art has the capacity to perceive things differently *and* simultaneously change the referent, in this respect art does not represent the world it remakes it as a differential 'know how' of rationalization.

[6] The 'object lesson' of the doctoral research shifts the emphasis from the comprehension of things to their creation. Artistic knowledge is developed as an affective and perceptual mode of experience, realized in the indeterminate zone of the compositional space in process (see Appendix E for an art historical application of this principle to recent work by the visual artist Ellen Bell)

[7] The socio-cultural techniques of instrumental rationality are the primary objects of investigation. Weber's (1970,1903) interpretation of instrumental rationality remains influential as one of the most sustained critiques of modern rationalization's expansion of a means to ends culture in the name of 'progress', which today dominates all aspects of life through the rationale of the balance sheet. My understanding of Weberian theory is primarily supported by Gane (2004), who provides an insightful analysis of Weber's rationalization thesis and its thematic parallels with the critiques of Foucault, Lyotard and Baudrillard. Schroeder's (1992) evaluation of Weber's social theory has also been of value for its analysis of the cultural dynamics between instrumentality and social life. Gellner (1992) has informed my wider understanding of the history of Reason, in particular the chapters *The Mundane Enemies of Reason* and *Counter Currents* that assess the philosophical and critical arguments highlighting the limitations of instrumental reason.

[8] The decision to focus on processes of rationalization allows art to engage with the general condition of life in post-industrial societies. The general condition though is not presumed to be society as a whole in terms of it being a definitive object of investigation, but rather the interconnected, local and contingent filiations of practices, techniques and knowledge that are immanent with subjective experience, determine its condition and contain the potential for its reformulation. Instrumental rationalities and the subjects of reason are encountered in specific domains of practice, while at the same time artistic connections are *made* between those practices. Art assumes a purpose as a differential practice of composition and is developed as a non-instrumental mode of critique, whose objective is to create formal diagnostics of the social condition. In this respect Georg Simmel's sociology (1971) has acted as an early influence on the conception of the critical framework in terms of his understanding of society as 'a constellation of *forms of sociation*, including emergent as well as permanent forms…grounded in the experience and knowledge of its participants' (Frisby, 2002, xv-xvi).

[9] *In Schizoanalysis and Baudelaire: Some Illustrations of Decoding at Work,* Holland (1996) shows how processes of decoding in *Anti Oedipus* (1984) are effective only in connection with historical contexts. In re-connecting schizoanalysis to the poetry of Baudelaire, Holland attempts to show not what decoding means but how it works and what it can do in terms of a cultural analysis of Baudelaire's modernism. In the doctoral research the emphasis is on what art can do in terms of how it acts upon the objects of investigation. The poetry of the constructive-critical composition is to be located in the process of an object's transformation; in the subsequent recoding of the object, the 'what does it mean' of art is seen as a restriction on art's potential to destabilize what it has already put into process. Meaning and creativity compete for the rights to make sense, as one produces comprehension and the other generates expression.

[10] The 'alreadymade' refers to Duchamp's *Readymades* such as the infamous *Urinal* (1917). The readymade takes the form of a mundane object which is designated an art object as a premise for its submission as an

artwork for public exhibition. Duchamp's intention was to show that the nomination of the 'art' object by the artist was a function of discourse, any object could be subjected to the same process as the arbitrary condition of its becoming art. The alreadymade artist is synonymous with the *Readymade* as the self-nominating artist who makes generic artworks 'in the style of' without ever pushing the parameters of what art can do.

[11] Chapter 2 of *Chaosmosis* (1995, 34-35), Guattari lists the components of machinic assemblages which in various combinations are aggregates of the unconscious as productive: 'expanding the limits of the machine, *stricto sensu*, to the functional ensemble which associates it with man…implies taking into account multiple components:

- material and energy components

-semiotic, diagrammatic and algorithmic components (plans, formulae, equations and calculations which lead to the fabrication of the machine)

- components of organs, influx and humours of the human body

- individual and collective mental representations and information

- investments of desiring machines producing a subjectivity adjacent to these components

-abstract machines installing themselves transversally to the machinic levels previously considered (material, cognitive, affective and social)'.

In *Chaosophy* (1995, 75-92) Deleuze & Guattari argue that machinic assemblages of desire are best understood by referring to the category of production. Desire is not the effect of a lack as is argued by clinical psychoanalysis, but is productive of flows, schisms and connections. Desire in a state of assemblage is 'revolutionary by nature because it builds machines capable – when inserted into the social structure – of exploding things, of disrupting the social fabric' (ibid, 76). They go on to consider the productive process of artists who are in some way designated mad, as the creative dynamic of the 'breakthrough' followed by a collapse. In the doctoral research the breakthrough and the collapse are characteristic of the critical breakdown of systems or practices, but it is only in Chapter 4 that the breakdown leads directly to a productive, machinic assemblage of the mental/emotional diagnosis of the artist. Examples of machinic assemblages are provided in *Balance Sheet Program for Desiring Machines* (ibid, 119-150), which include Buster Keaton's collapsing houses, Kafka's literary machines plugging into bureaucratic and technocratic machines, the telephone exchange in which 'one easily recognizes the very form of perverse artificial societies, or a society of Unknowns. A process of reterritorialization is connected to a movement of deterritorialization that is ensured by the machine' (123), and Duchamp's *Tu m'* which shows how 'the machine stands apart from all representation…because it is pure Abstraction' (128). The abstractedness of the machinic assemblage is thoroughly social in nature because it draws its productive energy from 'inside the social and technical machines themselves' (137) in which it is already a part.

[12] 'Informational craft' designates the artistic 'know how' of recomposing information as a material substance to be mutated in the pattern of interference. As the thesis develops the 'corrupting' of information becomes the critical infection of rationalization as it increasingly comes to rely on the computerization of its processes of discipline and control. Informational craft deregulates the information of rationalization in the compositional space *in* formation. For example, *Mainframe* (2005) materializes abstract processes of information in manifest objects not as metaphors for what remains outside of experience and invisible at the particulate level, but as processes in themselves, which facilitate different experiences of information in the cultural currency of the artist. Simple techniques of informational craft such the flower arrangements of *Still Life* (2005) and *Revitalized* (2006), the mosaic of *Emotion Encryption* (2006), hand produced *Heart Calculator* (2002) casts, the paper stacks and 'post its' of Chapter 3 and the colour pencil diagrams of Chapter 4, off set the objective seriousness of the rationalisms under investigation

[13] See the 'Plan Drawer' in Appendix G for an indicative selection of Leonardo's sketches and drawings.

[14] See the 'Plan Drawer' in Appendix G for an indicative selection of Duchamp's drawings and technical diagrams.

[15] Maciunas's assemblage of the artist's toolbox corresponds with Deleuze's conception of theory as a thing of use; 'theory does not express, translate or serve to apply practice, it is practice. It is local and not totalizing…a theory is like a box of tools…it must be useful'. (Deleuze in Ferguson ed, 1990, 7) Art becomes a critical instrument in the doctoral research through the activation of critical theory, the critique of composition utilizing artistic practice as the application of the theoretical procedure.

[16] The *Heart Calculators* were first exhibited in May 2002 at Ennepetal, Germany. An expanded series incorporating *Still Life* (2002) formed part of *Sense*, my MA exhibition at Nottingham Trent University, December 2002. I would like to make further additions to the *Heart Calculator* series based on their treatment in the doctoral research.

[17] The Lacanian 'subject who is supposed to know' describes a complex dynamic of desire (a transference) in knowledge, which comes into being with the symbolic nomination of an authoritative, knowledgeable subject. Freud was the subject supposed to know of psychoanalysis, there being a degree of transference between Freud and Lacan via his re-reading of the Freudian unconscious through the techniques of structural linguistics. Because language is a supra-subjective structure we do not own the words with which we speak, therefore in order to enter the symbolic order of words we are occupied by language and spoken by it. Both the desire to communicate knowledge and the desire to know is located elsewhere in the knowing place of the Other (society as the symbolic order of words). The place of the Other remains empty since in reality (which

for the Lacanian is the desiring subject of language) no actual person is able to occupy that place; the occupying force of language remains foreign because it fails to recognize the place we imagine we experience as 'individual'. We therefore *imagine* that there is a place in language where someone speaks with certainty and that place is occupied by authority figures such as God, Jesus, Buddha, Marx, the lawyer, the detective, the scientist, the teacher and the doctor. The desire to know is the *cause* of knowledge in the place of the Other, which at the same time sustains the knowing subject in an authoritative place of reason. In this respect the only true knowledge for the psychoanalyst is the uncertain knowledge of the unconscious, it is the knowledge that desire in the field of the Other distorts all attempts to know an objective reality (Lacan, 1998, 230-43). The expert's recourse to the 'objectivity' of number attempts to overcome the problem of uncertainty only to reinstate paradoxical objects of knowledge that are increasingly abstract and virtual in character, and whose sense is only accessible to the 'subject supposed to know' who produces them. The autism of the expert's knowledge makes the possibility of a public platform of understanding or common knowledge increasingly problematic (see Zizek in Chapter 3). Neither does it follow that numbers are less subject to desire than words, one need only think of the virtual economics of the stock market or the desire to quantify subjective intentions, recently investigated by Curtis in *The Trap* (2007). It is no coincidence that John Nash, the proponent of a mathematical model for predicting behaviour based on mutual suspicion between individuals, was later diagnosed as schizophrenic.

[18] The Ministry of Information was also the name of the central government department responsible for publicity and propaganda during the Second World War. The Ministry of Information provided George Orwell with material for his novel *1984* (1949) in which Winston Smith rebels against the totalitarian state in which he lives. The *Ministry of Truth* in *1984* was based on Orwell's first hand experience of the Ministry of Information while working for the BBC's overseas service. (www.netcharles.com/orwell/articles/1984/-background-info.htm)

[19] The Austrian based artist's group ubermorgan.com operate in this same surreal space of the information society gone mad, which amongst other things gives rise to an excess of bureaucratic production. *Bureaucrazy* (2006) is a project based on software generators such as the 'bank statement generator' and 'identity generator', which are designed to question the arbitrary authority of all bureaucratic systems. (www.turbulence.org/blog/archives/002038.html)

[20] A reference to Nottingham Trent University's *Academic Standards and Quality Handbook: Section 14A, Regulations for Research Degrees* (2006). The document contains minutiae of codes, conventions, terms, procedures and protocols, which must be adhered to in order satisfy the institution that 'the candidate' has progressed according the rules. I am also referring to the stages in the academic's progression through the knowledge chain; the official application for admission, the application to register the thesis, the transfer from

Master of Philosophy to Doctor of Philosophy, and the candidate's declaration form. Besides the mundane politics of academic office was a wider dynamic of power as to the question of art's value as a research discipline at NTU. Attempts to annex art to the dominant research model based in part on the disciplinary objectivity of the scientific method, resulted in a climate of institutional interference in which art had to continually justify its existence as a valuable and discrete form of practice, which need not look to other disciplines for validation. The doctoral research has thrived on this power dynamic with its own patterns of interference, which to some extent are designed to counteract those of the current institutional regime.

[21] With regard to the 'Reasons and Purposes' section in the AHRC's *Application Form* (2006) and the *Guidance Notes for Applicants* (2006), which is insured by the scientific rationale in terms of situating instrumental research as a function of a research problem or question that is identified in an established or emerging field of investigation. In the traditional sense, a thesis should grow out of this research parameter, which the AHRC expects to be *known* in advance. In forecasting a 'particular contribution to knowledge and understanding' (Guidance Notes 2006, 5) at the application stage, the artist begins to forsake what is particular to critical artistic practice, in terms of its re-evaluation in this doctoral research. Furthermore, the AHRC fails to acknowledge the possibility that art has the potential to be an investigative method in its own right, as it will not support '*only* a creative outcome or piece of work'. For whatever reason it is imperative that artistic practice be accompanied by a legitimate form of 'textual analysis or explanation to support its position and to demonstrate critical reflection' (Guidance Notes, 2006, 6). The constructive criticism of the doctoral research goes some way toward undermining this rationale.

[22] The *Emotion Officer* designates the administered artist of the workplace, the creation of a non-authoritative academic post insofar as there is no official position of the *Emotion Officer*. It is an interfering subject position adjacent to the institutional academic and the psychologist (psychiatrist, psychoanalyst, counsellor). As a diagnostic device of critique, the *Emotion Officer* instigates a discursive frame for the research in Chapter 4, in which the artist becomes a type of cultural physician of rationality.

[23] The Mechanical Freud was also referred to as the Affectometer, Emotograph, Lie detector, Stressometer, Emotion Meter, Polygraph, and Psycho-Deteco-Meter. (Dror, 2001a, 367) **Fig. 14a** is indicative of how the technology was transplanted into the social infrastructure as a diagnostic device for extracting bio data from the subject in numerical form, which was then translated into graphical information. **Fig 14b** Dror (1999b) argues that the correspondence between the experience of the emotional event and the after effect of the graphical representation is highly questionable.

[24] **Figs. 15a and 15b** show how once abstracted into numbers an emotional geometry could be utilized to depict any type of emotional event in a new discursive space of expression. The graphical records of the 1930's 40's and 50's are prototype versions of what we know today as biofeedback.

[25] In *What is Philosophy?* (1994) Deleuze & Guattari conceive of planes of expression in which art, science and philosophy are defined as irreducible *creative* practices that think about and produce their objects in different ways. Science discovers the physical reality of the world through a plane of reference, constructing partial states of affairs (particulate objects of knowledge) with its functions, Philosophy is the virtual event of thought in the process of creating and combining concepts, which extract a singular image of the world but never refer to its actuality and Art preserves in the artwork a singular monument, 'a bloc of sensation, a compound of percepts and affects' which stands for itself as that which is rendered from the world. Science unfolds on a plane of reference, Philosophy unfolds on a plane of immanence, Art unfolds on a plane of composition. Science deals with variables, Philosophy with variations and Art with varieties as each extracts a particular type of order from the virtual possibilities (multiplicities) of chaos (163– 199).

[26] See the 'Animi Duco' drawer in Appendix G for a full selection of artistic emotographs, emotion diagrams and related images.

[27] In *An Essential Disorientation* (2007) John Newling develops an artistic engagement with 'the disorientation of the liminal process' in which 'place, time and self are open to new experiences and new knowledge' (ibid, 41). Infused with a 'quality of betweeness... the liminal experience of the threshold, once encountered, leads to new understanding, and often, but not always, to new connections between things' (ibid, 41-42).

[28] The *Emotion System* was designed for an intelligent robot called Kismet by Professor Cynthia Breazeal at MIT Media Lab. Breazeal aims to construct 'robots that engage with meaningful social exchanges with humans' leading to 'cooperative and capable robots that can work and learn in partnership with people' (Breazeal, 2007). To some extent the machinic productions of the doctoral research break down the distinctions between artificial intelligence and human life insofar as affects are independent of a conscious, human entity, and are instead constituent in the emergence of the vital assemblage, 'not all Life is confined to the organic strata: rather, the organism is that which life sets against itself in order to limit itself, and there is a life all the more intense, all the more powerful for being anorganic' (Deleuze & Guattari, 1988, 503).

[29] *Mainframe* (2005) was conceived as a documentary assemblage of production in an attempt to reconfigure the archive as an object 'under construction', open to continual interpretation and reinterpretation as discussed by De Landa in *The Archive Before and After Foucault* (2003). As an archive of experience, *Mainframe*

generates artistic compositions designed to challenge the over determined subject of official documentation. From an art historical perspective the early *Mainframe* assemblage was influenced by Art and Language's *Documenta Index* (1972), an artwork that operated as a public facet of the imaginary *Art & Language Institute* to which 'authorship of the *Documenta Index* was briefly and strategically attributed' within 'a corpus of ideological commitments comprising a field' (Harrison, 1991, 63-4 & 269). This process of institutional critique via documentary production and exchange was conceived as a search for 'a general methodological horizon' (ibid, 269).

[30] My understanding of this process as social and historical is based on Day's analysis in *The Modern Invention of Information* (2001), in particular Chapter 2: *Information Theory, Cybernetics and the Discourse of Man* for a lucid account of how informational techniques lead to the subjugation of the individual in systems of communication, and Chapter 5: *Heidegger and Benjamin, The Metaphysics and Fetish of Information* for a critique of the reification of knowledge as information in the technical organization of mass culture.

[31] Perry (1999) outlines how information has gradually become subject to ever more sophisticated economic rationales, to some extent made possible by the information machines that are both commodities in themselves and the means for the distribution of information as a commodity, that is, as a thing of exchange value. Day (2001) argues that the commodification of information has emerged as the prevalent form of social relations almost by stealth, due to difficulties faced by critical theorists when attempting the separation of information as discourse from the discourse of information. When language, communication and information merge, the commodification of information becomes the premise for the absolute micro-management of individuals as feedback mechanisms in increasingly rationalized systems of control.

[32] To date, the most comprehensive overview of the connections between art, technology and new media is Stepehen Wilson's *Information Arts*: *Intersections of Art, Science and Technology* (2002).

[33] See the 'Plan' drawer in Appendix G for more examples of early *Mainframe* assemblages and technical drawings, which were eventually translated into the prototype scale model (**Fig. 38**)

[34] Virilio's *The Information Bomb* (2000) provides a useful background to the concept of information as a type of controlled explosion. In exploring the relationship between speed, war and information technology, Virilio attempts a sustained critique of modern science as exclusively 'techno-science – the product of the fatal confusion between the operational instrument and exploratory research' (ibid, 1).

[35] Colwell (1996) assesses 'dividualization' against Deleuze's control forms of power, which operate through 'the fragmentation of identity instead of its formation' (211). She proceeds to argue that the 'multiplicity of databanks and their interconnection in the network generate the ability to assemble an individual out of the electronic text that documents a person's dividual nature. Control…enables the assembling of more than one individual out of the same person' (ibid, 212).

[36] In considering Jean-Luc Godard's *Histoire(s) du Cinema,* Valiaho (2001) argues that the digital synthesizer although referring to the 'digital imaging processing techniques in *Histoire(s)*, exceeds a purely technological definition…as a concept that describes the digital Idea – an idea which Deleuze defines as a "system of multiple, non localizable connections between different elements which is incarnated in real relations and actual terms." (Valiaho, 2001) In a similar vein, *Mainframe* (2005) produces the digital idea of information in a material-analogue/electronic-digital composition of experience.

[37] Collaborations with the artist and writer Samson Kambalu have developed my understanding of semiotic energy from a Nietzschean perspective, which in the broadest sense corresponds to Deleuze &Guattari's materialist semiotic, encountered in art through the force of affects. (see Colebrook, 2006, 63-72) Kambalu generates an aesthetic discourse of the 'Solar Ethic' (see Appendix A), which offers a poetic framework for considering the power of signification as the will to power of creation, in which the artist becomes a cultural transformer of semiotic currency. The subject position of the artist as transformer is reworked in *Mainframe* (2005) as transformative in the social currency of information.

[38] Whiteread's installation *Embankment* (2005) (**Fig. 46b**) has further informed the development of the *Information Cube* as a modular artwork in terms of the recurrent dynamic between framing, containment and the leaky boxes of the doctoral research: the modulations of *To Do* (**Fig. 12**), the info-structures of *Mainframe* in Chapter 5, Maciunas's *Fluxus Year Box* (**Fig. 3b**), the diagrammatic boxes in Chapter 4, and the regulatory boxes of rationalization designed to contain subjects within certain types of discursive frame.

[39] In *Intensive Media: Modernity and Algorithm* (2007), Lash argues that in the information economy of the 21st Century, 'Rules and reason are generative. They are informational. More precisely they work like algorithms. As sets of instructions' (ibid 72) for accomplishing tasks or solving problems. The intelligent walls of the *Information Cube* would be algorithmic in the sense that users would make compositions by retrieving information according to a set of pre-programmed compositional potentials. The walls function as the artistic equivalent of those in the film *Minority Report* (2002), which act as an electronic canvas for retrieving visual, textual and audio elements using hand gestures, for combination and alteration in the compositional space (see *Aquaplayne* in Appendix D for an art historical application of this process to the techniques of Abstract Expressionism).

[40] The 'dance of information' is discussed in the conclusion as the synthesis of movement, expression and information, developed through the emotion diagram as choreographic template, a set of instructions for generating the dancer's performance as an interference pattern in the *Le Doux Circuit* (**Fig. 26**).

[41] My understanding of complexity theory and complex adaptive systems is informed by Gell-Mann's lucid overview of this emergent discipline (1995). According to Gell-Mann's account, *Mainframe* (2005) will take on a higher degree of complexity with the capacity to self organize as the irregularity of its information content increases, but only if, at the same time, it is able to build multiple platforms and connectivities into its accumulating creative system.

[42] The choreographic algorithm is equivalent to labanotation, the technique of inscription devised by Rudolf von Laban for encoding the complexity of the dancer's movements in notational form for use in future performances. Jones (2006) re-evaluates labanotation against the 'bureaucratizing sensibility of modernity' (ibid, 163) and its similarities with the time and motion studies of Taylorism, discussed in section 1.1 of the doctoral research.

Bibliography

Accenture (2007) *High Performance Business*: *Marks of Distinction*. Contributers: Tim Breene, Narendra Mulani, Paul Nunes [online] at www.accenture.com/outlook [accessed 24/5/2007]

Alberro, Alexander ed (2000) *Conceptual Art: A Critical Anthology*. Massachusetts. MIT Press.

Allen, Amy (2000) *The Anti-Subjective Hypothesis: Michel Foucault and the Death of the Subject.* The Philosophical Forum Volume 31, No. 2, Summer, pp113-130

Brayer, Marie-Ange ed. (2005) *Archilabs Urban Experiments: Radical Architecture, Art and the City*. London. Thames & Hudson

Balleine, Bernard & Dickinson, Anthony (1998) *Consciousness-The Interface Between Affect and Cognition in* Consciousness and Human Identity. John Cornwell ed. Oxford. Oxford University Press.

Barwell, Ismay (1986). *How Does Art Express Emotion?* Journal of Aesthetics and Art Criticism. pp175 – 181.

Baudelaire, Charles (1863) *The Painter of Modern Life* in Selected Writings on Art and Literature (1972) trans. P.E. Charvet. London. Viking

Bernstein, J.M (1992) *The Fate of Art: Aesthetic Alienation from Kant to Derrida and Adorno.* Cambridge. Polity Press

Bolton, Sharon (2005) *Emotion Management in the Workplace*. London. Palgrave Macmillan

Boundas, C & Olkowski, D eds (1994) *Gilles Deleuze and the Theater of Philosophy*. London. Routledge

Bourdieu, Pierre & Haacke, Hans (1995) *Free Exchange*. Cambridge. Polity Press

Bourriaud, Nicholas (2003) *Postproduction*. London. Art Data.

Brain, Robert. (1996). *The Graphic Method: Inscription, Visualization and Measurement in Nineteenth Century Science and Culture.* PhD dissertation. UCLA.

Brazil (1985) Director Terry Gilliam. USA. Universal

Broeckmann, Andreas (1997) *Machine Aesthetics – A Conversation*. Rhizome. Org [online] at URL http://rhizome.org/thread.rhiz?thread=767&page=1#439

Brown, Dan (2003) *The Da Vinci Code*. London. Corgi Books

Buchloch, Benjamin (1990) *Conceptual Art 1962-1969: From the Aesthetics of Administration to the Critique of Institutions*. October 55, pp105-143

Buck-Morss, Susan (1989) *The Dialectics of Seeing: Walter Benjamin and the Arcades Project*. London. MIT Press.

Buskirk, Martha (2003) *The Contingent Object of Contemporary Art*. Massachusetts. MIT Press.

Butler, Judith (1997) *The Psychic Life of Power*: *Theories in Subjection*. Stanford. Stanford University Press

Butler, Judith (2001) *What is Critique? An Essay on Foucault's Virtue*. [online] available at URL http://transform.eipcp.net/transversal/0806/butler/en

Cacioppo, J. et al (2004) *The Affect System: What Lurks Below the Surface of Feelings ?* In Feelings and Emotions. The Amsterdam Symposium. A. Manstead ed, pp223 – 242. Cambridge. Cambridge University Press.

Cannon, Walter. (1929). *Bodily Changes in Pain, Hunger, Fear and Rage: An Account of Recent Researches into the Function of Emotional Excitement*. New York. D.Appleton.

Chandler, Daniel. (2002) *Semiotics: The Basics*. London. Routledge

Colebrook, Claire (2006) *Deleuze: A Guide for the Perplexed*. London. Continuum

Colwell, C (1996) *Discipline and Control: Butler and Deleuze on Individuality and Dividuality.* Philosophy Today Vol 40 pp 211 - 16

Comte, Auguste, (1855) *The Positive Philosophy of Auguste Comte*. [2003 ed] Kessinger Publishing Company

Couldry, Nick (1995) *Speaking Up in a Public Place: The Strange Case of Rachel Whiteread's House* in New Formations Number 25 summer pp 96 - 113

Curtis, Adam (2002) *The Century of the Self*. BBC 2 documentary series in four parts

Curtis, Adam (2007) *The Trap*. BBC2 documentary series in three parts

Damasio, Antonio. (1994) *Descartes Error: Emotion, Reason and the Human Brain*. New York. Putnam.

Damasio, Antonio (1999) *The Feeling of What Happens: Body and Emotion in the Making of Consciousness.* New York. Harcourt.

Damasio, Antonio (2003) *Looking for Spinoza: Joy, Sorrow and the Feeling Brain.* New York. Harcourt

Damasio, Antonio. (2004) *Emotions and Feelings: A Neurobiological Perspective.* In Feelings and Emotions: The Amsterdam Symposium. A. Manstead ed. Cambridge. Cambridge University Press

Darwin, Charles. (1872) *The Expression of the Emotions in Man and Animals.* [1999 edition] London. Fontana Press

Daston, L & Galison, P. (1992). *The Image of Objectivity.* Representations 40, pp107 – 115.

Day, Ronald. (2001) *The Modern Invention of Information. Discourse, History, Power.* Illinois. Illinois University Press.

DeLanda, Manuel (2003) *The Archive Before and After Foucault* in Information is Alive: Art and Theory on Archiving and Retrieving Data. Joke Brouwer, Arjen Mulder, Susan Charlton eds. V2 Publishing

De Laurentis, Teresa (1989) *Technologies of Gender: Essays on Theory, Film and Fiction.* Basingstoke. Macmillan

Deleuze, Gilles (1998) *Essays Critical and Clinical.* trans. Daniel W. Smith & Michael Greco. London. Verso

Deleuze, Gilles (1996) *Postscript on Control Societies* in Negotiations 1972 – 1990 New York. Columbia University Press

Deluze, Gilles (2006) *Two Regimes of Madness.* New York. Semiotext(e)

Deleuze, Gilles & Guatarri, Felix (1984) *Anti Oedipus: Capitalism and Schizophrenia.* trans. Robert Hurley, Mark Seem and Helen R Lane. London. Athlone Press

Deleuze, Gilles. & Guattari, Felix (1988) *A Thousand Plateaus. Capitalism and Schizophrenia.* trans. Brian Massumi London. Continuum.

Deleuze, Gilles & Guattari, Felix (1994) *What is Philosophy ?* trans. Graham Burchell & Hugh Tomlinson. London. Verso.

De Duve, Thierry (1996) *Kant after Duchamp.* London. MIT Press/October Publications

De Duve, Thierry (1996) *Echoes of the Readymade: Critique of Pure Modernism* in The Duchamp Effect: Essays, Interviews, Round Table. Martha Buskirk & Mignon Nixon eds. Massachusetts, MIT Press/October Publications

Derlien, Hans-Ulrich (1991) *Bureaucracy in Art and Analysis: Kafka and Weber*. Journal of the Kafka Society of America, Volume 15, PT 1-2, pp4-20

Descartes, Rene (1649) *The Passions of the Soul*. trans. Stephen Voss [1989 edition]. Hackett Publishing Company.

De Salvo, Donna ed. (2005) *Open Systems: Rethinking C. 1970*. London. Tate Publishing

De Sousa, R. (1989) *The Rationality of Emotion*. London. MIT Press.

Dreyfus, H & Rabinow, P (1982) *Beyond Structuralism and Hermeneutics*. London. Harvester Wheatsheaf

Dror, Otniel (1998) *Creating the Emotional Body: Confusion, Possibilities and Knowledge*. In An Emotional History of the United States. P. Stearns & J. Lewis eds, pp173 – 194. New York. New York University Press.

Dror, Otniel (1999a) *The Affect of Experiment: The Turn to Emotions in Anglo American Physiology, 1900 – 1940*. Isis, Volume 90, Part 2, pp205 – 237.

Dror, Otniel (1999b) *The Scientific Image of Emotion: Experience and Technologies of Inscription*. Configurations, Volume 7, Part 3, pp355 – 401.

Dror, Otniel (2001a) *Counting the Affects: Discoursing in Numbers*. Social Research. Volume 68, No2, pp357 – 378.

Dror, Otniel (2001b) *Techniques of the Brain and the Paradox of Emotions 1880 – 1930*. Science in Context, Volume 14, Part 4, pp643 – 660.

Edwards, Steve (2004) *Photography out of Conceptual Art* in Themes in Contemporary Art. Gill Perry & Paul Woods eds. Milton Keynes. Open University Press.

Elkins, James (1996) *The Object Stares Back: On the Nature of Seeing*. New York. Simon & Schuster.

Elkins, James (2000) *What Painting Is*. London. Routledge.

Fer, Briony (1993) *Realism, Rationalism, Surrealism: Art Between the Wars*. David Batchelor, Paul Wood co-authors. The Open University Press

Ferguson, R ed (1990) *Discourses: Conversations in Postmodern Art and Culture*. London. MIT Press.

Foucault, Michel (1970) *The Order of Things: An Archaeology of the Human Sciences*. London. Routledge.

Foucault, Michel (1977) *Discipline and Punish: The Birth of the Prison.* trans. Alan Sheridan. London. Penguin

Foucault, Michel (1978) *The History of Sexuality*: *Volume 1 An Introduction.* trans Robert Hurley. London. Penguin

Foucault, Michel (1991) *The Foucault Reader* ed. Paul Rabinow. London. Penguin

Foucault, Michel (1998) *Aesthetics, Method and Epistemology. Volume 2.* James Eribon ed. trans. Robert Hurley et al. London. Penguin.

Fraser, Andrea (2005) *From the Critique of Institutions to an Institution of Critique*. Artforum, September, XLIV, No. 1, pp278-283

Frisby, David (2002) *Georg Simmel*. revised edition. London. Routledge

Gaffney, Peter (2006) *DemiurgicMachines: The Mechanics of New York Dada*, *A Study of the Machine Art of Francis Picabia, Marcel Duchamp, and Other Members of New York Dada 1912 – 1922.* PhD Dissertation. University of Pennsylvania

Gane, Nicholas (2004) *Max Weber and Postmodern Theory: Rationalization and Re-enchantment.* London. Palgrave Macmillan

Gell-Mann, Murray (1995) *What is Complexity?* [online] at www.santafe.edu/-mgm/complexity.html [accessed 30/07/2007]

Gellner, Ernest (1992) *Reason and Culture: The Historic Role of Rationality and Rationalism.* Oxford. Blackwell

Gerritson, F. (1979). *Evolution of the Colour Diagram*. Colour Research and Application. Volume 4, No.1, pp33 – 38.

Godfrey, Tony (1998) *Conceptual Art*. London. Phaidon Press.

Goldman, Harvey (1988) *Max Weber and Thomas Mann: Calling and the Shaping of the Self.* London. University of California Press

Gray, C. & Malins, J. (2004) *Visualizing Research: A Guide to the Research Process in Art and Design.* Hampshire. Ashgate.

Greenaway, Peter (1999) *Artworks 1963 –1998.* Manchester. University of Manchester Press.

Greenberg, Clement (1961) *Art and Culture*, Massachusetts. Beacon Press

Guattari, Felix (1995) *Chaosophy*. Sylvere Lotringer ed. New York. Semiotext(e)

Guattari, Felix (1995) *Chaosmosis: An Ethico-Aesthetic Paradigm*. Sydney. Power Publications

Guattari, Felix (1996) *Remaking Social Practices* in The Guattari Reader. Gary Genosko ed. Oxford. Blackwell

Gupta, R.K. (1974) *Bartleby: Melville's Critique of Reason*. Indian Journal of American Studies, Volume 4, PT 1-2, pp66 - 71

Haacke, Hans (2004) *Hans Haacke*. Molly Nesbit [interview], Walter Graaskamp [survey], Jonathan Bird [focus]. London. Phiadon

Hall, Donald (2004) *Subjectivity*. London. Routledge

Harrison, Charles (1991) *Essays on Art & Language*. Oxford. Basil Blackwell

Hawkes, Terrence (1977) *Structuralism and Semiotics*. London. Methuen.

Hayles, Katherine (2005) *My Mother Was a Computer: Digital Subjects and Literary Texts*. London. University of Chicago Press

Heidegger, Martin (1977) *The Question Concerning Technology and Other Essays*. trans. William Lovitt. New York. Harper and Row

Heidegger, Martin (1981) *Nietzsche Volume 1: The Will to Power as Art*. trans David Krell. London. Routledge

Hochschild, A. (1983) *The Managed Heart: Commercialization of Human Feeling*. Berkeley. University of California Press.

Holland, Eugene (1996) *Schizoanalysis and Baudelaire: Some Illustrations of Decoding at Work* in Deleuze: A Critical Reader. P. Patton ed. Oxford. Blackwell

Holland, Eugene (1999) *Deleuze & Guattari's Anti- Oedipus: An Introduction to Schizoanalysis*. London. Routledge

Holmes. F & Olesko M. (1995) *The Images of Precision: Helmholtz and the Graphical Method In Physiology* in *The Values of Precision*. M.Wise ed. Princeton. Princeton University Press.

Huber, Hans (1989) *The Artwork as a System and its Aesthetic Experience: Remarks on the Art of Joseph Beuys*. [online] available at URL http://www.hgb-leipzig.de/ARTNINE/ huber/writings/beuyse.html [accessed 09/07/2007]

Hughes, Rolf (2005) *Orderly Disorder: Posthuman Creativity.* Conference Paper: ACSIS Nationella Forskarkonferens for Kulturstudier, Norrkoping, 13ᵗʰ – 15ᵗʰ June

Hulten, P. (1993) *Marcel Duchamp: Work and Life.* Massachusetts. MIT Press.

Inwood, Micheal (2000) *Heidegger: A Very Short Introduction*. Oxford. Oxford University Press.

James, William (1884) *What is an Emotion ?* Mind, Volume 9, pp188 – 205.

James, William (1890) *Principles of Psychology.* New York. Henry Holt.

Johnston, John (1999) *Machinic Vision* Critical Inquiry 26 Autumn pp27-48

Jones, Amelia (2004) *Irrational Modernism: A Neurasthenic History of New York Dada*. Massachusetts: MIT Press

Jones, Caroline (2006) *Embodied Experience,Technology and Contemporary Art*. Cambridge. MIT Press

Kelly, M ed. (1998) *Encyclopedia of Aesthetics*. *Volume 2*. Oxford. Oxford University Press.

Kemp, Martin ed. (2006) *Leonardo Da Vinci: Experience, Experiment, and Design*. London. V & A Publications

Krysa, Joasia ed. (2006) *Curating Immateriality: The Work of the Curator in the Age of Network Systems*. Autonomedia. Data Browser

Lacan, Jacques (1998) *The Four Fundamental Concepts of Psycho-analysis*. trans. Alan Sheridan. London. Vintage

Langlands & Bell. (1996) *Langlands and Bell*. London. Serpentine Gallery Trust.

Langlands & Bell. (2002) *Language of Places*. London. Alan Cristea Gallery.

Lash, Scott (2007) *Intensive Media: Modernity and Algorithm* in Organizing for Change: Integrating Architectural Thinking in Other Fields. Basel. Birkhauser

LeDoux, J (1996) *The Emotional Brain: The Mysterious Underpinnings of Emotional Life*. New York. Simon & Schuster.

LeWitt, Sol (1993) *25 Years of Wall Drawings 1968 – 1993*. London. University of Washington Press

Light, Ann (2005) *Media: Kafka Anti-Bureaucracy Website Yields Streamlined Government* [online] at usabilitynews.com URL http://www.usabilitynews.com/news/article2561.asp [accessed 26/04/2007]

Lord of the Rings Trilogy (2001-2003) Peter Jackson, Director. New Line Cinema

Lutz, Tom (2001) *Crying: The Natural & Cultural History of Tears*. London. W.W. Norton & Company

Lyotard, Jean–Francois (1991) *The Inhuman: Reflections on Time*. trans. Geoffrey Bennington & Rachel Bowlby. Cambridge. Polity Press

Maciunas, George (2005) *Maciunas' Learning Machines*. Astrit Schimidt-Burkhardt ed. Gilbert and Lila Silverman Fluxus Collection

McMahon, Melissa (2002) *Machinic Repetition in the Age of Art* in A Shock to Thought: Expression After Deleuze and Guattari Brian Massumi ed. London. Routledge

Marks, John (1995) *A New Image of Thought* in New Formations Number 25 summer pp66 - 76

Marx, Karl (1976) *Capital: A Critique of Political Economy Volume 1*. trans Ben Fowkes London. Penguin

Marx, Leo (1987) *Melville's Parable of the Walls* in Modern Critical Interpretations: Herman Melville's Billy Budd, Benito Cereno, Bartleby the Scrivener and Other Tales. Harold Bloom ed. New York. Chelsea House Publishers

Massumi, Brian (1992) *A Users Guide to Capitalism and Schizophrenia: Deviations from Deleuze and Guattari*. Cambridge. MIT Press

Massumi, Brian (1996) *The Autonomy of Affect,* in Deleuze: A Critical Reader. Paul Patton ed. Oxford. Blackwell

Massumi, Brian (2002) *Like a Thought* in A Shock to Thought: Expression After Deleuze and Guattari. London. Routledge

Massumi, Brian (2002) *Parables for the Virtual: Movement, Affect, Sensation*. Duke University Press

Matravers, Derek (1998) *Art and Emotion*. Oxford. Clarendon Press.
Maturana, Humberto, & Varela, Francisco (1980) *Autopoiesis and Cognition: The Realization of the Living.* Robert Cohen & Marx Wartofsky eds. Boston Studies in the Philosophy of Science 42

Meecham, Pam & Sheldon, Julie (2000) *Modern Art: A Critical Introduction*. London. Routledge

May, Todd (2005) *Gilles Deleuze: An Introduction. Cambridge*. Cambridge University Press.

Minority Report (2002) Director, Steven Spielberg. 20th Century Fox Film Corporation.

Mitchell, William J (2003) *ME ++ The Cyborg Self and the Networked City*. The MIT Press

Montag, Warren (1995) *The Soul is the Prison of the Body: Althusser and Foucault, 1970 – 1975.* Yale French Studies 88, *Depositions*.

Morgan, Gareth (1997) *Images of Organization*. London. Sage Publications

Mulvey, Laura (1975) *Visual Pleasure and Narrative Cinema*. Screen 16(3): 6-18

Newfield, Paul & Rayner, Timothy (2007) *Learning and Insurgency in Creative Organizations.* Fibreculture: Internet Theory, Criticism and Research Issue 5

Newling, John (2007) *An Essential Disorientation: An Investigation into Sacredness and its Relation to Contemporary Art*. Poland. Wydane W. Polsce Przez

Nietzsche, Friedrich (1887) *On the Genealogy of Morals*. Oxford. Oxford World Classics

North, Michael (1992) *The Public as Sculpture: From Heavenly City to Mass Ornament* in Art and the Public Sphere. William J Mitchell ed. Chicago. University of Chicago Press

Norton Wise, M ed. (1997) *The Values of Precision*. Princeton. Princeton University Press.

O'Sullivan, Tim et al. (1994) *Key Concepts in Communication and Cultural Studies*. London. Routledge.

Panchasi. R. (1996) *Graphology and the Science of Individual Identity in Modern France.* Configurations, Volume 4, pp1 – 31.

Patterson, Simon (2002) *Simon Patterson* essays by Bernhard Fibicher and Iwona Blazwick. Locus +

Pauly, P. (1994) *Modernist Practice in American Biology* in Modernist Impulses in the Human Sciences 1870 – 1930. D.Ross ed. Baltimore. John Hopkins University Press.

Paquet, M. (2000) *Rene Magritte 1898 – 1967: Thoughts Rendered Visible*. New York. Taschen.

Pedersen, M. ed. (1988) *Graphis Diagrams 1: The Graphic Visualisation of Quantitative Information, Procedures and Data.* Zurich. Graphis.

Pedersen, M. ed. (1997) *Graphis Diagrams 2: International Showcase of Diagram Design and Technical Illustration.* Watson-Guptill Publications.

Patterson, Simon (2002) *Simon Patterson* essays by Bernhard Fibicher and Iwona Blazwick. Locus +

Persichetti, Vincent (1961) *Twentieth Century Harmony*. London. W.W. Norton [online] at http://wikepedia.org/wiki/Modulation_%28music29

Perry, Brian. (1999) *Is Information a Commodity?* [online] at www.nii.ac.jp/publications/ kaken/HTML1999/99Perry02-E.html [accessed 29/08/2007]

Porter, T. (1995) *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life.* Princeton. Princeton University Press.

Raunig, Gerald (2005) *A Few Fragments on Machines*. trans Aileen Derieg. [online] at URL http://transform.eipcp.net/transversal/1106/raunig/en [accessed 15/11/2006]

Raunig, Gerald (2006) *Instituent Practices: Fleeing, Instituting, Transforming* trans. Aileen Derieg [online] at URL http://transform.eipcp.net/transversal/0106/raunig/en [accessed 15/11/2006]

Ray, G. ed (2001) *Joseph Beuys: Mapping the Legacy. New York*. Distributed Arts Publishers.

Richards, C (2000) *Getting the Picture: Diagram Design and the Information Revolution.* Information Design Journal, Volume 9, No 2 - 3 pp87 – 110.

Rutsky, R.L (1999) *High Techne: Art and Technology from the Machine Aesthetic to the Posthuman.* Minneapolis. University of Minnesota Press

Salk Institute. (2005) *Historical Perspectives on Emotion* [online] http: //emotion .salk .edu/Emotion /History/Plato/Bplato.html. [accessed 23 March 2005]

Saper, Craig (1998) *Fluxus as a Laboratory* in The Fluxus Reader. Ken Friedman ed. Chichester. Academy Editions

Scaff, Lawrence (1989) *Fleeing the Iron Cage: Culture, Politics, and Modernity in the Thought of Max Weber*. London. University of California Press

Schroeder, Ralph (1992) *Max Weber and the Sociology of Culture*. London. Sage Publications

Sellars, Wilfred (1991) *Science, Perception and Reality*. California. Ridgeview Publishing Company.

Sheikh, Simon (2006) *Notes on Institutional Critique* [online] at URL http://transform. eipcp.net /transversal/0106/sheikh/en [accessed 15/11/2006]

Simmel, Georg (1971) *On Individuality and Social Forms: Selected Writings of Georg Simmel.* London. The University of Chicago Press

Sloman, A. (2000) in *The New Fontana Dictionary of Modern Thought*. A. Bullock & S.Trombley eds p521. London. Harper Collins

Smart, Barry ed. (1999) *Resisting McDonaldization: Theory, Process and Critique*. London. Sage Publications

Smith, Daniel (1996) *Deleuze's Theory of Sensation: Overcoming the Kantian Duality* in Deleuze: A Critical Reader. Paul Patton ed. Oxford. Blackwell.

Sullivan, G. (2005) *Art Practice as Research: Inquiry in the Visual Arts*. London. Sage Publications.

Tagg, John (1988) *The Burden of Representation: Essays on Photographies and Histories* London. Macmillan

The Matrix (1999) Directors Larry Wachowski, Andy Wachowski. USA. Warner

The X Files (1993 – 2002) television series, 20th Century Fox Television

Thompson, Graham (2000) *Dead Letters! ...Dead Men? : The Rhetoric of the Office in Melville's Bartleby the Scrivener*. Journal of American Studies, 34, 3, pp395-411

Tyson, K. (2002) *Head to Hand*. London. Powerhouse Cultural Entertainment Books.

Tufte, Edward (2001) *The Visual Display of Graphic Information*. Graphics Press. USA

Valiaho, Pasi (2001) *An Audiovisual Brain: Towards a Digital Image of Thought in Jean-Luc Godard's Histoire(s) du Cinema* in Conference Proceedings for Affective Encounters: Rethinking Embodiment in Feminist Media Studies. University of Turku, School of Art, Literature and Music, Media Studies Series A, No. 49

Van Peer, Willie (1997) *Toward a Poetics of Emotion* in Emotion and the Arts. Mette Hjort & Sue Laver eds. Oxford. Oxford University Press

Virilio, Paul (2000) *The Information Bomb*. trans Chris Turner. London. Verso

Weber, Max (1970) *Essays in Sociology*. H.H. Gerth & C. Wright Mills eds. London. Routledge

Weber, Max (1903) *The Protestant Ethic and the Spirit of Capitalism* [1992 edition]. trans. T. Parsons. London. Routledge

Weinstein, E. (1991) *Georg Simmel, Sociological Bricoleur* in A Special Issue on Georg Simmel TCS, Volume 8, Number 3. Mike Featherstone ed. London. Sage Publications.

Welchman, John ed (2006) *Institutional Critique and After SoCCAS Symposium Vol. II* JRP Ringier

Willats, Stephen. (1996) *Between Buildings and People*. London. Academy Editions.

Wilson, Stephen (2002) *Information Arts: Intersections of Art, Science and Technology*. London. MIT Press

Wurster, Christian (2002) *Computers: An Illustrated History*. Taschen

Young, Carey (2002) *Carey Young, Incorporated*. London. Film and Video Umbrella

Young, Julian (1992) *Nietzsche's Philosophy of Art*. Cambridge. Cambridge University Press

Zepke, Stephen (2005) *Art as Abstract Machine*: *Ontology and Aesthetics in Deleuze and Guattari*. New York. Routledge

Ziarek, K. (1998) *Powers to Be: Art and Technology in Heidegger and Foucault*. Research in Phenomenology, Volume 28, pp162 – 194.

Zizek, Slavoj (2002) *The Matrix: Or, The Two Sides of Perversion* in The Matrix and Philosophy. William Irwin ed. Chicago. Open Court

Appendix A

Holyballism: A Brand New Religion
Interview Text: May 2004

Interview between artist and writer Samson Kambalu and Jonathan Willett, exploring the artist's philosophical and aesthetic attitudes towards life, art and self-expression. The interview was compiled from an ongoing exchange of taped conversation, informal meetings, written and emailed correspondence.

Kambalu has recently completed his first novel *The Jive Talker* to be published by Jonathan Cape in Spring 2008. I provided critical input and a first edit for the original manuscript, prior to the artist's publishing deal in summer 2006.

Web Links: www.holyballism.com

Holyballism: A Brand New Religion

JW: We were talking about Nietzsche and the Death of God. Explain what you mean by the Death of God, in particular your view of faith in a Godless world?

SK: For me Nietzsche is specifically writing about a Christian tradition and how a Christian conception of God has become unbelievable in Western society. There is a wider metaphysical question about what to believe in beyond the material, day to day conditions of everyday life. This marks a crisis in Western thought and my work is a personal response to that crisis. I am working in the void left by the unifying force of a Christian God, as I attempt to define a post– secular existence.

JW: In Africa you were raised with a Christian set of beliefs and received a European education. The belief may have faded but the knowledge has been retained and integrated into your practice. It seems as though the awareness that comes with the knowledge has released you from superstition and that somehow the work is the process of this realization. You retain some religious forms but they are emptied out of their essential or spiritual value.

SK: Yes that's right. I can identify with Nietzschean thought as a way of dealing with the Christ I inherited as a child in Africa. It is a way of shedding that 'old housing' and overcoming the restrictions on self-expression. I am not a victim of God, nor a product of the Colonial missionaries, nor am I the starving child we see in the Oxfam appeals. I have used Nietzsche as a tool to carve out my own post secular position, based on my life experiences. My art is a way of creating new values for myself, an ongoing process of re-evaluation. I take some of the 'old housing' with me and use it as creative material. As I have said to you before, it is like moving from the Christian Madonna to the Madonna of postmodern culture.

JW: Art as a vehicle for self-expression leads us to the second and for me the most significant aspect of *Holyballism*, Solar Ethics. If the Death of God has been your starting point, then I see Solar Ethics as the energy source for your creative process, a way of externalizing and affirming the re–evaluation of your life; 'bringing the work to the world' as you say.

SK: My interest in Solar Ethics comes from the Church of England theologian Don Cupid who talks about Solar Ethics as a way of life, it's all about expression, living like the sun. I thought it was cool to live like the sun, to just go out there and express myself. It's almost like Expressionism - just do it, don't think too much, don't search for meaning, meaning comes from having a creative life. It's just energy you know and me coming from Africa I found the Solar Ethic seductive, to just rise and shine and be in the here and now. And so I realised that inevitably Solar Ethics embraced things like fashion and music and all forms of contemporary expression in the here and now. This is also part of bringing the world back into my work, it's affirmative, another way of just doing it.

JW: Although *Holyballism* cannot be simply reduced to consumerism or the global spread of brands, it does engage with the productive energy of capitalism and the pursuit of happiness through material goods. For example when you say 'just do it' are you playing with that same advertising slogan for Nike sportswear?

SK: For me it's all about attitude. Whereas Nike says 'just do it', *Holyballism* explains why you should do it. The self-conscious consumer can be more creative, more expressive. It's not just about engaging with the kinds of individuality or self-expression that capitalism bestows on us. I am using a contemporary language of consumerism to communicate an ethos that goes beyond consumerism, it will transcend the language it employs but needs that language for the Solar Ethic to shine through. When the light goes on the 'old housing' no longer eclipses the sun and the sun just shines. Instead of filling the void left by God with consumer goods we can affirm our own lives by producing our own artefacts and ideas. I use contemporary art as my medium but the engineer, teacher, shop assistant, secretary can all go Solar, they can all find something in their everyday experience that will lead to a more self-conscious and affirmative life. Everybody can have a life that unfolds as a creative process.

JW: Solar Ethics and attitude seem to be about choosing how to live. They are not really dependent on money or belief but involve creative choices about how to insert yourself into culture. As a friend said to me recently, being cool is about being yourself, not trying to construct a personality or search in vain for who you 'really' are. Would you agree?

SK: Yes I like that. It's all about choices, it's about looking at life and making choices. Robert De Niro once said that the talent is not in the acting it's in making choices. You make choices and you make your own cool. There is no prescription, I improvise like the Jazz musician, I borrow from everywhere and play my own tune. To some extent my work is an improvised act of self- creation. This is why I am also interested in the entrepreneurial spirit of hip hop, the self promotion of rap stars who tap into the solar power of the market, even though they may not consciously be engaged with the kind of Solar Ethic that I have been describing.

JW: As the gap between contemporary art and celebrity narrows, is there a danger that all creative activity will be reduced to localized acts of self expression, the whole world as a Fame Academy where everyone becomes 'famous for 15 minutes'; in other words, can we still refer to something in art that has a wider social importance beyond the individual act?

SK: As I said when we were talking about consumerism it is necessary to adopt a contemporary language as a way of connecting with the world. The culture of celebrity and self-image dominates in today's society, so I use it self-consciously as another vehicle for expression. Today we worship brands and pop idols, people wait for hours to audition for the 'X Factor' but they are not really tuned into their own cool. Consider how society now treats the artist, he is something like a religious being; when we ask What is art? we may have to return to the 'old housing' of religion. Art no longer serves the Universal of God, it has been displaced onto the canvas of the self and I use this canvas in a meaningful way. Once the self becomes the universal form then the artist should address this as a wider objective structure. It's almost as if people cannot live without the opportunity project themselves, they die if they don't appear. Solar Ethics could be about a poetics of this self. For me its quite simple really, with the Death of God art becomes a self-conscious thing, an existential thing, almost as a way of identifying your existence. The artist finds meaning through self-expression when he is conscious that meaning can be found in the creative process. It is inevitable that art gravitates towards a Solar Ethics; in our culture the self is the new church.

JW: It seems to me though that the artist works something like a switch between the subjective and objective experience of the world. On the one hand he taps into the vast forces of expression already at work in the social structure, but at the same time learns how to recompose those currents according to a more philosophical creative register. The artist remains aware that his own sense of

self is always in question and dependent on the wider social arrangement. If he manages this balancing act it might be possible to move towards an objective critique of the self through the aesthetic re-conception of self–expression.

SK: One way to think about this balancing act between the subjective and the social is to consider Solar Ethics as a dynamic energy of expression. The myth of Phaeton springs to mind, who borrows his fathers sun chariot (the sun) only to let it get out of control; he crashes and burns so to speak because he is not able to properly harness its power. In tapping into the vast semiotic energies of cultural production, the solar artist must learn to be more like the transformer in an electrical circuit, switching between currents he moves up a level to handle high voltages and steps down a level for lower ones. Sometimes the artist becomes overwhelmed by the sheer potential of semiotic energy, but like a transformer maintains the capacity to handle the currents and avoids getting burnt out by them. This energy exchange of expression might offer possibilities for moving towards new ways of thinking objectively from a subjective position. The *form* of the individual has taken central stage so I look at my own life through the expressive energy of that aesthetic, and from my art it is possible to derive a more universal experience of truth. Maybe life is not so different now, even without God. Art is a way of facing the inevitable and what is most objective, that being our own mortality. We know for sure that one day we are going to die and nothing transcends death. Nietzsche challenges us to live life for what it is without belief or superstition, to affirm it. At a personal level *Holyballism* is about me affirming my own life, it represents a faith in my art. Beyond that, *Holyballism* is also about a wider imperative that echoes Nietzsche 'find your own *Holyballism*, live life in the here and now – '*Exercise and Exorcise*' as the slogan goes.

JW: I think this brings us to the final aspect of *Holyballism*, Eternal Recurrence. My reading of Eternal Recurrence is that it is one of Nietzsche thought experiments, allowing him to beg the question 'Without God and with no possibility of beginning or end, how would you live your life'? It is a way of making the choices you talked about earlier; when faced with decisions about our lives what could we live with over and over again for eternity. How can we make life bearable by understanding the art of living? Is this what is existential about Nietzsche's philosophy and by proxy what is existential in *Holyballism*? In other words, 'Souls are as mortal as bodies' and we have to live accordingly.

SK: Yes we are going nowhere and that's why there can be nothing transcendent, there is no *after*life. In postmodern society we ask the question 'Where do we go from here?' According to Fukuyama, Capitalism is about Eschatology, it's about the end of history. *Holyballism* is built on the ruins of this Judeo–Christian perception of history that makes God the author of the Beginning in a sequence of events. *Holyballism* is part of this historical fallout that now manifests itself as the cyclical time of the commodity. Eternal Recurrence comes in here because it is about the attitude that emerges from this historical impasse – how do we live creatively with the repetition of the workaday world and be happy? This attitude is expressed as the Solar Ethic, and takes the form of Hollyballism as an inquiry into the here and now. 'Choose Life' as they say in *Trainspotting* because it is all that you've got anyway. With this realization there comes a kind of enchantment and disenchantment at the same time, it depends on how you look at it…its difficult and easy all at once. Life unfolds as we go and Art can draw our attention to this fact - what you see is what you get. In a way *Holyballism* kills a postmodern anxiety about meaning but still manages to re-enchant life in itself. The artist does not represent life to us on a stale canvas, he becomes fully aware in order to understand that the canvas *is* life. Imagination powers the Solar Ethic, live everyday as if you have seen the sun rise for the first time.

JW: I would like to conclude with Nietzsche who illustrates Zarathustra's teaching with a parable of the sun: 'Happiness for the sun is that its plentiful light is absorbed by the things for which it shines'. Zarathustra in comparing himself to the sun overcomes his ignorance and turns into the 'light of the world', which replaces the light of God. Could *Holyballism* be another parable of the sun with Samson Kambalu asking us to live creatively and return to the light of the world?

SK: *Holyballism* is the rapture of an age. It is happening here and it's happening out there. I only gave it a name. To return to the light of the world means to return to life. I am one of the many people who are replacing negative attitudes that renounce the world, with those that are an affirmation of life, of the here and now. Like the rap artist Puff Daddy has said, 'The sun don't shine forever, but as long as it's here then we might as well shine together.

Samson Kambalu & Jonathan Willett 2004

Works cited directly or as background for the interview.
Adams, Philip. *Nietzsche's Eternal Recurrence* at
http://personal.ecu.edu/mccartyr/great/projects/Adams.htm
Cupitt, Don. *Solar Ethics*. SCM Press. Canterbury. 1995
Fink, Eugen. *Nietzsche's Philosophy*. Trans. Goetz Richter. London. Continuum. 2003.
Fukuyama, Francis. *The End of History and the Last Man*. Perennial. 1993.
Nietzsche, Friedrich. *The Gay Science, with a Prelude of Rhymes and an Appendix of Songs*. Trans. Walter Kaufmann. New York. Random House. 1974.
Nietzsche, Friedrich. *Human All Too Human : A Book for Free Spirits*. Trans. R.J. Hollingdale. Cambridge. Cambridge University Press. 1986.

Appendix B

The Inward Tourist (2006)

Exhibition text by Jonathan Willett for Stuart Simpson's solo show, *3 Piece Suite* at The City Gallery, 90 Granby Street, Leicester.
ISBN 0-9543211-8-9

Exhibition dates: 22nd April – 27th May 2006

Web Links: www.leicester.gov.uk/citygallery

The Inward Tourist

In the Leisure & Tourism industry the phrase 'inward tourism' refers to people who tend to explore their own backyards. Instead of travelling overseas they visit sites of national significance or rediscover places of local interest that were previously overlooked. Stuart Simpson takes inward tourism a step further by embarking on an odyssey of the imagination that leads us along European boulevards, neighbourhood avenues and the memory lanes of the photo album. As inward tourists, visitors to *3 Piece Suite* explore the gallery space as memento, the bits and pieces of everyday life recomposed in the art of memory.

At first sight *Smile: Formaggio con Queso* is a journey outwards into a distinctly European territory but as the piece unfolds the viewer experiences the inner geography of the tourist's imagination. We encounter the act of tourism as a sideshow to the main attraction, the art of documenting oneself in the performance of sightseeing. Random sequences, snapshots and glimpses, continually reroute the viewer through short cuts and detours in the tourist landscape. What really travels in *Smile* are signs in all their cultural mobility, reframed and recombined in a moving postcard of the tourists gaze. The *Kiosk* will supplement the piece as the artistic process travels beyond the installation, allowing the public to play with the digital components of *Smile*, including the diaries, notes and maps from the field trip.

4 Walls literally brings us back home. The viewer becomes an armchair tourist, a voyeur looking out from a domestic interior onto aspects of the surrounding neighbourhood. We are reminded of James Stuart's inquisitive gaze in Hitchcock's *Rear Window* or *The Fast Show's* comic character *Michael Pane 'nosey neighbour'*. The curtain twitch becomes a kind of neurotic condition for individuals who have retreated into 'the safety of their own homes'. The *4 Walls* narrative reflects an atmosphere of suspicion and distrust that is projected from the security of the home onto an uncertain, unpredictable outside world. In a subtle movement between place and imaginary space, *4 Walls* represents the erosion of neighbourliness and the side effect of self confinement. Margaret Thatcher's now infamous proclamation 'there is no such thing as society only individuals and their families', echoes around *4 Walls* as an allegory for the disintegration of community in the 1980's and its subsequent resurrection in signs: television as a window on the world, where *Neighbours* are now safely confined to an Australian soap.

Slide Show completes the trio of works that make up *3 Piece Suite.* In *Slide Show* the artist portrays himself as a tourist in his own and other peoples lives. A process of self discovery and self recovery unravels in the narrative, as the family photograph becomes a raft upon which we sail out into a personal and collective sea of memory. What is retrieved is sometimes private and sometimes a public document of the act of remembering, the shared ritual of piecing things together, of *making* sense. The autobiographical slides into the cultural and back again, a *Slide Show* of self portraits and a portrait of the self as a collection of social fragments.

In *3 Piece Suite* memory and place are inextricably linked to a sense of identity. But like the restless tourist the self is always on the move, formed and reformed from the substance of new memories and experiences. There is something nomadic about life whether or not we are predisposed to travel because by its very nature it is always changing. Memory is just the souvenir of 'having been there', or should I say *souveneer*, the surface that fluctuates between documentation, situation and experience: 'My image is a picture that can never be taken'.

Appendix C

Mine: A Brand of Uncertainty (2005)

Exhibition text by Jonathan Willett for John Newling's solo show, *Mine* at The Haggerty Museum of Art, Marquette University, Milwaukee.

Exhibition Dates: 2nd June – 28th August 2005

Web Links: www.john-newling.com

Mine: A Brand of Uncertainty

'Catechism Seven: A Soul is Worth the Dollars Therein'

David Mitchell, *Cloud Atlas*

Cloud Atlas depicts a not so distant future where to be human is to be endowed with the rights of consumption; individuals are branded with an electronic implant that literally gives them a purchase on life. The value of being is reduced to an economy of the soul, a kind of pious materialism that accords with the law of the balance sheet. Although a fiction, the image of an existence that is utterly accounted for and devoid of mystery creates a feeling of unease, we are forced to question what sets us apart from this bleak prophecy as our lives become increasingly guided by material values.

In Exodus xxxii the golden calf is forged during a period of uncertainty. Moses is with God on Mount Sinai and has been away for some time. The people grow impatient while they are waiting for direction from Moses who is expected to return with Gods word. One might say that a void of meaning is filled by the substance of the calf, it gives weight to uncertainty and so becomes a *form* of reassurance in the meantime. On returning Moses destroys the idol, reduces it to dust and throws it into the brook from which the Israelites are made to drink bitter waters. God is angry because the people lose faith. They install belief and worship a false idol not realising that 'faith is trust in an entity that cannot be proven'.

This interstice between meaning and material gives rise not only to *Mine* but to Newling's wider engagement with the cultural negotiation of substance. *Mine* asks us to put faith in the artist who is prepared to reside in the difficult place between what can be understood and what lies beyond knowing, to prise it open and forge questions from the stuff of uncertainty. In this respect *Mine* is the descendent of Newling's Riddler piece and related works that negotiate the architecture of public statements. *Mine* makes a statement in the density of the word 'mine' forging further questions from the intangible, without ever offering us solutions. Is this the mine that belongs to me? Or is it the mine that belongs to the other? 'What's mine is yours and what's yours is mine.' In the sense of the verb we are invited to extract something, to mine the nuggets of wisdom that are embedded in the artwork. Like a form of compound interest *Mine* compacts substance as meaning and substance as material into a transaction in our beliefs about ownership and how we mark those beliefs. The doubtful identification is the art of *Mine*, it is a brand that marks uncertainty and calls the doctrine of ownership into question.

In this respect we are reminded of Samuel A.Maverick (1803 – 1870) the Texan cattle owner who neglected to brand his cattle. Unbranded cattle were known as Maverick's and the term usually applied to stray calves that roamed the plains while open range ranching was still practiced. Mavericking was outlawed in 1866 when the order was given to brand all cattle. The territory of ownership and identification is destabilized by the absence of a mark. *Mine* reopens this territory and explores the fields of signification that support the act of making impressions. All art makes some kind of impression but *Mine* is totemic of representation per se, a gold standard in the art of *making* sense and a reminder that all meaning is installed at the expense of some other meaning. Only a Maverick like Newling, who subtly resists identification through the tacit dissolution of the boundaries between things, could render such a complex work in such a simple form.

151

A monument to the beauty of absence and the poetry of the unknown, *Mine* is at the threshold of sense, it tinkers with the mechanics of how beliefs are made from the stuff of the world, even otherwordly beliefs. It is the hole in signification itself – 'they have eyes so they might not see', might not see what? Samuel Maverick points us in the right direction, he made a mark that left no impression, a brand of uncertainty. Maybe life is also an uncertain brand, the hole gets bigger as time passes, 'mine self' is continually replenished with meaning to avoid the inevitable. The only certainty is that one day our substance will disintegrate, 'souls are as mortal as bodies' said Nietzsche. What matters is how we live in the meantime, if 'a soul is worth the dollars therein' then perhaps those dollars are redeemed in *Mine* as yours.

Appendix D

Aquaplayne (2006)

Exhibition catalogue text by Jonathan Willett for Giles Askham's installation with the same title, which featured as part of *Game Play* a touring show commissioned by QUAD, Derby's Contemporary Art and Media Centre and HTTP London. First exhibited at Q Gallery, 35-36 Queen St, Derby.
ISBN 0-9553538-0-7

Exhibition Dates: 22nd July – 10th Sep 2006

Web Links: www.http.uk.net
                   www.derbyquad.co.uk
                   www.game-play.org.uk

Aquaplayne

> The structure of play absorbs the player into itself and thus frees him from the burden of taking the initiative, which constitutes the actual strain of existence.
>
> *Hans–Georg Gadamer.* Truth and Method

The 'strain of existence' is the work of responsibility. We are tested, evaluated and determined by a world that would prefer know everything and leave nothing to chance. In the work of art though we find relief from the burden of knowledge, the need to know loses traction in the flux between sign and substance. We are absorbed into play as the artist is carried along by the creative process, it has a momentum all of its own, the happen chance of discovery where one thing leads to another. Art emerges as the unpredictable condition, between order and chaos it lays out permutations and activates them. The artistic mode is *the* creative 'set up', a fluidity of experience whose only burden is the sheer weight of possibility. The artistic composition is a calibrated form of that experience, replayed in the viewer through the perception of forms. There is a moment of stillness for contemplating the work of art, precisely because it has the power to move; to be moved is to be played by the work.

There are Art movements and there is the movement of art. For art historians the dynamic of a work can be observed in the conventions of effect. There is a play of light and colour, the interplay of forms, the gesture, the stylistic progression, the school, and at some point a Movement. Conversely, the movement of art as a creative event replaces recognition with action. In the case of Abstract Expressionists like Jackson Pollock art literally becomes a movement. To create was to move directly into experience, to become in play by 'getting into the picture'. Pollock would layout his canvas on the floor to feel closer to the painting, walking or even dancing around it in a painterly performance. The pouring, dripping, skimming and splashing of patterns across the surface, capture the immediate forces of intention; 'When I am *in* my painting I am not aware of what I am doing'. The unconscious gesture emphasized the physical act of creation [in German spiel, 'to play' originally meant dance]. The unthought experience of 'automatic painting' *is* the play of composition, a sign not of representation but of the event. As Paul Klee once remarked 'not to render the visible, but to render visible.'

Aquaplayne lays out a new field of expression by extending the framework for immediate experience. The horizontal plane bypasses recognition and 'sets up' an interactive surface, making a play of art by providing the viewer with instant access to the creative flow. In the movement from observation to participation we interface with an intelligent canvas through the automatic rendering of action into effect. The 'body in motion' plays across a field of sensation, making the ripples of possibility appear as an ever - changing artwork. Unlike the action painter, whose technique is to off load creative energy in the painterly gesture, the *activator* retrieves what has already been deposited as data and brings it to the surface, aquaplaning on a stream of information. The virtual is restored to the actuality of expression, brought back to life in the flux between cause and effect, between code and composition. The calibrated experience of Aquaplayne is the art of permutation, the programmed initiative played and replayed as the artwork *in* formation.

Appendix E

Ellen Bell's Object Lesson (2007)

Exhibition text by Jonathan Willett for Ellen Bell's touring show, *Speaking Soul,* first exhibited at The City Gallery, 90, Granby Street, Leicester.

Exhibition Dates: 20th Jan – 24th Feb 2007

Web Links: www.leicester.gov.uk/citygallery

Ellen Bell's Object Lesson

The artworks produced by many Conceptual Artists in the 1960's, represent a philosophical inquiry into the relations between objects, words and images. Artists were questioning how things came to be defined as artworks and who had the authority to define them. Frames of reference sprang up everywhere like scaffolds for visual experience, mediating between words and things, shaping perceptions. Concepts were valued above their material execution and became the essential currency for being 'in the know', as artworks were 'finished off' at the point of reception by an educated audience.

Joseph Kosuth's *One and Three Chairs* 1965, consisted of a chair, a photograph in the same dimensions of the chair and an enlarged dictionary definition of the word 'chair' beside the photograph. Kosuth was drawing attention to the problem of communicating the universal idea 'chair' in a contingent and partial knowledge, which is established second hand through signs. In 1968 Lawrence Weiner exhibited a book entitled *Statements*, each page contained a description of an artwork, which had either been made or could be made in future. The work was reduced to the materiality of language itself, one need only access the language to understand 'the work'. A few years earlier, Marcel Broodthaers exhibited a sculpture entitled *Pense - Bete* in 1964; copies of a book written by Broodthaers were inserted into a rubber ball stuck into in a mound of plaster; to read about the work you would have to destroy the sculpture by removing the books. Broodthaers figured out a paradox between cognition and creation in which knowledge diminishes experience, because it has the power to divide things. As the philosopher Michel Foucault noted, 'knowledge is not made for understanding, it is made for cutting'.

Ellen Bell works with and against the grain of 1960's Conceptual Art by re - negotiating the space between intellect and experience. Her exercises in comprehension embellish concepts with histories and create *substances* that are both meaningful and material. Language is reformed through an artistic 'study' on its power to make differences and forge identities. Where words insured the status of Conceptual Artworks by underwriting them with intellect, Bell inserts a narrative of inscription, cutting back into knowledge and undermining our desire to understand. The very word 'book' is derived from the German for beech, with reference to the beech wood tablets on which runes were inscribed and to the tree itself in which people carve their initials. The loops, hinges, tabs and incisions are like so many techniques in the informational craft of the artist, unfolding the word in all its dimensions through the making of sense. The page turns in on itself in feedback loops and the power of vocabulary cuts out, as her 'object lessons' lose their sense of gravity.

In uncertain places between definition and dislocation, diction and contradiction, words fail to adhere; the book stutters and communication falls short. The psychoanalyst Jacques Lacan used the term 'the subject who is supposed to know' for the place in language that we imagine is occupied by someone who speaks with gravity. The teacher, the scientist, the detective, the lawyer, the doctor, the artist and the analyst himself are figures with the power to define, to interpret, to make things meaningful. The catch is, no individual is really invested with the authority of language because we do not own the words with which we express ourselves, on the contrary, we are 'bespoke' and 'cut off' by words even as we master them; 'My words fail me', 'I am lost for words'. The occupying force of language remains foreign, because it doesn't recognize the territory we call 'individual'.

Only the desire for a sense of order sustains the 'knowing' subject in a place of authority, lest there be a break down of all that is reasonable. In the film noir genre, the detective occupies this tenuous place of the subject who is supposed to know. He discovers clues and reads the signs, always believing that he is on the right track. Eventually he 'throws the book' at the suspect and takes a statement, in an effort to shed some light on the situation. Visibility and knowledge go hand in hand which is why the Venetian blind is a recurrent device in film noir, left half open the shadows fragment the detective and his suspect the dangerous woman, who are both depicted as flawed characters in relation to the letter of the law. Partial illumination is a state of confusion and we are left with a desire to know how things are going to be resolved.

Ellen Bell's *Venetian Blind* gives substance to a problem that is never quite resolved: the apparent transparency of words. It is an apology for a language that is 'speaking in tongues' and like her books it binds the word to its material condition of possibility. Language makes possible not the illumination of truths but rather the conditions for misunderstanding. *I didn't know how to say he was wrong so I had to say sorry* is a statement opening onto the gap between experience and description, the place where meaning loses traction over and over again. The half-light of the transparent blind covered in words, is the sign that language can't speak up for itself and tell of its errors, which is why we turn to art and poetry for answers.

Appendix F

Moved (2006)

Artist's proposal for *Capture 5*, the Art's Council England's dance for film platform. The proposal is based on a research residency conducted in January 2006 by the dancer and choreographer Claire Cunningham. The research experimented with techniques for generating a movement language from the emotion diagram of the *Le Doux Circuit*.

Moved Project Proposal

Concept: to produce a dance for film, which uses an emotion diagram as a choreographic template and visual/narrative device. The diagram offers a 'readymade' expressive sequence for creating the dancer's movement language, which is then streamed into the filmic space of the moving image: a film *about* movement.

Theme/Idea: 'the dance of information'. The diagram is taken from neuroscience and depicts emotion as an informational flow in the Ledoux circuit. The objective is to make the invisible, emotional event available to the viewer by re - composing it in diagrammatic space. The dancers will revitalize the diagram by transforming its static form into a moving one, as the kinetic expression of information.

Style: a minimal style will form a dialogue of gestures between the modernist appearance of the diagram, the discourse of 'information' and the technique of the dancers. 'The tension occurring when abstraction (the geometric, neutral body) strives for *traction* (the kinetic, invested person) will inform the dynamic spectrum of the piece' [Matthias Sperling, choreographer]. In this respect the modular and cellular component will be emphasized as that which links together bodies, expressions, sequences and frames *in* formation.

Look & Sound: the visual design of the film will be informed by twentieth century modernist painting whose abstract and diagrammatic qualities key into the emotion diagram. The visual dynamics of the paintings are released from the static surface of the canvas in the perspectives and perceptions of the moving image. Following the philosopher Nietzsche's proclamation 'I am an arrow', the dancers will become the trajectories of the composition, in which emotion and the moving image stream together in a synthesis of movement. The sonic template will be designed to modulate the visual economy of the piece, through the phased breakdown and subsequent transformation of the manifest dancer into particulate flows of digital information.

Structure: the structure is provided by a series of sequences and layers that take elements of the diagram as starting points. For example the film will begin with a 'sunrise', which becomes the circle of the amygdala in the diagram. Each consecutive element in the diagram is engaged in this way by the dancers, until all the potential movement is converted into kinetic form. The final sequence involves the culmination of previous elements, as the dancers exhaust the existing sense of the diagram and begin to overwrite its code with their own diagrammatic drawings, creating both image and movement as they go. The impetus for the structure came from a research week supported by Arts Council East Midlands, during which Claire Cunningham began to develop a movement language for the piece.

Rhythm, Feel, Atmosphere: are calibrated by the diagram. The introduction is developed as a gradual *intensive* engagement with the diagram, it captures the dancers in its process and they follow its rhythm in a claustrophobic space of composition. Gradually this space unfolds, as the dancers move 'outside the box', drawing across and defacing the diagram. This second phase is characterized by an expansive feel, it is *extensive* and re-connects the abstract process of the diagram with the movements of the exterior world. Emotion comes from the latin *ex motio*, which means to move outwards.

Technical: the piece is made from discrete layers that will help with the management of material. Stage one: Andrew Love will produce the initial visual sequences digitally and they will be given to the dancers prior to rehearsal week. The dancers will then develop the previous research into the movement language by responding to the sequences. Stage two: the sequences will be modified just prior to the filming week, which will take place at the blue screen facility at Nottingham University and the motion capture facility at Nottingham Trent University. Stage three: the footage will be digitally manipulated and 3d animations added, so the sequences and dancers become as one in the information stream described in 'Look and Sound'. This will be much easier to achieve by using the blue screen facility for stage two. Geoff Litherland and his video production unit will provide the necessary technical support for filming during stage two.

Audience Engagement: the aim is to produce a piece that will appeal to both contemporary art and dance audiences by developing an experimental filmic space for thinking about our perceptions of movement. This space will offer dancers an approach for abstracting movement from the domain of dance, by conceiving of the creative process primarily in terms of moving images. Conversely, visual artists and people with an interest in contemporary visual art will realise the potential for working with dancers/performers, not so much in terms of an 'interdisciplinary project' but rather in terms of a synthesis of form. In this case the image of movement cannot be reduced to dance, visual art or film, it is a singular and distinct composition, which happens to take shape in and get channelled through the dance for film format.