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THE DISSECTION

An examination of the printmaking tradition as a means to reconsider the relationship between the human body and its representation.

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DOCUMENTATION AND COMMENTARY ON THE BODY OF PRACTICAL WORK PRESENTED FOR THE DEGREE OF MASTER OF FINE ART AT THE MICHAELIS SCHOOL OF FINE ART , UNIVERSITY OF CAPE TOWN.

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INTRODUCTION

My work is informed by the identification of the body as a site of anxiety. Computer technologies have led to increased disembodiment, while AIDS has reinforced awareness of the body as physically vulnerable. The basic premise governing my dissertation is that the body of the individual has become a collection of parts - fragmented by its representation. More specifically, I have referred to medical illustration and its role in the objectification and abstraction of the body. In revisualising the image of the body I have chosen to work within a formally fragmented framework. My title, *The Dissection*, refers to an intrusion into the body, that has as its aim the extraction of knowledge: it is about revealing the unseen. It also relates directly to my working method, which isolates, cuts and sews images.

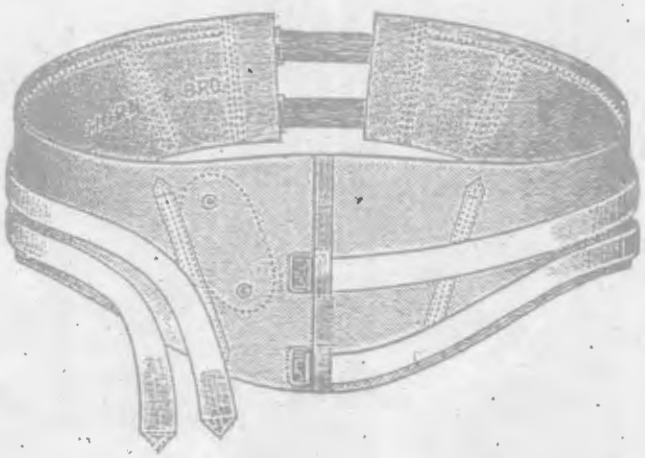
My source materials are medical engravings derived from eighteenth, nineteenth and twentieth century medical atlases. As these references form part of the history and technology of printing, my project has been to recontextualise these images within the tradition of printmaking. This has resulted in technical innovations becoming a significant part of the work's content.

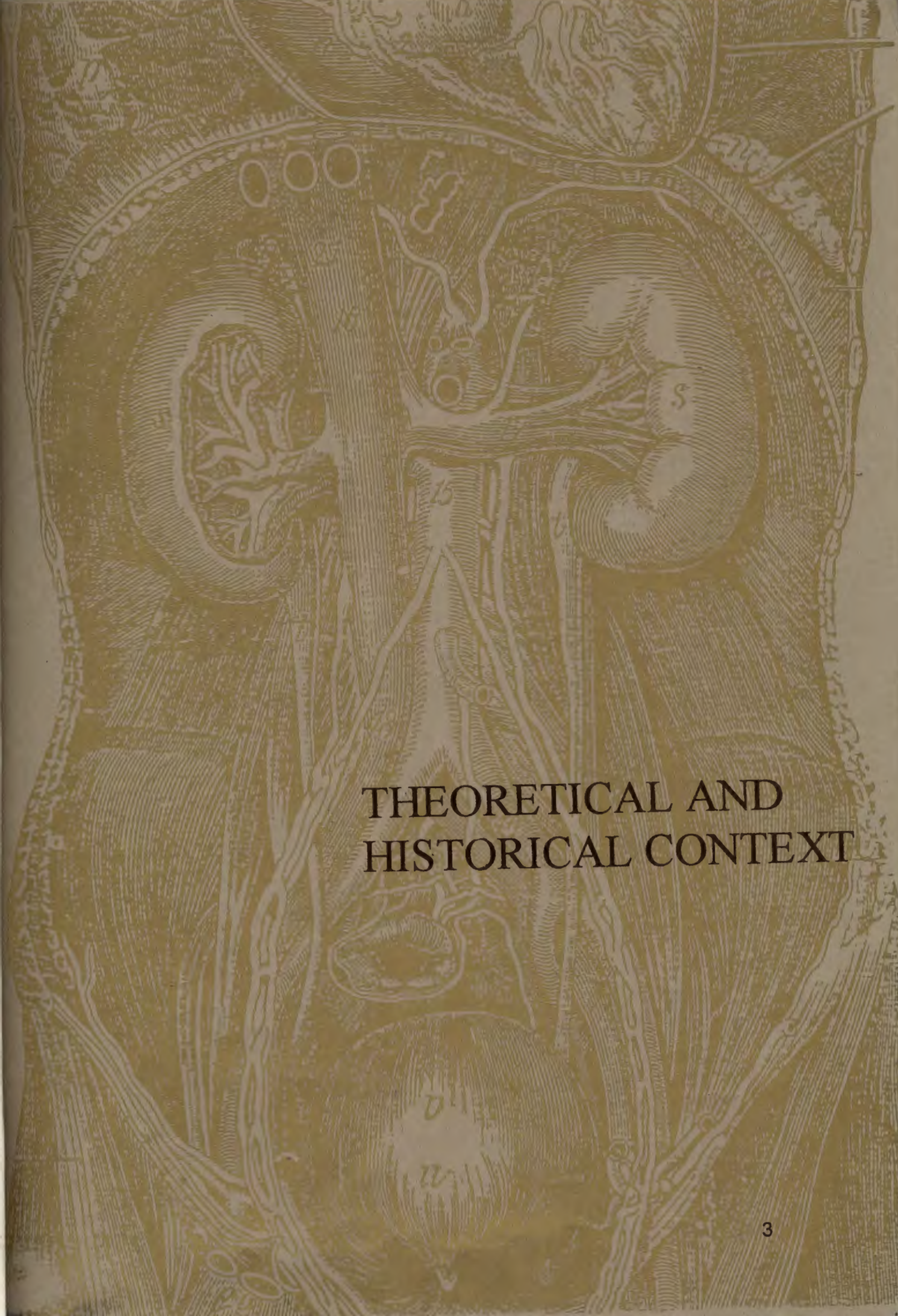
The first part of this paper deals with the assertion that medical illustration constructs the body as an object. I refer to Barthes in assessing the notion of authorship, and discuss alternative theories of the subjective construction of the body. Having established the body as object, I consider the influence of illustration on the perception of the body. I then examine the influence of illustration on theories of biological determinism, and identify the implications of these theoretical concerns for the body as art object.

The second part of the paper situates my work within the context of printmaking. I draw parallels between the printed body and collage, and mention my use of format and the multiple in an interpretation of the body. The final section makes specific reference to my body of work.

There are few definitive texts written on my area of interest. Although the influence of philosophy on the reading of the body receives mention, few refer to illustration. I have found Turner (1984) and Foucault (1975) useful for their social quantification of the body. Stafford (1993) uses medical illustration to interpret the artistic and philosophical preoccupations of the eighteenth and nineteenth century, yet does not indicate the implications for the individual body. Jordanova's (1989) text was beneficial to my project: while writing from a feminist perspective, she parallels the representation of the body with its social construction.

It is important to note that my use of the loaded terms 'body' and 'body image' largely refer to the internal physical form. I have intentionally neglected the representation of the nude body in art history. My broad use of the term 'medical science' refers to Western medicine that has become the dominating practice throughout the world. 'Printmaking tradition' refers to post-Renaissance, Western, fine art printing.





THEORETICAL AND HISTORICAL CONTEXT

a. Defining the body as object

The act of representation assumes a relationship between that which is represented and that which represents. The role of representor is traditionally interpreted as active, and the role of representee as passive. The premise that the representation of the body results in its construction as object, rests on the assumption that the body has a subjective presence. In this sub-chapter I situate the body within medical discourse and identify various processes of disembodiment. This leads to a debate of authorship - who controls the body. I mention disease, pain and genetic theory as aspects of embodiment and disembodiment.

The Cartesian mechanistic framework is, in part, responsible for the construction of the body as object. During the Enlightenment, the body became secularised by the scientific gaze, which transformed it into a divisible machine. The development of machinery during the eighteenth and nineteenth centuries provided metaphors through which to visualise and understand the body system. In order to understand function, the body was reduced to small units, named and reassembled: the implication of this separation into parts being the death of the whole. Newtonian and Cartesian mathematics established à priori stereotypes and rational axioms that could be used to gain control of the body (Stafford 1993). The Enlightenment sought to render the invisible visible, to reveal the internal through dissection and magnification, which promoted a visual layering of the body. The Cartesian theory that defines the body as the object of the mind, persists in most biomedical research today.[1]

> Mechanist materialism is the hallmark of science. This means that phenomena are regarded as devoid of individuality... patients treated as 'material' for scientific purposes on mechanistic material lines, lose their individuality in the doctor's eyes: they become bearers of a disease. In the statistical equation, the individual uniqueness gets lost (Lederman 1986: 20).

[1] Medical thought has recently undergone revision. In accordance with the post-modern project, which challenges the premises upon which contemporary culture resides, the authority of deterministic, mechanistic thinking has been disputed. There has been a move towards a systemic and holistic approach.

The fragmenting method of mechanist philosophy has set a precedent for the fractured post-human state of the computer age. This has led to the displacement of the individual, and emphasis has subsequently moved from the body as a significant reality, to the computer terminal as location of knowledge. With the advent of the internet, the consummate disembodiment has occurred. Although computer technologies allow for the democratisation of information, interpersonal communication is transmitted through a neutral arbitrator, and the presence of a body becomes irrelevant. Mediated encounters reduce tactility.

Hayles considers the relationship of virtual reality and cyberspace to the body. She argues that in an overpopulated, diseased world, physical presence is no longer an asset: "physicality seems a better state to be from than to inhabit" (Hayles 1993: 81). Cyberspace is immune to infection. She says that although the corpus has been reconstituted as a collective body of information, this information cannot exist outside embodiment. The reduction of the body to the eye and brain could anticipate the death of the body. Baudrillard discusses the shift that has occurred in the age of computer technology: from human scale to the micro. "Everything is concentrated in the brain and in genetic codes, which alone sum up the operational definition of being" (in Jencks 1992: 153).

In his seminal work on the body, Turner (1984) indicates that sociological theory has neglected issues of embodiment in favour of the social body. He writes that sociology accepts the Cartesian mind/ body dichotomy, making oblique references to the body as need and instinct: the body is unable to escape signification as a social object. Turner divides the sociology of the body into two groups: a discussion of self in a debate of modern narcissism (phenomenology), and the regulation of the body under mass consumption (Marx, Foucault and Nietzche).

In examining the phenomenological perspective of the body Turner cites Gabriel Marcel's argument. One is embodied by virtue of having a body over which one can exercise absolute rulership. Although this argument identifies the individual's will to action, it ignores the body as the subject of external control systems.[2] Turner agrees that we have phenomenological possession of our bodies, but not

[2] The West in the past has erroneously qualified the body as property, based on the Lockean definition that the body is basic, unappropriable property. The appropriation of the body in the quest for knowledge defies the notion of the body as an autonomous subject, as through the process of representation it becomes object.

ownership. He draws a comparison to structuralism which defines the body as constructed by discourse, ignoring embodiment.

Turner also asserts that the body is a social object, and endorses Foucault's classificatory divisions of the government of the body in society: the reproduction of populations in time, the regulation of the body in space, the control of the interior body through discipline and the representation of the exterior body in social space. Foucault argues that clinical discourse has exercised control over the body in two respects. Firstly, by acknowledging the institution as authority, and, secondly, by positioning physicians as active subjects: observing, perceiving, diagnosing, etc. Foucault's theories of power shall be discussed in the following section on illustration.

Crudely, these contradictory opinions represent the construction of the body as subject: that exists as its own author, able to exercise will; and object: that is authored by institutional structures.

Authorship can be defined as an act of definition and determination. The irony of the post-modern undertaking, is that while decanonisation (the death of authority, the author, the father) is part of its agenda, so too is the notion of selflessness. Thus, if medical authority and self are impotent, the body becomes an impenetrable text - who is its reader, and who is its author? Conversely, if it is argued that medical science, through illustration, has acted in an authorial capacity, then it has been, to an extent, also the reader of the body, as these images largely exclude the uninitiated. Either way the individual body has been forced into a passive, object state, as the presentation of medical illustration limits individual readership and determines understanding. Barthes rejected Cartesian philosophy because of its being subject centered and promoting the idea of author as autonomous ego. However, the phrase that is synonymous with Barthes: "the birth of the reader has to be at the cost of the death of the author" (Tilley 1991: 181) is only useful to the body if it can be reconstituted as subject. If authority is removed and the individual denied, the body remains a fragmented object.

For the purpose of this discussion, I should like to conflate the notion of author with that of passive subject, and reader with that of active object. Reading implies activity, and according to Barthes is an active process. The reading of

medical illustration, however, is limited by an acquiescence to its authority. The notion of objectification as an active process is discussed in the following section.

Barthes argues that the reader produces the text, reducing the significance of the author. In previous literary discourse, the author was omnipotent, and critics looked for textual meaning within authorial intention (Burke 1992). Thus an analogy can be drawn to early medical science, which considered the body as a text, and God as the author: divine intention was revealed by probing the text. Post-Darwinian medicine deposed God in favour of science, determining medical theory as author of the body. The sanction of medicine presents a closure that would appear to deny any relocation of the reader or author. However, it can also be argued that, as the body produces its own text, it is purely the representation of that text that has displaced authorship. Issues of representation are dealt with in the following section. Firstly, I wish to identify aspects of embodiment and disembodiment.

Dawkins' genetic theory is useful to establish the body as its own author. He argues that as genes provide the text for the body, they are the ultimate authors. His book, *The blind watchmaker* (1986), explores the non-random process of natural selection. Although he establishes natural selection as 'blind', in that it has no future plan, he introduces the genes as the controlling authority over the body, while being subject to the whole organism. The phenotype (the material result of the genetic code) influences natural selection, and this determines the body's capacity for survival. Speaking of organs he writes:

> They exert an influence over the replication that caused them, in that they effect the survival and reproduction of their bodies - which contain that same DNA, and whose fate is therefore shared by the DNA. Therefore, the DNA itself exerts an influence over its own replication, via the attributes of the bodies. DNA can be said to exert power over its own future, and bodies and their organs and behavior patterns are the instruments of that power (Dawkins 1986: 134).

It would appear that if genes are the authors of the body, with each code providing a unique self, then the body cannot be externally determined. Although this may be scientifically valid, it has no ramifications for the socially constructed body. DNA chains are a text, providing an alphabet that can be rearranged by

genetic engineering. Therefore, genes are not autonomous authors, as science is capable of reformulating and constructing the body.[3]

Turner (1984) argues that disease threatens embodiment: the disease becomes part of self definition. It is partly through disease that the body has become objectified, as medical diagnosis focuses on the disease rather than the body as the active subject. Foucault writes that the practitioner has to abstract the body to apply knowledge. "The patient is only that through which the disease can be read" (Foucault 1975: 59). Prior to contemporary medical imaging, disease only became an existent reality when it appeared above the skin. Now it exists as a permanent threat to the seemingly passive recipient body.[4]

Miller (1978) identifies two images of the body which merge to form the body as self: the seen and the felt. The interior of the body cannot be experienced because there is no felt image of the body. An interior awareness only occurs when there is a flaw, and even then, pain is not felt at its location and can only be approximated by external experience.

Scarry (1985) contests that the body only becomes a subject through pain. She writes that internal pain is the only bodily experience that has no object in the external world (as do touch and sight), and thus has no referential language. Pain is expressed in pre-language, and language as we know it can only be used through self objectification. She conflates pain with imagining, in that pain is an 'intentional state' without an 'intentional object' and imagining is an 'intentional object' without and 'intentional state'. Pain therefore becomes imagining's 'intentional state' and imagining pain's 'intentional object'. She regards these two phenomena as the framework for all perceptual and somatic events. She writes

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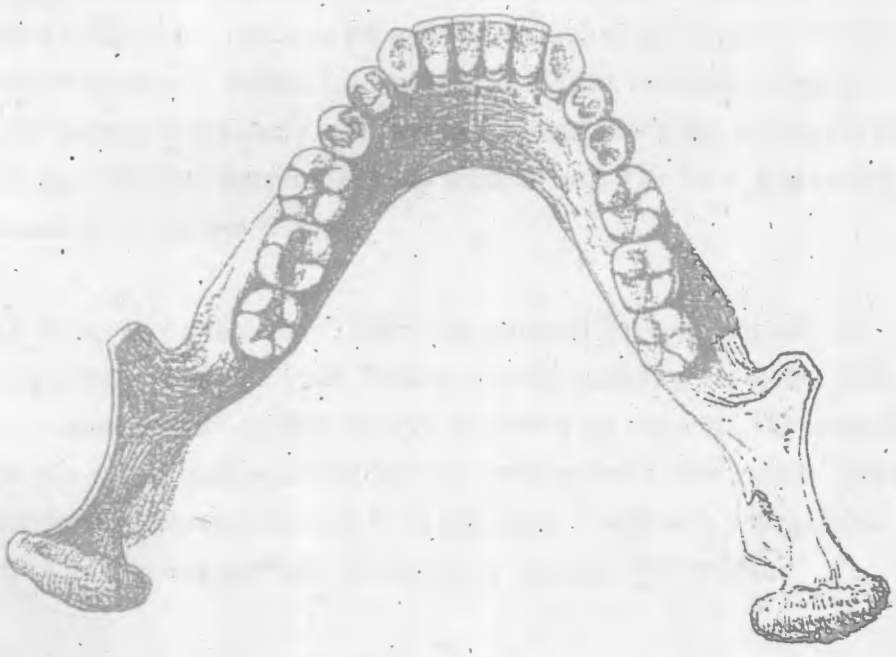
[3] Birch (Jencks 1992) writes that the post-modern challenge to the body is to recognise the internal relationships of organisms (the system as a whole) and their subjective will to choice. He thereby recognises the self-determination of the organism and terms it 'ecological biology'.

[4] The reductionist methods of the mechanist model have been criticised by Capra (1982) who assumes domination and control to be the scientific agenda. He argues that the emphasis of contemporary medicine is on the breakdown of the body by disease rather than on healing. This surrenders the body to the authority of medicine. Correspondingly, Chopra (1990), a physician, is informed by the aspects of quantum theory that reduce the body to basic levels of energy, where the body and mind become one. At this level, energy and matter are interchangeable, and the mind is able to control the body. The body is not seen as a collection of fragments, but a whole that extends outside itself. It is in a constant state of replenishment, and conscious intervention by the mind can restore and heal the body. Quantum physics defines matter as energy, and thus the body cannot be quantified as a schematised given.

that pleasure stems from desire, which has an external object. Disembodiment occurs through the senses: either one is transported outside of the body by external stimuli, or external images are internalised, displacing the body itself. (This second process is what occurs in the interpretation of medical illustration). Embodiment is only realised through pain.

Although these theories would seem to empower the body as embodiment is not subject to the authority of medical illustration, embodiment does not release the body from representation systems that are the Cartesian legacy. Medical illustration remains the guide of internal body perception, and in so doing continues to author the body.



b. Illustration and body perception

> Representation, then, is not - nor can it be neutral: it is an act - indeed the founding act - of power in our culture (Owens 1992: 91).

This sub-chapter explores the control medical illustration has exercised over the perception of the body. I begin by briefly mentioning the history of illustration and then establish it as the language of the body. I then situate this language within a representational system by identifying theories of power and using topography as an analogy.

Medical illustration has a long association with art. Leonardo da Vinci is considered by many to be the founder of modern anatomy (Thornton 1983). Rather, his treatment of the body as an object to be dissected and understood, pre-empts mechanist philosophy. Albrecht Dürer's book on human proportion became a fundamental resource for medical illustrators during the sixteenth and seventeenth centuries. Andreas Versalius was the first anatomist to apply scientific method to his study, and publish his illustrations and writings in *De fabrica*, the definitive sixteenth century medical text. This book was copied and disseminated throughout Europe.

During the seventeenth century, engraving replaced the woodcut, thereby allowing greater detail. In 1628, William Harvey published *De motu cordis*, in which he relied heavily on illustration to articulate his research. Thornton notes that despite this original research, and the development of the microscope, most illustrations at the time borrowed from past texts. It was only with greater technological development that the image of the body was redefined.

The most enduring anatomical publication of the nineteenth century was *Gray's Anatomy* (1858), of which many illustrations were reprinted until 1966. The development of lithography in this period allowed for a wider distribution of illustrations, while the use of photography improved verisimilitude. Although the influence of photography persisted into the twentieth century, it could not achieve the detail of the drawn image, and was used rather as an aid to the artist than an end in itself.

Modern print technologies (computer generated graphs and images) have largely replaced the drawn illustration, and have facilitated efficient production and dissemination of the body's image. Contemporary illustration is medical imaging, which non-invasively electronically dissects the body, producing diagnostic images. Ultrasound uses high frequency sound waves to calculate tissue depths and produce analogous images. Thermography uses heat imaging to detect infection, while CAT scanning calculates the absorption of x-ray beams by the body at various points and uses this information to create an image.

These imagings probe the body, exposing the private, internal space to public monitors. Although this imaging provides access to the real rather than generic body, the interpretation of these images is restricted to the initiated. The outcome is the creation of a schism between the individual and his/her body image. The perception of the interior body is constructed by visual information supplied by the secondary sources of medical illustration and medical imaging. It is this process that results in the surrendering of the body to the representative authority of science. This authority is partly exercised by a marginalisation of the public through scientific sophistication, giving the institution control over knowledge and privilege of information.

Foucault (1975) identifies the dissection of the body as a move from the unsaid to the said, and suggests that the body as object only exists because of language. In my opinion, this language is medical illustration rather than a written text. This provides a basis to understand the body outside the dissection, from which conclusions can be drawn. Anderson (1886) writes:

> Art has become more and more indispensable to us as an aid both to record and to explication. The diagram, the more highly finished drawing, the photograph, and the model, serve as a new language that speaks with strength and clearness where written or spoken words would convey their meaning slowly and imperfectly (Thornton 1983: 100).

The medical text does not exist outside illustration. The visual is used to concretise theories that rely on visual evidence for their validity. The Cartesian paradigm that placed value on what was revealed and seen has produced the converse - what can be seen is believed to exist. Consequently, many

developments in modern science, for example the DNA molecules of Watson and Crick, have taken their lead from illustration.

> The reality of the body is only established by the observing eye that reads it. The atlas enables the anatomy student to see certain things and ignore others. In effect what the student sees is not the atlas as a representation of the body, but the body as a representation of the atlas (Armstrong 1983: 2).

Scientific illustration, as seen by Wollheim (Bryson 1991), relies on a coded resemblance rather than representation. However, as it intends to render reality, it naturally has an external referent. Jordanova notes the influence of realism on the medical image, and writes: "I take realism to be an impulse towards forms of representation which insist that the viewer be convinced that they have a referent beyond themselves, in a supposedly objective world, and that they closely resemble that transferent" (Jordanova 1989:47). Clearly, if illustration aims to represent, it opens itself to those theories of domination and subjugation that are inherent within Western representational systems.

Representation is a process of intervention by which the body becomes objectified. Medical science has induced the body to become the object of the scientific gaze. "In reclaiming our bodies and the means to bestow meaning on them, we must also take back the power of the gaze" (Waterhouse in Scott 1993: 111). The gaze interprets the body as an image and consequently has the power to represent.[5]

At this juncture, it is necessary to define what is understood by power. Classical power theory regards power as a transference of rights: a contractually acquired possession that justifies and authorises (Honneth 1991). This can be applied to medical illustration, as it is by sanction of the individual that medical science is given the authority to represent. A belief in the truth and virtue of medicine, and a fear of the unknown result in submission and the will to be represented. Correspondingly, Talcott Parsons defines power as a 'mobilisation of consent' or the formation of a common will (Lukes 1986). Honneth argues that power is maintained by the cultural orientation and normative convictions of social

[5] The notion of 'the gaze' is largely associated with patriarchy and control. Feminist theory has drawn an analogy between medicine and the nature/ culture paradigm: medicine seeks to impose order and control on the 'natural' body.

groups, and in this way the individual is able to participate in the exercise of domination. Foucault contributes to this theory when he writes that power is not held by the state alone[6], but is also the product of strategic conflict between social subjects: we all participate in the mechanisms of power, and in this process, contribute to our own objectification. He contests that society is compelled toward the development of a means of social control, and consequently regulates the power of institutions and their control over the body. Subjects participate in objectification due to their potential for conditioning. He writes:

> The state is superstructural in relation to a whole series of power networks that invest the body ... but this meta-power with its prohibitions can only take hold and secure its footing where it is rooted in a whole series of multiple and indefinite power relations that supply the necessary basis for the great negative forms of power (in Honneth 1991: 159).

Topography can be used to clarify the contention that medical illustration is an instrument of power. The body was considered by many early anatomists as unfamiliar territory which could be tamed and understood by detailed recording. The body became a schematized map on which organs could be plotted. As with a map, medical illustration uses scale, delineation and location to reveal the unseen.

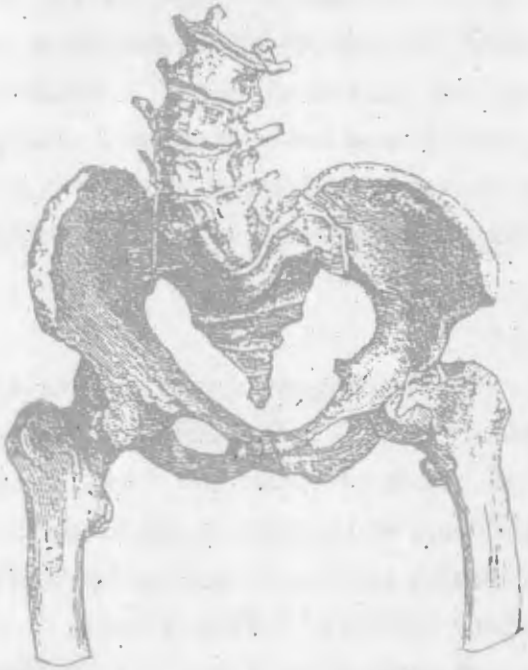
The assumed function of the map is neutrally to document an area of land. However, the inherent political and economic agenda of mapping indicates that the map is far from unbiased. A map provides an index by which to determine power and exercise control: it refers to ownership. The division of territory is actualised by the map, which is part of the colonial legacy that saw a world of empty space to be possessed and exploited (Wood 1992).

Foucault writes: "we are subjected to the production of truth through power and we cannot exercise power except through the production of truth" (Lukes 1986: 229). Illustration can be seen as complicit with this process as it is empowered by its acceptance as a truthful representation of the body. The truth of the map is based on the misnomer that, like medical illustration, it is neutral. "A willingness

[6] The statist theory of power is associated with Marx, and argues that power rests with the state apparatus which exercises social control through centrally administered thought control (Honneth 1991).

to accept the map as an eye, where the eye too no more than selectively brings into being a world that is socially constructed" (Wood 1992: 19). The legitimacy of the map relies on the absence of the author in that it is believed to represent a real world rather than a perceived world. An artificial objectivity is transposed on the map in order to distance it from its author. The author is apparently denied by a visual jargon, which approximates an objective style by avoiding superfluous detail and using delineation and order. This style, which has become synonymous with scientific data, carries the power of illustration. As the authority of the map lies in its supposed presentation of fact, so is the viewer's expectation of truthful representation of the body seemingly met, by medical illustration. Representation requires attribution of meaning by the viewer, and it is in this process that the body is objectified. The viewer is unable to bring what is known to the image, and interpretation is thereby suspended. The authority is absolute.

The map intervenes between the world and its perceiver, forcing objectification. Territorial dispossession by illustration can be applied to the body, as the body becomes a public space, determined and controlled by external forces. The body-map constructs the image of the unseen internal body, and thereby provides power to control it.



c. Implications of the fragmented body

Huggan (1994) identifies two critical perspectives on map making: the feminist and regionalist. The feminist argument situates maps within the nature/culture, female/male dichotomy. A parallel is drawn between the patriarchal repression of land and the female body. Regionalists assert that maps delimit private experience by containment, which subsequently allows dominant power groups to retain control over space. Body-mapping contributes to the fragmentation of the body. In the eighteenth and nineteenth centuries, attempts to see the unseen resulted in a preoccupation with the exterior, as this was the only standard for the interpretation of the interior (the mind). This led to the postulation of theories that located body structure as a measure of intelligence and ability, and this understanding of the body by its constituent parts facilitated the construction of gender and racial stereotypes. In this sub-chapter I discuss the effect of illustration on biological determinism - the belief that behaviour and character can be explained by biology. Illustration and measurement provided the means to prove and justify biased theories.

Illustration represents a generic body - an ideal type - and in so doing, introduces the notion of normative anatomy and the standard of a *Homo perfectus*. Stafford regards this as symptomatic of the need for certainty and exact science. Bodies are interpreted as deviants from the norm and deemed inferior. She writes: "the anatomical figure was increasingly divorced from any sense of the fleshed 'natural' body and turned to a lithic, even mineralogical, specimen" (Stafford 1993: 108).

Stafford mentions Lavater's essay on physiognomy (1792), which made use of silhouettes to group heads according to their geometric balance. Genius and the criminal type were established in this manner. Lombroso, a physician, was to build on these theories identifying the criminal type according to physical stigmata. A sloping forehead and small brain, were indications of a throwback to the savage. Behaviour was thus prescribed by biology. On this basis, Jen-Joseph Sue established mathematical cannons at the Ecole des Beaux Arts in 1797. Round eyes, straight lips, an oval head, and planar forehead were thought to reveal an inner perfection. Normative anatomy thus pervaded the fine arts and set a standard for the body.

Gould (1981) traces the path of biological determinism in *The mismeasure of man.* He regards science and its conjectures as socially and politically embedded, and identifies the nineteenth century as the apex of biological determinism, when scientists used à priori ideas to guide their procedures. The body was measured to illustrate fundamental 'scientific truths' that proved racial inequalities. Craniologists used skull size as an index of intelligence. Morton, a polygenist in the early nineteenth century, used scientific method to illustrate his comparative anatomy theories. Skulls were weighed and filled with seed to measure volume. Gould writes that this seed was unconsciously compacted when measuring Caucasians, that his sample skulls were biased, and that relative skull and body size were overlooked. Other craniological studies attempted to prove that flattened noses and small brain cavities related to infant and Simian skulls (crudely based on Darwin's theories of the ascendance of the species), and were to be found in women and black races.

Etienne Serves, a medical anatomist, worked to determine the evolutionary inferiority of non-Caucasian races. He used the theory of recapitulation, whereby 'higher' animals repeat the adult stages of 'lower' animals during their growth. For this he measured the distance between the genitals and the naval, and found that this distance was greatest in adult white males. Again, woman and non-Europeans were revealed inferior (Gould 1981).

Biological determinism can be argued to have persisted in the twentieth century in the form of socio-biology, which argues that genes determine behaviour. Edward Wilson and Thomas Williams argue that genes have a capacity for culture which is not consistent throughout all societies (Lopreato 1984). This is a contentious issue in sociological circles, yet has been used to reinforce theories of racial inferiority.

Illustration was also used to endorse gender inequality throughout the eighteenth and nineteenth centuries. William Smellie's medical atlas, *Treatise on the theory and practice of midwifery* (1752), stressed the difference of female anatomy, defining it as other than the norm. The anatomical determination of the social role of woman is made apparent by Pierre Roussel: "The soft parts which are part of the female constitution ... also manifest differences which enable one to catch a glimpse of the functions to which woman is called, and of the passive state to which nature has destined her" (Jordanova 1989: 27). Jordanova writes that nineteenth century wax anatomical models were cast in the form of famous artworks. The female models were set in submissive, passive poses, reinforcing stereotypes. Furthermore, anatomy was symbolically divided: the nervous system being feminine and musculature being masculine. Jordanova indicates that these, and other documentations isolating physical difference, are in part responsible for stereotypical gender roles. This would imply that illustration is able to affect change outside itself.

Although now understood as misguided, these theories indicate the potential danger of scientific method based on the illustration of body as an abstract, quantifiable collection of parts. Illustration does not constitute the body as a neutral space.

d. The body as art

The human form is one of the oldest objects of artistic endeavour. The use of the body as a form of visual expression dates to long before the twentieth century. Mutilation, scarification and tattooing are traditions existing throughout the world, and these inscriptions on the body are identified as a projection of social and cultural identity (Brain 1979). Mutilation is closely connected to social restriction of the body. Clitoridectomy and bound lotus feet regulate the sexual body, whereas skull, ear and lip elongation prescribe beauty. Scarification, most prevalent in Africa, involves the slicing, lifting and irritation of the skin to produce complex scars. The more detailed the scaring, the more beautiful the body. This practice is bound to the belief that pain is intrinsic to beauty.

Christian theology has placed spiritual significance on the mutilated body. Stigmata symbolise martyrdom, relating to the violation of Christ's body, and stand as a reminder of the vulnerability of the flesh and human mortality. Because the body was thought to be in God's image, Christian missionaries denounced the practice of body decoration throughout the colonised world (Brain 1979). Ironically, the Western world has come to hold the body as an object of fashion. Currently, the body is being objectified as a canvas: body piercing, tattooing and reconstructive surgery alter the image of the body. Although much can be said about the sociology of the 'decorated' body, my concerns lie with the peeling away and exposing of vulnerable flesh, and the symbolic violation of the soma.

The recognition of the role representation plays in the social construction of the body has given rise to the term 'the body po!:tic'. This body-consciousness has resulted in the emergence of the corporeal as a focus of contemporary art production. The appearance of the body is in the form of substance. Spector (1989) argues that the regulation of body fluids forms the basis of human culture. Societal values control diet, procreation, ingestion, ejaculation and excretion.

In the 1960s and '70s Hermann Nitsch (fig. 3) staged ceremonies using animal meat to explore the dialectic between ownership and death. Mühl and Brus performed taboo acts such as defecating and vomiting in public, and Schwarzkogler carried out acts of self-mutilation and amputation. For Beuys, substance (fat) was a metaphor for the body, which he used in various

performances. Although self-conscious shamanism was, in part, the agenda of these artists, and as Nitsch states, "to bring our consciousness to a joy in its own existence" (Spector 1979: 123), their work heralded the introduction of the visceral body (considered taboo) into the art forum as material.

The feminist artists of the 1970s incorporated this established language into their work, which sought to reclaim and empower the female body. The determination of the female body by men was challenged by acts and images that unveiled the female body. Judy Chicago's notorious *Red Flag* (1971) documented the removal of a bloodied tampon, while Eleanor Antin's *Carving: a traditional sculpture* (1972) (fig. 1) documented her naked body over a 36 day period of weight loss.

Although many artists are still working within the feminist framework, the new wave of body-oriented artists use the body as a focus for social and psychological stress born by AIDS, genetic engineering, artificial intelligence and atomic power. They examine identity within the social construction of the public and private body (Rian 1993). Maureen Connor's work examines the dislocation of body parts. Her *Lung Racks* (1988) (fig. 2) exhibit glass and wax organ casts on steel armatures and their presence as isolated pieces of flesh make poignant reference to the death of the absent body. Kiki Smith is concerned with the determination of the body by medical illustration, and she aims to reclaim the body through her work (fig. 4). The portfolio *Possession is Nine-tenths of the Law* (1985) consists of a collection of printed, fragmented organs, which she obscures and reveals with ink. Her images, based on a generic body, explore normative anatomy. She writes:

> Our history is a history of the body/mind dichotomy, and it really has had enormously devastating ramifications in the society, in peoples relationships to themselves. I think it is used to justify great quantities of oppression ... (Schleifer 1991: 84).

The emergence of the body as art content provides the historical context for my work. Working within this paradigm I have elected to use the image of the body as source material, and have simulated artificial bodies in my constructions of fabric and images.

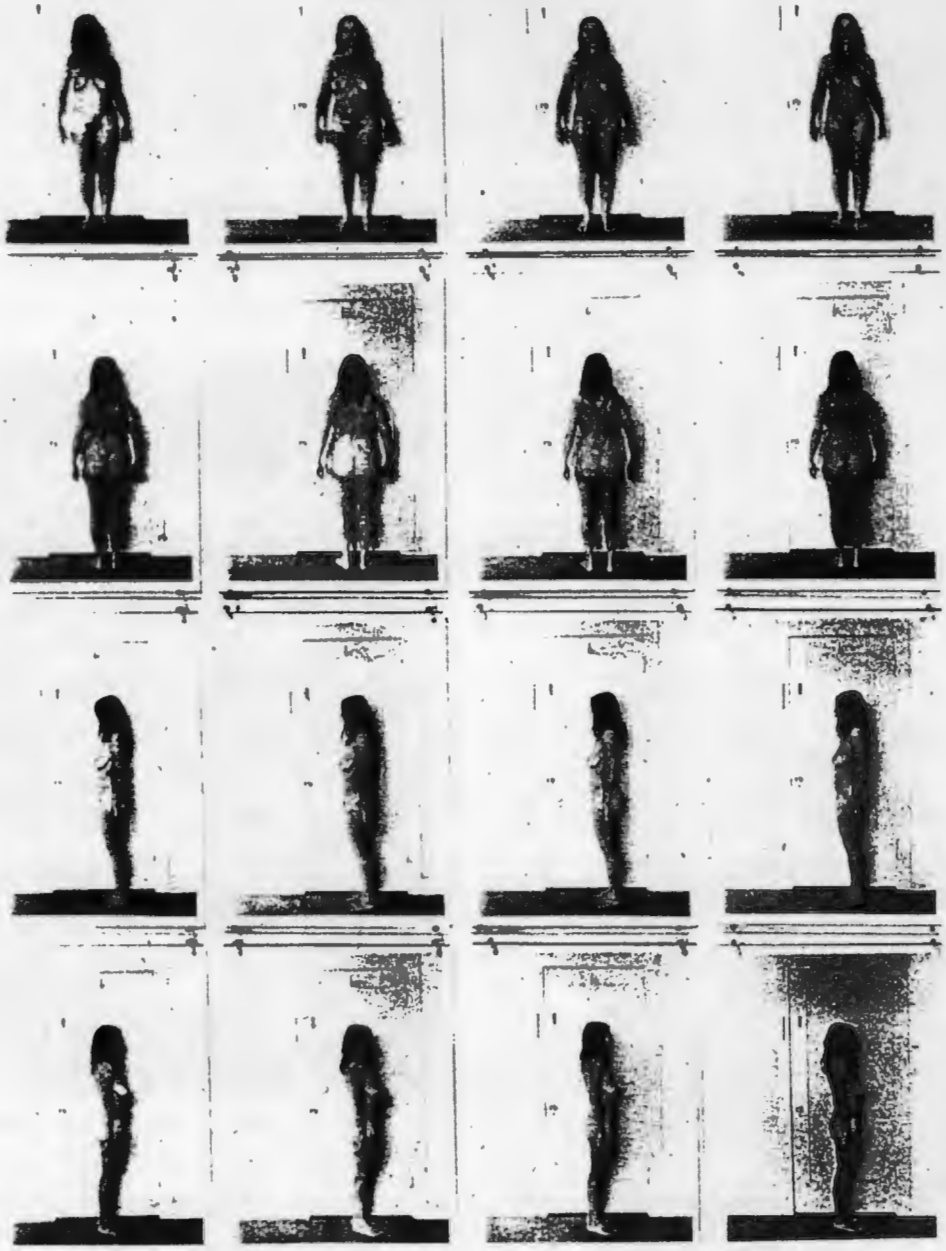


Figure 1. Eleanor Antin.
Carving: a traditional sculpture. 1972.

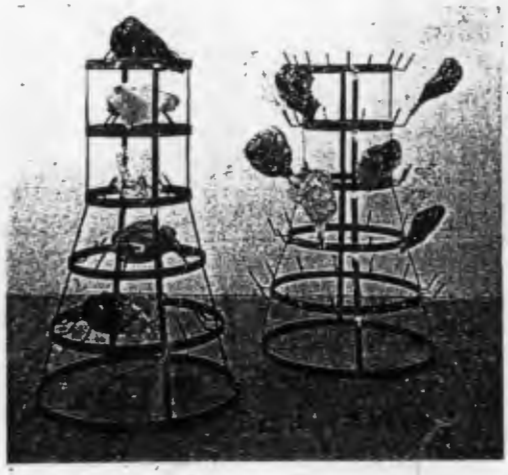
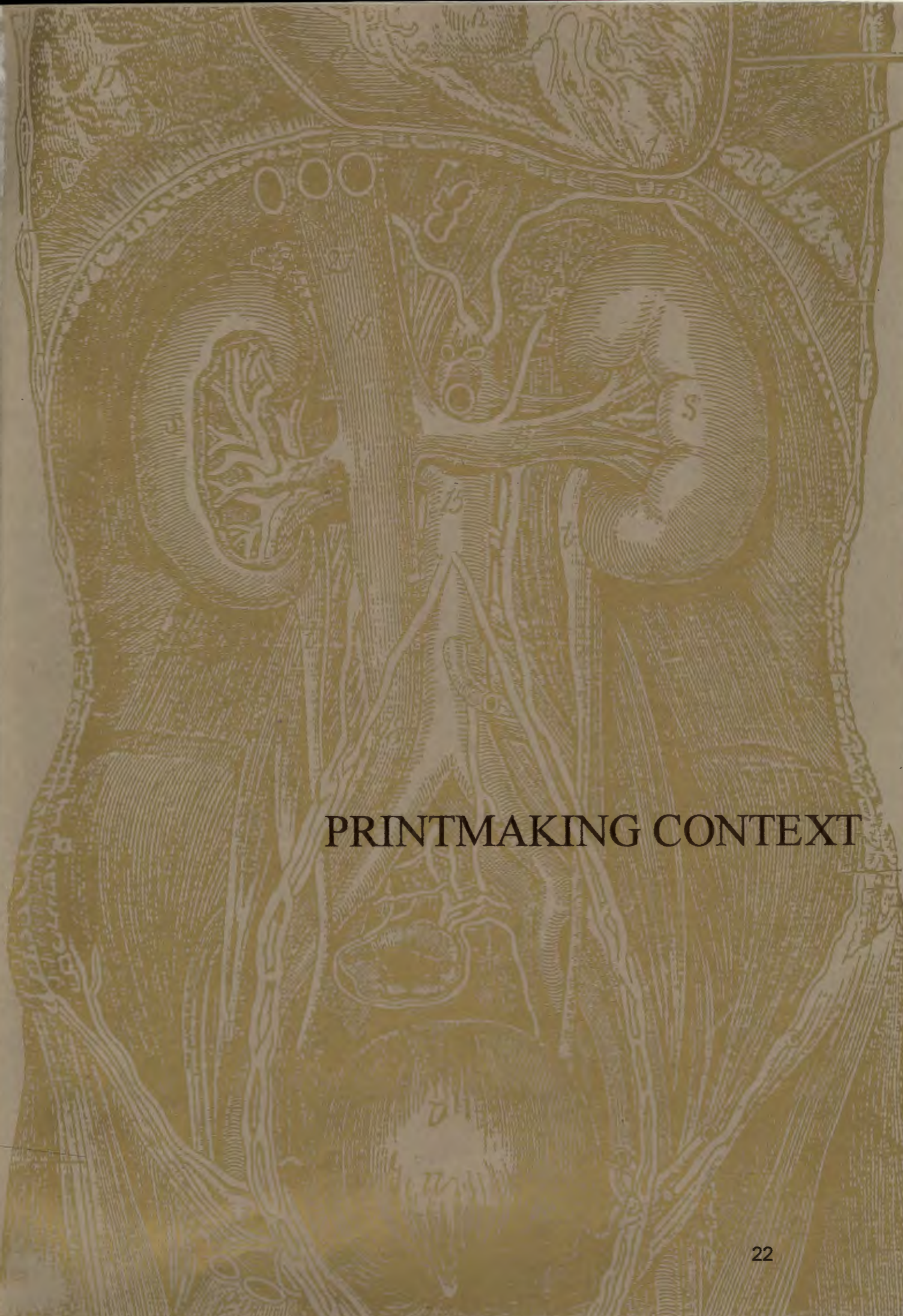


Figure 2. Maureen Connor.
Lung Racks. 1988.

Figure 3. Hermann Nitsch. .
Orgies Mysteries Theatre. 1972.

Figure 4. Kiki Smith.
Untitled. 1988.



PRINTMAKING CONTEXT

The history of illustration is closely related to the history of printing. The development of printing allowed for the rapid circulation of knowledge and images, which expanded access to the image of the body. The reproduction of the image of the body has had a considerable influence on its perception. The individual body is no longer unique, but analogous to a product of mass production. Berger (1977) relates this to original artwork: as we are bombarded with reproductions, the original is valued because of that which it is not, rather than for its meaning. In the same way, meaning is located in the image of the body rather than in the body itself. In mass communication, recipients make no contribution to the course or content of the process, and the body is commodified.

I have chosen to use the print medium to articulate my theoretical position largely because of its association with mass production. In this chapter, I locate my work within the context of printmaking, and expand on my use of collage, multiple, format and their relationship to the body.

a. The printed collage

The Enlightenment reduced the body to a collection of unrelated parts. Stafford (1993) claims that eighteenth century optical devices minimalised space and distance, allowing for the examination of separate parts of information. The disconnection of units of information underpins the 'cut and paste' mentality of the computer epoch, where disembodied, decontextualised information can be simultaneously viewed on the screen. Inter-referencing can occur, and as with collage, the assimilating of unrelated texts and images in a single context creates potential for new meanings. The current bombardment of visual information has created a fragmented sense of time and space in which images are constantly set in opposition to one another. Television relays images in short sequences, creating a non-continuous world view. Fragmentation is associated with post-modernism, yet more than an aesthetic, it appears as the only way in which the contemporary eye can assimilate information.

Collage is defined as a collection of fragments glued to a support to form an image, yet it is often the intersection of the ready-made and artistic intervention. Aragon writes: "it does not interpose between the viewer and the world as does painting, but links virtual images that surround us - recasting the real into new relationships" (Elderfield 1992: 44). Collage intercepts reality and abstraction, fracturing space to a flat plane, and giving all elements equal significance. Although my prints do not make use of ready-mades (as defined by Duchamp), the pre-existence of the images on which they are based allows the recasting of the real to occur. Whitehead talks about collage as an incompleteness and a sense of perceptual becoming (Kuspit 1988), alluding to the new relationships that arise from the juxtaposition of unrelated images. The interchangability of elements in collage suggests a potential for change.

Wolfram (1975) locates the origins of collage in the nineteenth century where the notion of the 'collection' became institutionalised. The development of the museum promoted the presentation of fragmented information. The personal 'curiosity cabinet', in which unrelated artifacts were assembled, is an early form of collage. Joseph Cornell's box collages of the 1940s seem to continue this tradition of collage as collection (fig. 5). My two prints, *Laceration I and II* (pg. 63 & 65), work within this convention and use the medical case as a vesicle for the collection of body parts.

Collage was introduced as an art form by the Cubists, who attributed a new status to cultural artifacts by including them in an artwork. Assemblage and collage were subsequently embraced by many groups: the Surrealists used them to explore their theories of automatism and free association, whereas the Dadaists associated them with random objectivity and anarchy. The notion of collage as anarchy is relevant to my work: the body in disassembled chaos. The ability of collage to abstract and depersonalise is useful to convey an image of the body as neutral object. Assemblage has become integral to contemporary visual art practice: the selection of object and material giving the work significance. The use of mixed printing media is, in itself, a form of collage as contrasts in surface become significant.

The use of collage in the work refers to the fractured body. The body has been fragmented from the initial collage (the cadaver) to the medical illustration (which isolates parts), and reconstituted as an artificial 'body' in the artwork. It is about fragmentation (from one context) and synthesis (to a new context). The assault on the picture plane is evocative of an assault on the body. Amputating and tearing is resonant of destruction, whereas the act of sticking and stitching is curative. Collage is an act symbolic of both violence and reconciliation.

Figure 5. Joseph Cornell.
Soap Bubble Set. 1936.

b. Multiples

The Dissection is situated within the recent tradition of the unidentical multiple and this warrants an examination of this tradition. Historically, the print was used to extend the viewing public of painting. Artisans were employed to produce accurate renditions of paintings which were then commercially distributed. With modern reproduction processes, printmaking as a means of mass communication has become redundant. It is this legacy, however, that informs the perception of the print as an identical edition.

Janis blames the commonly held perception of the print as an 'exactly repeatable pictorial statement' on both the nature of the medium, and the conservatism of curators. As printing is associated with replication, the unidentical print poses a problem for dealers and buyers, in that the relative value of an edition is called into question. (Although the monoprint is not duplicable, it is accepted as a print form as it is not produced in a multiple edition). As publisher of James Rosenquists' *Welcome to the Water Planet* series, even Ken Tyler, of Tyler Graphics, had misgivings, as the pulped paper images were unidentical.

The diffusion of graphic images in the 1960s revived an interest in printmaking, as did a preoccupation with the mass product and its technical processes. The contribution of painters and sculptors to the medium was to integrate it with other media, and in so doing, release it from its two-dimensional constraints. This heralded the birth of the unidentical multiple.

The many print workshops in America and England were instrumental in this development, as they facilitated ambitious projects by artists from different disciplines and encouraged experimentation and innovation within the discipline. Claus Oldenberg produced his *Profile Airflow* at Gemini in 1968, a vacuum-formed plastic sculptural edition and Edward Kienholz produced a number of editions using prefabricated steel structures and cast objects. Robert Rauschenberg and Jasper Johns' experiments with various fabrics and media are legendary contributions to the notion of the multiple. Rauschenberg began working with constructed paintings in the 1950s. He later incorporated printed elements in these works, and eventually included painted elements in his prints (fig. 6). Axsom (1987) writes that it was painters' interest in prints that allowed for unselfconscious exploration. He cites Stella as a pivotal figure in the

development of printmaking, and says of the 1982 *Swan Engravings*: "It is, indeed, the dense materiality of these prints that most dramatically established their technical significance for the recent course of contemporary printmaking" (Axsom 1987: 174). Stella's interest in surface released prints from their flat limitations, while his spontaneous working method established printmaking as an expressive and versatile medium. The use of unconventional materials in the production of prints diminished the preoccupation with identical editions.

My images have drawn on these developments in printmaking, yet, I have sought to retain the association with mass production, characteristic of our epoch. In accordance with mass production, the body has become a commodity: organs are bought and sold and pharmacy has created a market around it. I have chosen to work within the tradition of the multiple in order to duplicate the image of the body and thereby reinforce the idea of the body as a mass product.

Figure 6. Robert Rauschenberg. Payload. 1962.

c. Format

The tradition of the printed image as a window to reality - a view in - has endured in printmaking, as the paper forms a frame for the image. This is largely resultant of the relationship between the image and the support, the two being held as distinct. (The works cited in the previous section demonstrate a move towards the print as an autonomous object). Deviants from this norm include bleed printing and paperworks. Helen Frankenthaler's woodcut, for example, *Essence of Mulberry* (1977), extends to the edge of the paper, and in so doing, becomes an object in space.

Ken Tyler introduced papermaking to the production of prints in the 1960s. At Tyler Graphics, he set up papermaking workshops, which engendered experimentation. Moulded paperworks allowed for the creation of the format, and in the case of Anthony Caro's paper sculptures (1982), the format and image are integral. The use of paper pulp as a direct medium was encouraged (fig. 9). Hockney's *Paper Pools* (1975), are perhaps the most famous examples of this process whereby pulp was 'drawn' with through stencils, and the image was constructed from the format. Recent multi-media paper projects include Stella's *Waves* series (1988) (fig. 7) and Rosenquist's *Welcome to the Water Planet* (1988) (fig. 8). I have used paper pulp in my prints, as element rather than format.

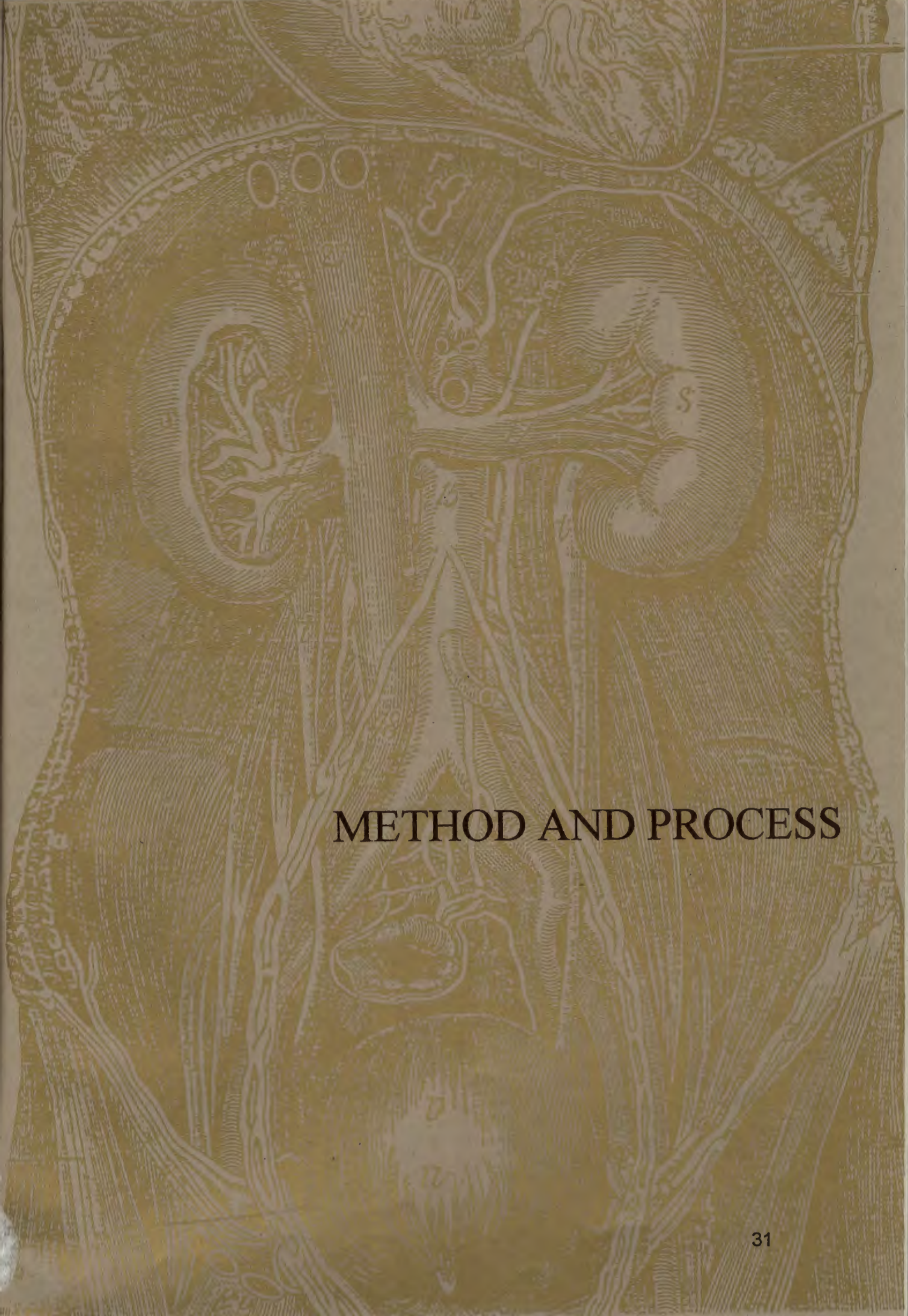
Twentieth century art has been preoccupied with the intrinsic qualities of materials, so much so, that material has become the content of many installations (Ann Hamilton uses vellum and pig's gut to fill interior spaces). The introduction of alternative materials has led to the dissolution of the traditional boundaries between art and craft. Textiles are accepted as a legitimate art form, which contributes to the reassessment of the conventional format. Marna Goldstein cuts, sews and distresses fabric. Her pieces of 1994 are sewn garments upon which she has printed and embroidered.

My departure from the traditional paper support arose from a need for an unrestricted format. *Lesions III* (pg. 61) is the first fabric print. I began to use fabric as a support and then to sew the fabric into objects. This has developed to the point where the support has become the image: printed images occur on an object, rather than a neutral surface (this association is the nature of sculpture). The different formats are based on medical apparatus: surgical gowns, face masks, cases, etc., and create an unfamiliar context for the body parts. The format dictates the apparent order of the compositions. It also restricts the images: as with the mechanistic fragment, they are unable to move outside the framework.

Figure 7. Frank Stella.
Squid: The Waves series. 1988.

Figure 8. James Rosenquist.
Where the Water Goes: Welcome to the
Water Planet series. 1988.

Figure 9. Karen L. Stahlecker.
The Executive Sweets: a set of shirts. 1978.



METHOD AND PROCESS

My approach to the creation of the prints is inseparable from the notion of the body as fragmented object. The random selection of images and arbitrary juxtapositions explore this notion. Images are chosen to fit the format rather than for a symbolic value, and are repeated throughout the various prints, affirming the notion of the body as an inactive set of images. There are no extensive preparatory drawings, as I prefer to develop the print while it is in progress.

a. Source material

I have selected nineteenth century engravings as source material to provide a historical detachment in the work. Most of the images are derived from Harter's book of copyright free illustrations (fig. 15- 16) and versions of *Gray's Anatomy* (fig. 10 - 14). As the source material forms part of a printing tradition, the production of meaning in the work relies on both recontextualisation and the use of alternative materials.

The conception of the body as abstract object is inherent to the process that occurs in my prints: in the translation from the original subject-body to body images. Printing is an indirect medium, and thus, by the time the original engravings are translated to my source material, they are already five stages removed from the body: to plate to paper to photo-positive to lithographic plate to paper. My work continues this path of intervention when the images are translated to an etching plate or photo-positive, then printed and recontextualised on a new substrate. The referential relationship between the image and the body becomes arbitrary.

I have chosen to include medical instrumentation with the body parts, as they are a physical manifestation of the control of the body by medicine. They also evoke associations with weaponry. Scarry (1985) mentions the fine line between weapons and tools. To the anaesthetised body instruments are tools, but to the sentient body, weapons.

Furthermore, my selection of body parts is random: they become formal, impotent elements within a constructed format. The construction of the print as a whole of denatured parts, and the subsequent lack of signification, refers to Mechanistic theory. The appearance of the face is limited in the images. This refers to a loss of identity and disempowerment - a beheaded state, unseeing, unspeaking, and subject to external observation.

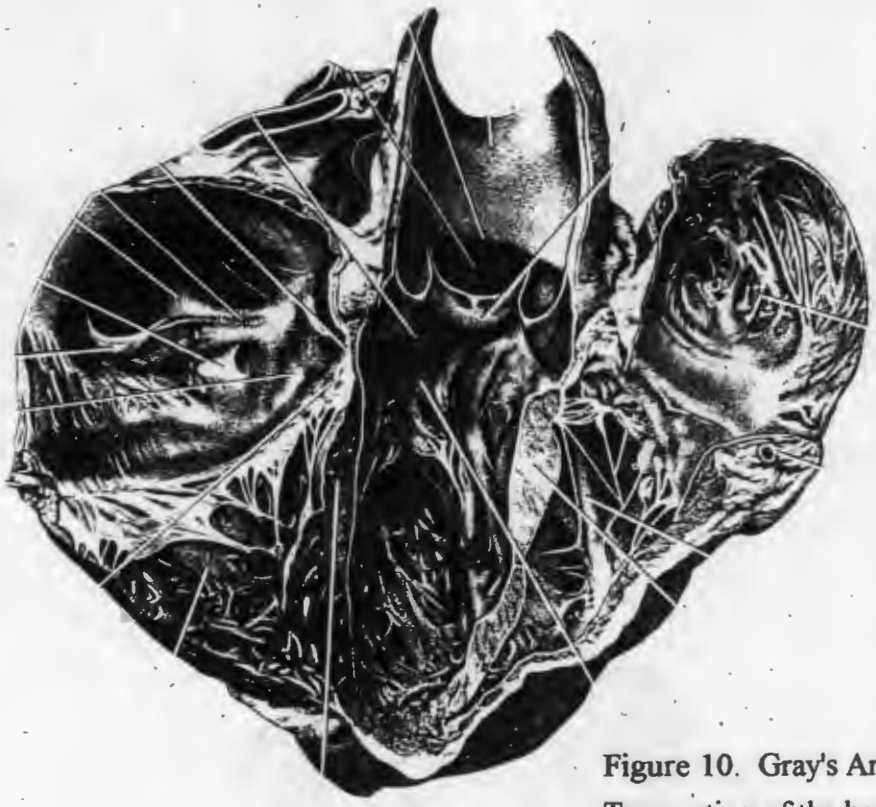


Figure 10. Gray's Anatomy.
Transection of the heart.

Figure 11. Gray's Anatomy.
Adductor muscles of the left thigh.

Figure 12. Gray's Anatomy.
Electron micrograph of renal corpuscle.

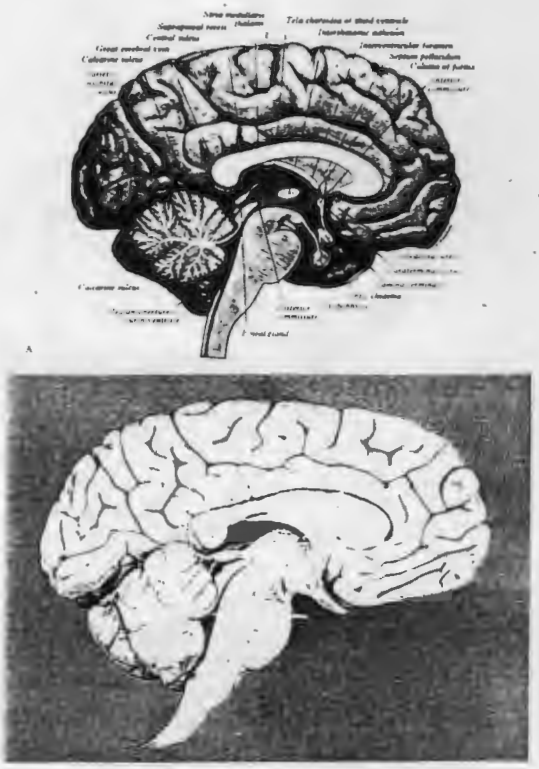


Figure 13. Gray's Anatomy.
Cross-section of the brain.

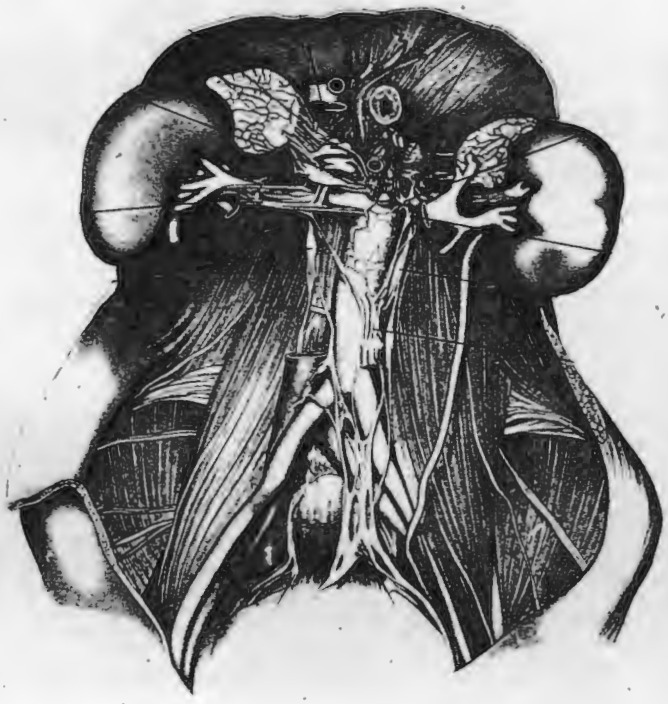


Figure 14. Gray's Anatomy.
Abdominal part of sympathetic system.

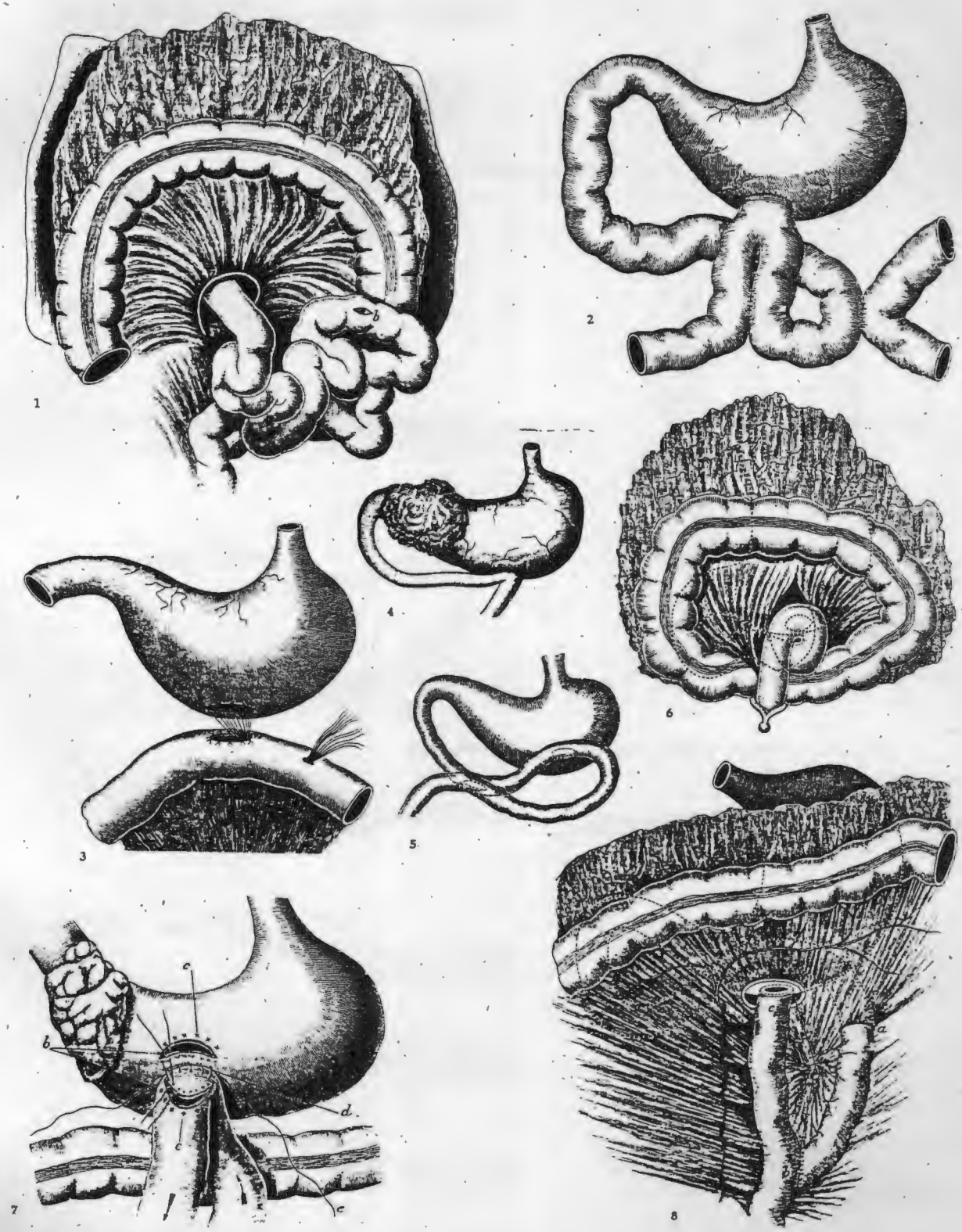


Figure 15. Copyright-free engravings.Jim Harter. Therapeutics: gastrointestinal surgery.

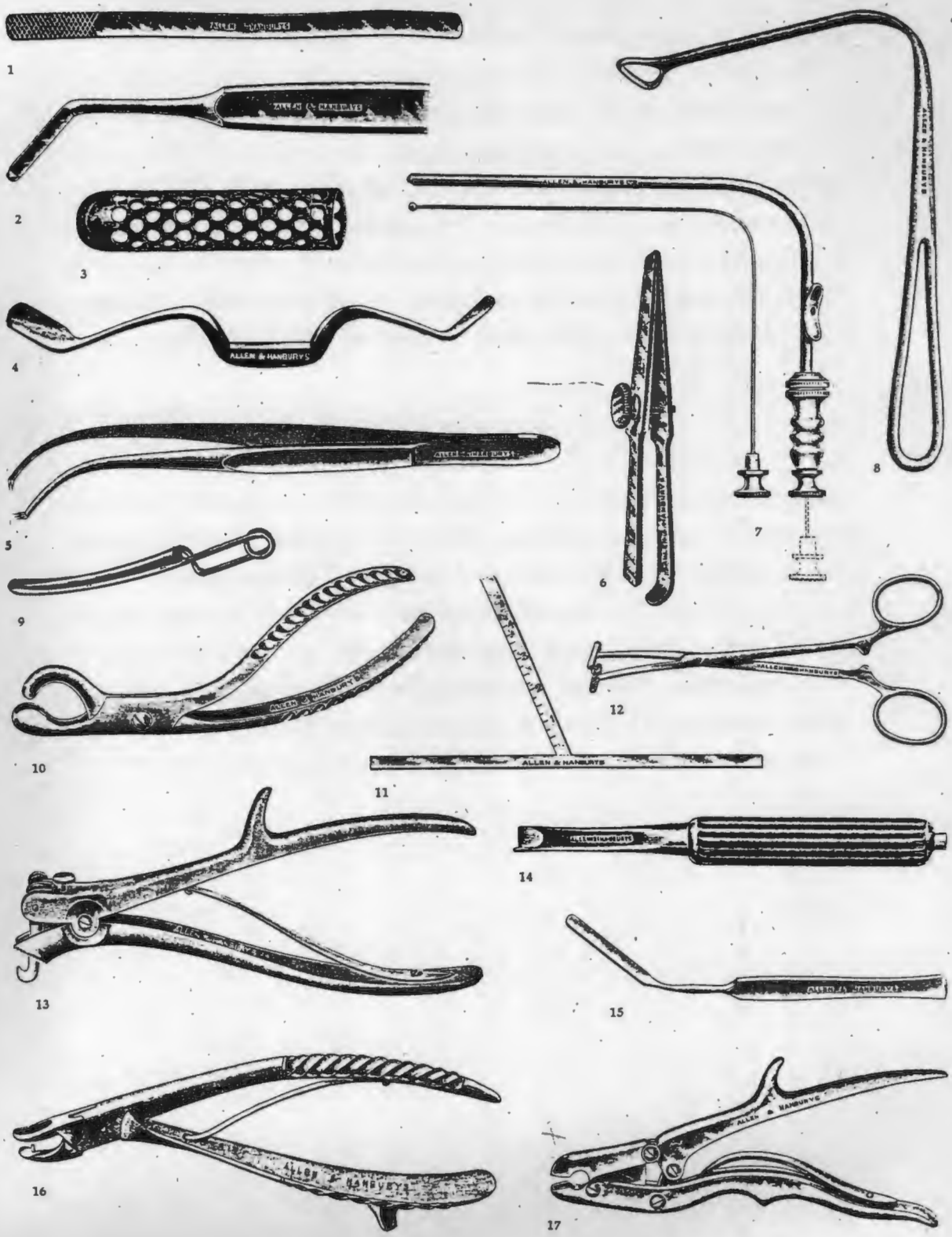


Figure 16. Copyright-free engravings.Jim Harter.
Medical equipment: neurosurgical instruments.

b. Medium

The possibilities of photocopy reproduction motivated the use of screenprinting. When photocopied onto acetate, the images could be enlarged, overlaid and distorted and then exposed onto a screen. The manipulation of the original images results in a further distancing from the body, while still referring to an image of it. The technique can be used to print on a variety of surfaces. Etching has a similar visual appeal to engravings, yet allows for greater experimentation and expression. Images of medical tools are deep etched to remove them from the sterility of the surgical and evoke associations with instruments of torture, while aquatints are used for the organs to simulate a decaying fleshiness.

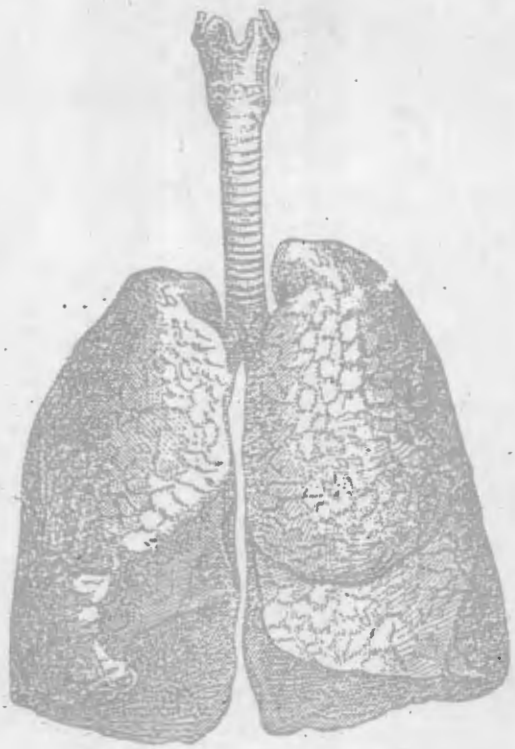
c. Materials

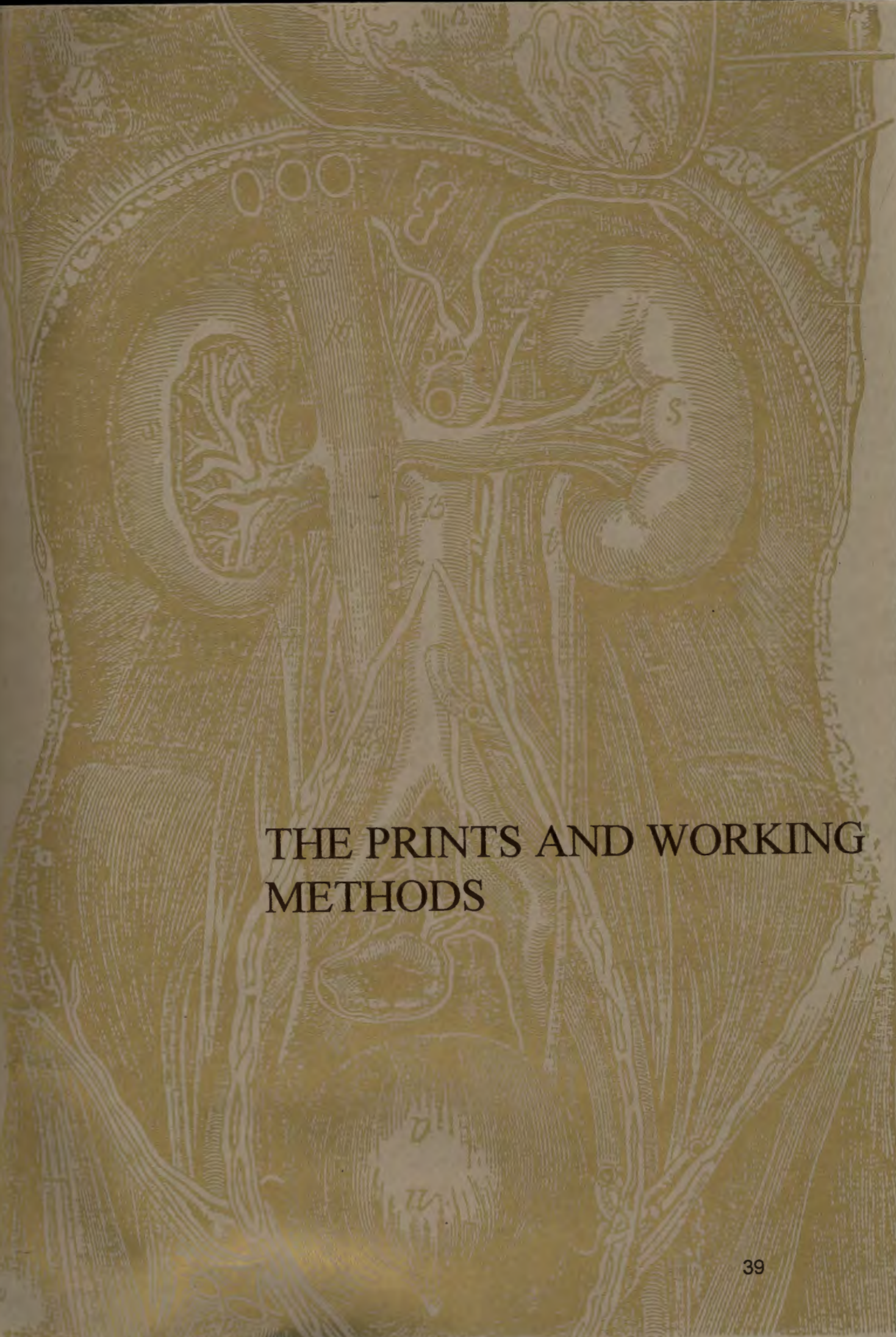
The source illustrations are sterile and sanitised. The introduction of materials - staining, varnishing, starch, wax and resin - reintroduces the subject-body to the image by alluding to body fluids. These have been referred to as the abject body, that of substances: blood, semen, excrement, tissue, etc. When the liquid materials set and dry, they form an impermeable layer that seals and protects the 'body'. The use of plaster derives from its medical associations: its visual association with bone and its healing thereof. A variety of materials are used to treat the separate elements, so that they have individual identities within the whole.

The use of fabric and the construction of sewn elements evoke the concept of the stitched, disfigured body, and relate to veiling and concealing. Stitching reintroduces the hand to the image of the body, and poses the symbolic threat of contamination. Fabric has a natural connection with the body and more immediately with the skin: it covers and protects, is vulnerable, stretches and is subject to incision and repair. I have used fabric largely to produce medical garments rather than body parts, as medicine provides the paradigm within which the image of the body resides. The stained and distressed life-size fabric constructions evoke images of relics and mummies, which preserve the body, thereby prolonging both life and death. The collections of prints become an epitaph to the body.

d. Colour

Colour becomes increasingly reduced in the body of work. I have aimed to achieve an historical, ephemeral, detached quality. Bleached colour resembles flesh in formalin and dried blood, evoking the notion of the preserved body.





THE PRINTS AND WORKING METHODS

The prints are divided into four series: *Contusions*, *Lesions*, *Lacerations* and *Incisions*.

Contusions

These are the first prints executed in this project. My concerns are with the medical 'hunt' for knowledge, wherein the body becomes the hunted. Thus there are references to maps, targets and weaponry, which have a visual parity to medical lenses and instruments.

Lesions

These digress from the two-dimensional plane, as the surface is ruptured by images built on moulded paper. *Lesions III* (pg. 61) is the first print using fabric as a support. This resulted from a need for a larger format, but allowed the move outside the rectangle.

Lacerations

These two prints take the medical case as their format. This provides a convincing space for the juxtaposition of images. The case makes reference to the 'curiosity cabinet' in which miscellaneous, confused histories were housed.

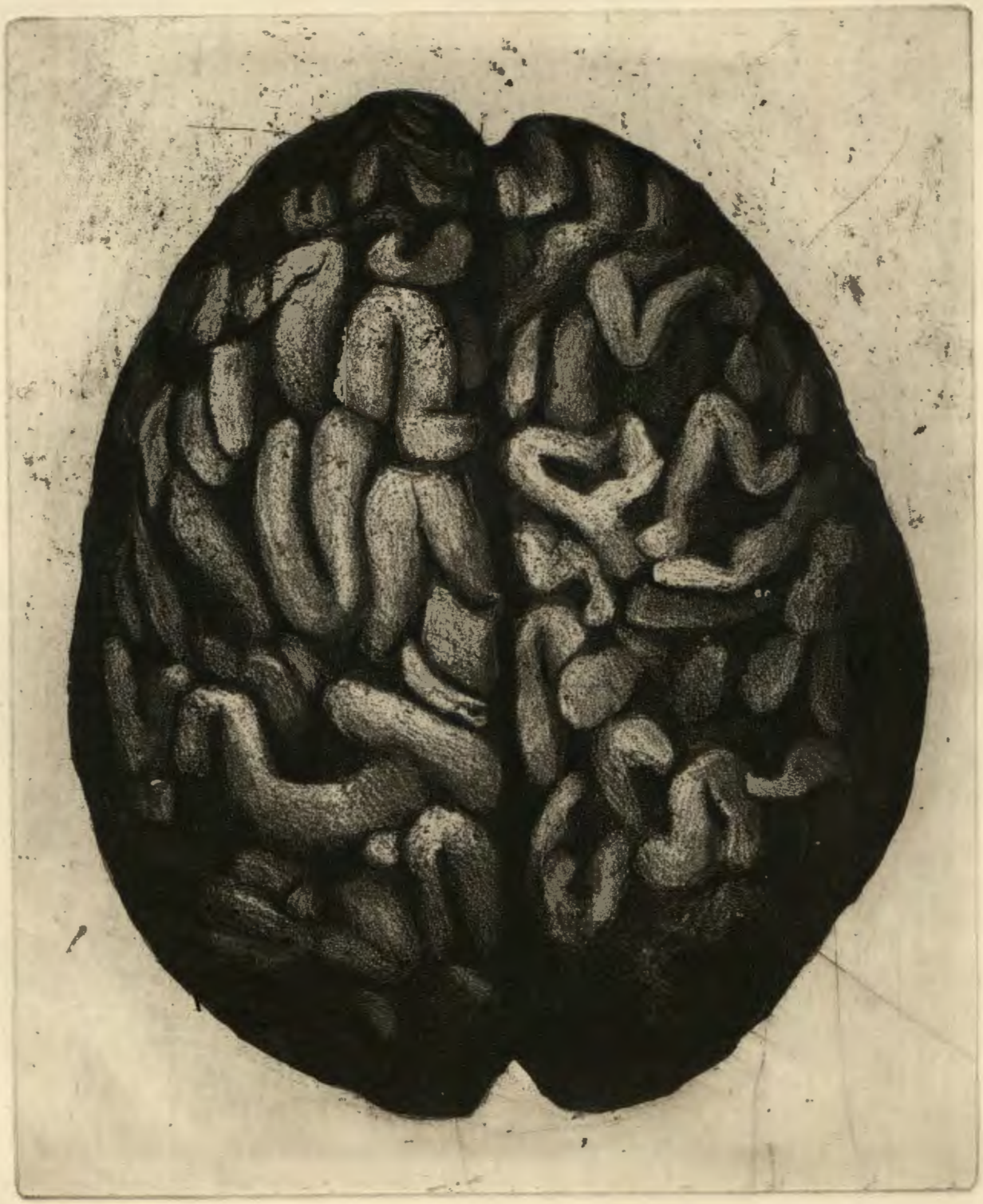
Incisions

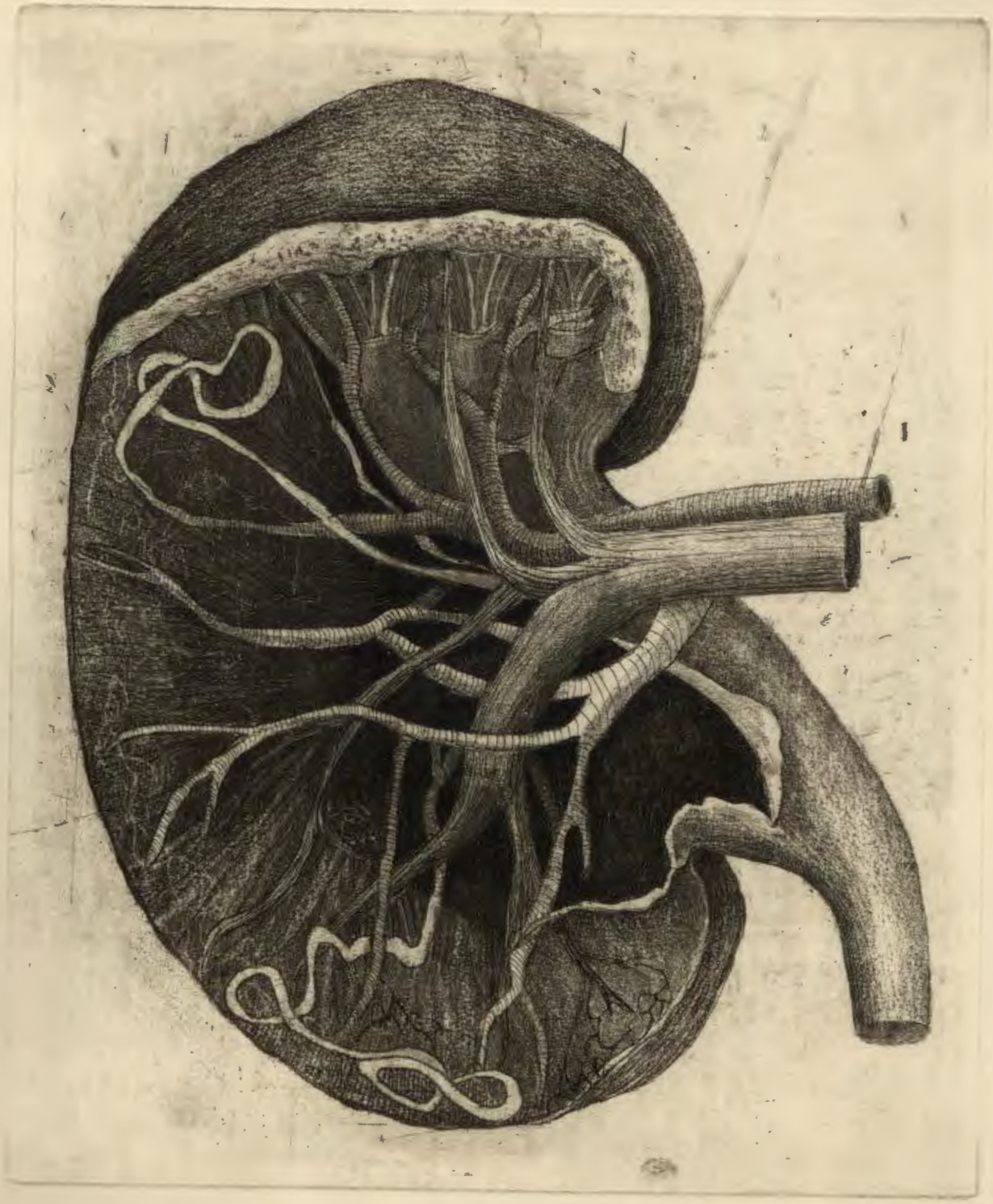
These eight prints take their format from medical apparel, and are sewn from calico and other cotton fabrics. They act as carriers for the body images: pockets, pins and thonging bind the images to the substrate. The garments refer to restriction and protection of the body: keeping the inside in and the outside out, identifying the body as a site of potential danger.

Source Plates

1993 - 1995

The etching plates used in the production of the four series have been individually printed, and are presented in book form and together in cases. These are derived from medical atlases, and by their presentation form points of reference for the prints.





Contusions I

1993

Screenprinting and etching on Fabriano Avorio and aluminum.

77 cm x 46 cm

Edition 10

ICONOGRAPHIC INVENTORY: rib retractor, scapula retractor, vaginal speculum, sclerectomy scissors, bone forceps, tonometer.

METHOD: Autographic and photocopy stencils were initially overprinted. Medical tools were then etched into copper plates, cut out with a jeweller's hacksaw and assembled on the bed of the press. These were printed over the screenprinted surface. A small screenprinted aluminum plate was then adhered to the paper.

Contusions I

Contusions II

1993

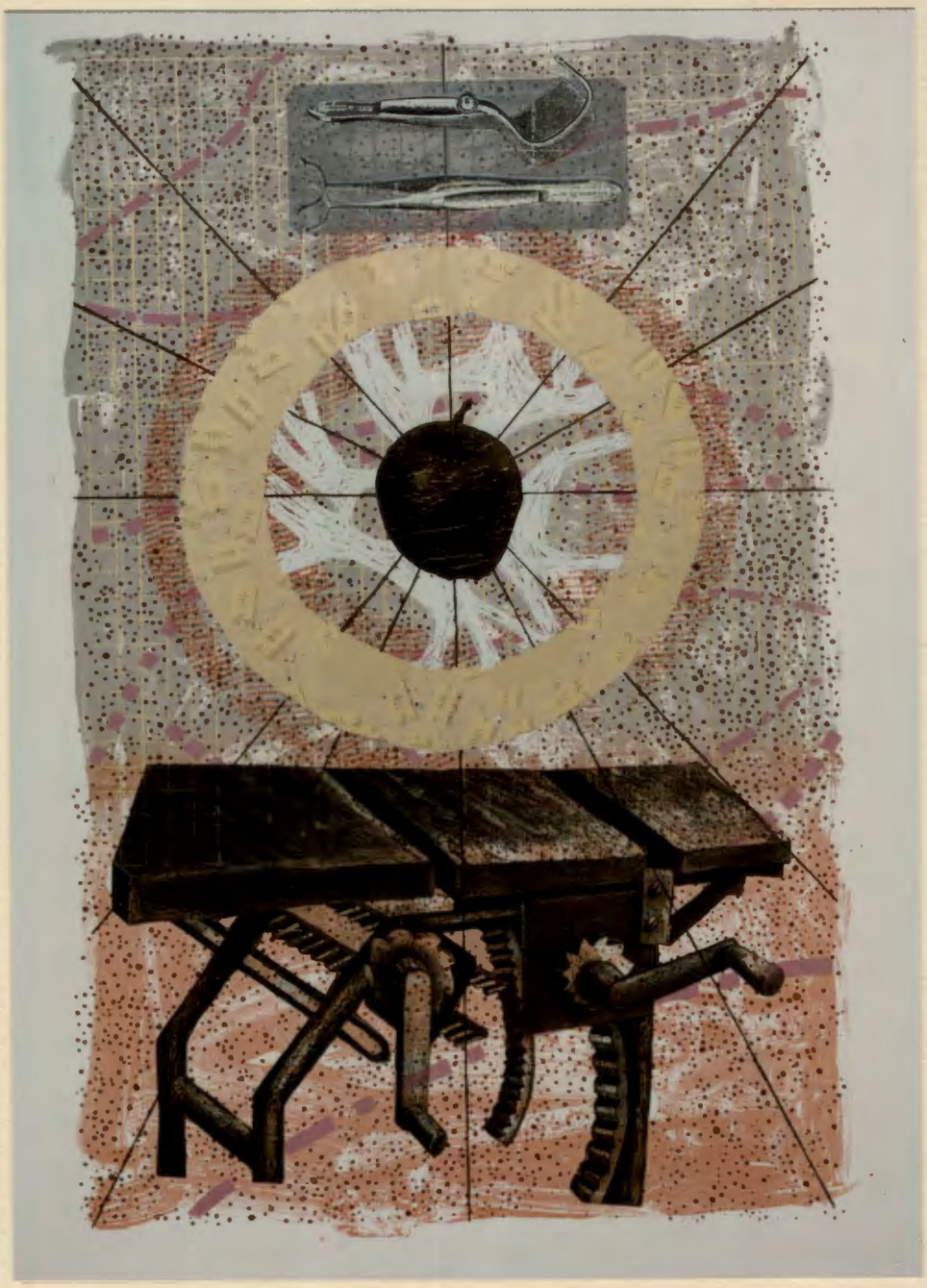
Screenprinting and etching on Fabriano Avorio.

73 cm x 47 cm

Edition 10.

ICONOGRAPHIC INVENTORY: entropium forceps, fixation forceps, operating table.

METHOD: Xerox toner powder was painted onto acetate to create a stencil. This and other photocopy stencils were exposed onto a screen and printed onto paper. An etching was cut out with a jeweller's hacksaw and was simultaneously printed with a chine-colléd mezzotint.



Contusions II

Contusions III

1993

Screenprinting and etching on Fabriano Avorio.

77 cm x 55 cm

Edition 10

ICONOGRAPHIC INVENTORY: operating table with restraints, vertebrae.

METHOD: Again, a shaped etching was printed over a screenprinted surface.

Contusions III

Contusions IV

1993

Screenprinting and etching on Fabriano Avorio.

71 cm x 47 cm.

Edition 10

ICONOGRAPHIC INVENTORY: heart, scalpel, burr, hook knife, hemorrhoidal clamp, forceps, areolar tissue.

METHOD: The image was first screenprinted. In order to achieve accurate registration, the image was traced off the soaked paper before transferring it to the etching plate.

Contusions IV

Contusions V

1993

Screenprinting and etching on Fabriano Avorio.

90 cm x 60 cm

Edition 10

ICONOGRAPHIC INVENTORY: spinal support.

METHOD: The image was bleedprinted using screenprinting. Registration was set from damp paper, and the etching was ultimately printed over the screenprinting. Etched images were printed onto mulberry paper, adhered to triplex board and cut out. They were then attached to the print surface.

Contusions V

Lesions II

1994

Screenprinting and etching on Fabriano Avorio and mulberry paper with triplex, aluminum, resin, hand-made paper and gauze.

132 cm x 68 cm

Edition 6

ICONOGRAPHIC INVENTORY: arteries at the base of the brain, operations: radical cure of inguinal hernia, suture of the olecranon, extraction of matter from the cornea, bone clamp, stomach crushing clamp.

METHOD: Toner and photo-positives were screened onto Fabriano and the paper was laminated onto board. Etchings were cast in resin and adhered to the print. Hand-made paper, gauze and an etching were also applied and then coated with wax and varnish. Aluminum was laminated onto board and etchings on card were then added.

Lesions II

Lesion III

1994

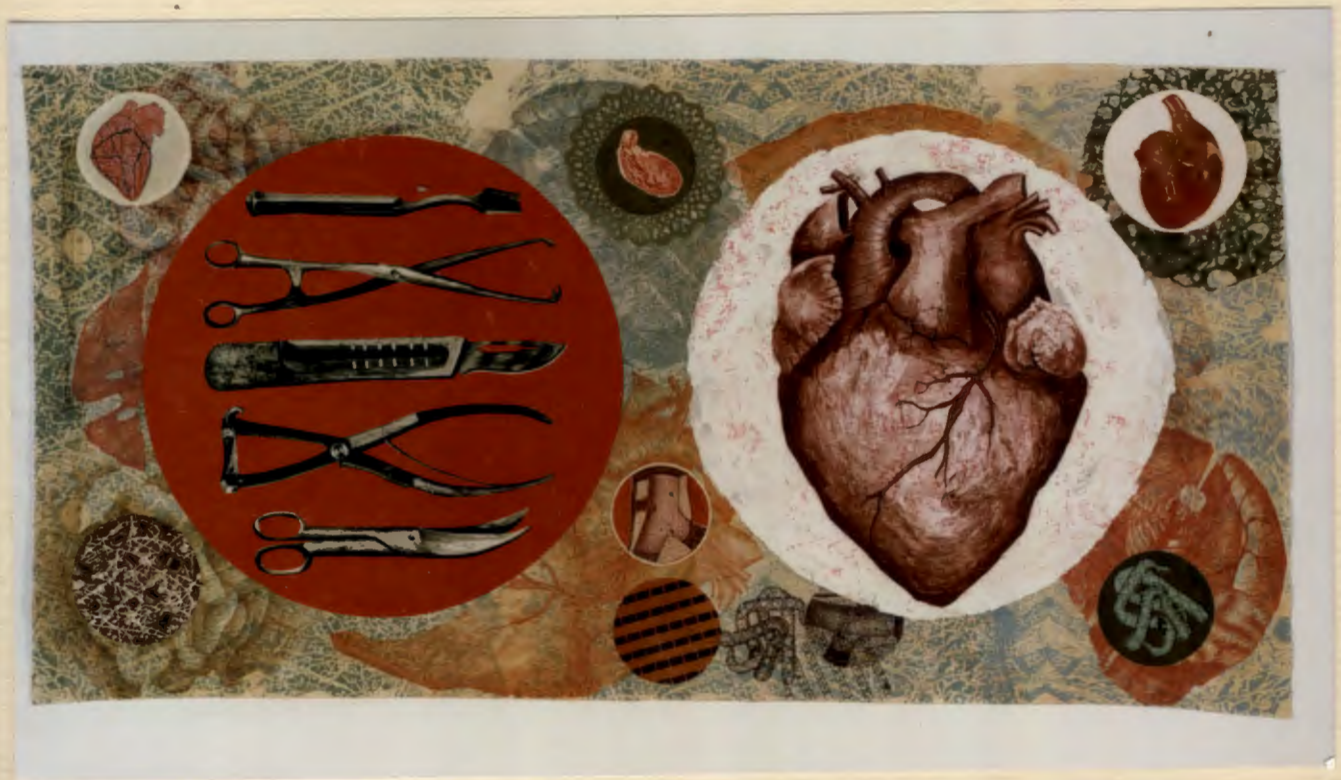
Screenprinting and etching on Fabriano Avorio, mulberry paper and calico with triplex and hand-made paper.

90 cm x 180 cm

Edition 6

ICONOGRAPHIC INVENTORY: heart, transection of the heart, longitudinal section of hepatic vein, peptides, erythrocytes, haemoglobin, uterine vulsellum forceps, laryngotomy scissors, scalpel, rib shears, arhroplasty gouge.

METHOD: A large sheet of calico was screenprinted, stained with tea, starched and varnished. This provided a rigid support for the lamination and stitching of printed Fabriano, calico and tissue. A sheet of hand-made paper was cast in a circular mould, impregnated with gauze, and an etching applied. This was then coated with wax.



Lesions III

Lacerations I

1994

Screenprinting, etching and collagraph on Fabriano Avorio, mulberry paper and calico with wood, wax, gauze, triplex, razor blades, resin, polyurethane foam, leather and varnish.

115 cm x 75 cm

Edition 6

Post-mortem case

ICONOGRAPHIC INVENTORY: dissection of the brain, cranial x-ray, cranial scan, medulla oblongata and pons deep and superficial section, connection between cerebrum, cerebellum and medulla oblongata, computer imaged section through the brain, amputation saw, dissecting forceps, fraenum scissors.

METHOD: A hinged case was made of masonite and meranti timber, the interior of which was covered with printed calico. Printed tools were positioned into sewn fabric pockets, and the compartments were filled with images printed on Fabriano. These images were coated with wax or varnish. Mulberry paper was set over polyurethane foam, and the foam cut to shape. A collagraph was set into cast resin, making the paper transparent and the ink dominant.

Lacerations I

Lacerations II

1995

Screenprinting, etching wax casting and plaster casting on Fabriano Avorio, mulberry paper and calico with wood, triplex, leather, metal, varnish and polyurethane foam.

90 cm x 60 cm

Edition 6

Medical drawer

ICONOGRAPHIC INVENTORY: orthopaedic appliances: artificial arms, bones of the right foot, section of the deep muscles of the forearm, posterior interosseous and radial artery, dissection of left knee joint.

METHOD: A case was made of masonite and meranti timber, the interior of which was covered with printed calico. The prosthetic arms were adhered to card, and eye-lets were made and thonged with leather. Polyurethane foam was used as in *Lacerations I.* The hand was made in clay, coated in rubber moulding, and cast in a mixture of paraffin and bees wax. The plaster was cast in the same way.

Lacerations II

Incisions I

1994

Screenprinting and etching on Fabriano Avorio, mulberry paper and calico with wax, resin, triplex and gauze.

150 cm x 110 cm

Edition 6

Surgical apron.

ICONOGRAPHIC INVENTORY: lungs: front view, vascular system of the trunk, scalpel, dissecting forceps, fraenum scissors, uterine curette, anaesthetic syringe, tissue forceps.

METHOD: A pattern was made, the calico cut and stitched, then screenprinted and stained with coffee. Implements were inserted into stitched pockets and etchings in resin casts were pinned onto the format. The central etching was set onto gauze and coated with wax.

Incisions I

Incisions II

1994

Screenprinting and etching on Fabriano Avorio, mulberry paper and calico with triplex, polyurethane foam, chiffon and resin.

170 cm x 105 cm

Edition 6

Operating table

ICONOGRAPHIC INVENTORY: intestine, vascular system of the trunk, pancreas, transection of heart and kidney, muscular coat of the stomach, section through the spleen.

METHOD: The fabric was screenprinted and stained with coffee and then freely hand-stitched. A background was made of starched tissue, screenprinted and coated with resin and a print on polyurethane foam set upon it. Other images were printed on fabric and paper and stitched onto the format.

Incisions II

Incisions III

1995

Screenprinting, etching, plaster casting and collagraph on Fabriano Avorio, mulberry paper, calico and hand-made paper, with leather, fly-mesh, wax, embroidery and polyurethane foam.

100 cm x 90 cm

Edition 6

Wall chart

ICONOGRAPHIC INVENTORY: heart and lungs, brain, various micrographs, dissection of the heart, uterine forceps, laryngotomy scissors.

METHOD: Fragments of fabric were screenprinted and photocopies were transferred with thinners. These were stitched together, the fabric starched, stained and wooden dowels inserted. Prints were made onto tissue, hand-made paper, polyurethane foam and fabric, coated with wax and varnish and stitched to the format. Plaster casts were made from clay model, spraypainted and coated with varnish. These were then attached with leather thonging.

Incisions III

Incisions IV

1995

Screenprinting, etching and plaster casting on Fabriano Avorio, mulberry paper and chiffon with triplex, leather, fly-mesh, resin, gauze and embroidery.

97 cm x 180 cm

Edition 6

Surgical gown: back and front

ICONOGRAPHIC INVENTORY: large intestine, sections through the heart, femur, tibia, metatarsals, vascular system of the trunk, fraenum scissors, chisel, wire nippers, dissecting forceps, uterine curette.

METHOD: Patterns were made and the fabric cut, stitched, stained, starched and varnished. The hearts were laminated onto foam-core board, coated with resin and attached with thonging. The instruments were printed onto tissue and board and set behind fly-mesh. In the second gown, chiffon was printed and stitched to the format. A machine was then used for the embroidery. Prints on Fabriano were laminated to the surface and covered with gauze, and etchings in resin were pinned to the surface. A plaster cast was made, varnished and adhered.

Incisions IV

Incisions V

1995

Screenprinting and etching on Fabriano Avorio, mulberry paper and calico with wax, embroidery, polyurethane foam and string.

90 cm x 120 cm

Edition 6

Surgical face mask

ICONOGRAPHIC INVENTORY: small intestine and colon, section through kidney and heart, various intestinal operations, scapula, innominate bone.

METHOD: The fabric was cut, stitched and stained with coffee and cochineal. The fabric was then screenprinted and screenprinted iron-on fabric was adhered. A machine was used for the embroidery. Screenprinted fabric and printed, wax-coated Fabriano were stitched to the format. Polyurethane foam images were stitched to surface with string, and the central image was adhered to fabric with starch-paste and stitched.

Incisions V

Incisions VI

1995

Screenprinting, etching and batik on Fabriano Avorio, mulberry paper and calico with latex, polyurethane foam, chiffon, gauze, fly-mesh, leather, wax and embroidery.

150 cm x 90 cm

Edition 6

Frankenstein's monster

ICONOGRAPHIC INVENTORY: brain from the top, transection of the heart, branches of the sacral plexus seen on raisin the gluteus maximus, thorax, dissection of forearm and hand, dissection of left knee joint.

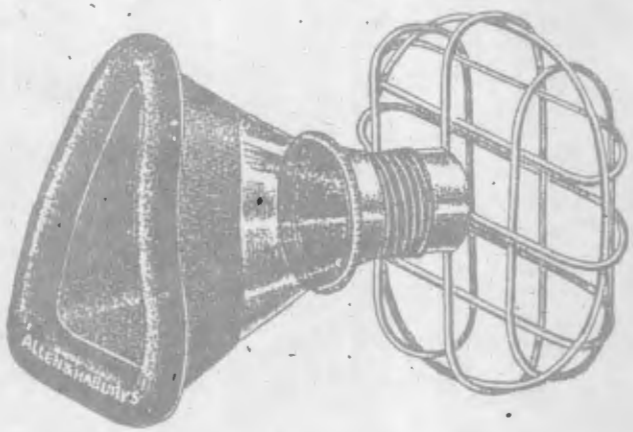
METHOD: The various fabrics were separately treated and hand-sewn together in a collage-type fashion. Wax was printed through a stencil onto fabric, it was then dyed with coffee and cochineal and the wax ironed out. Fabric was screenprinted, stained, eye-lets were added and it was thonged with leather. This was then coated with latex.

FRANKENSTEIN'S MONSTER

Mary Shelley's *Frankenstein* (1818), which is set during the Enlightenment, is symbolic of the extent of the dangers of a medical science based on the separation of parts. Frankenstein's initial influence is Paracelsus, a natural philosopher, but he is soon introduced to Cartesian 'true science' by his professors, and he learns to dissect, analyse and reassemble. Interestingly, in the 1994 Coppola film version, *Mary Shelley's Frankenstein*, Frankenstein's pre-occupation with Paracelsus is seen as impetus for his project. This reversal can be interpreted as an indictment of New-Age medicine.

The story has been interpreted as a condemnation of the masculine will of science to control nature, and the supplanting of the female procreative role

(Jordanova 1989). Shelley's monster is intelligent, yet his ugliness symbolises the dangerous implications of the quest for knowledge. The monster remains unnamed throughout the novel, its identity being that of an experiment - a stitched collection of parts - an abstract creation of science. Stafford (1993) cites Aldini (1762-1834) as a possible reference for the story. He was said to have used a voltaic pile to connect electrodes to corporeal fragments to assess the vitality of different organs. Shelley's text makes no overt reference to electricity, and yet, this is how her work is generally understood. Possibly the interpretation of the text as an imputation of technology has engendered the desire to locate her work within a specific scientific context.



Incisions VI

Incisions VII

1994

Screenprinting, etching and plaster casting on Fabriano Avorio and calico with wax, leather, gauze, triplex and bandaging.

94 cm x 170 cm

Edition 6

Spinal corset

ICONOGRAPHIC INVENTORY: scoliorachitic pelvis, spinal vertebrae, femur, humerus, trunk, dissection of forearm and hand, wire nippers, drill, chisel.

METHOD: A pattern was made, the fabric printed, cut and sewn, metal 'boning' was inserted and leather longing added. Plaster casts of bones were made, uniformly broken and covered with bandaging. Images were laminated onto foam-core and cut to shape and the central image was laminated to the surface and coated with wax.

Incisions VII

Incisions VIII

1995

Screenprinting, etching, resin casting and photocopy transfer on Fabriano Avorio, mulberry paper, hand-made paper and calico with triplex, latex and varnish.

140 cm x 120 cm

Edition 6

Pocket case

ICONOGRAPHIC INVENTORY: roots of lungs and posterior pulmonary plexus, viscera and vessels of the abdomen, vascular system of the trunk, anterior tibial artery and its branches, deep dissection of forearm and hand, eye, ear, mouth, molar tooth, laryngotomy scissors.

METHOD: A pattern was made, the fabric cut, stitched, screenprinted, photocopies transferred and then stained. Screenprints on tissue were then laminated to the surface and coated with varnish. Hand-made paper was adhered, and prints on Fabriano pinned to the surface. A mixture of resin and cement was cast from rubber moulding. Etchings were adhered to card and coated with latex.

Incisions VIII

CONCLUSION

Embodiment has been displaced by representation and computer imaging. The body is not a predetermined given: appearance can be altered by prosthetic implants, liposuction reduces profile, hair and organs are transplanted, and genes are manipulated. The body has been neutralised.

In my dissertation I have problematised the body as an object of representation, subject to control systems. I have examined the means by which medical illustration interposes between the body as subject and object, and how this has been instrumental in its subjugation and surrender to medical authority. I have identified fragmentation as a central means of control, and the prints work within a visual framework of fragmentation to re-represent the body. Realising that embracing this position could be read as an endorsement of this process of fracturing, my intention has been to create an awareness of disempowerment rather than attempting re-empowerment.

The images are intentionally both clinical and impersonal; and somatic. This arises from my dualistic concern with the consequence of illustration: an impartial, unemotional relationship to the body; and my personal response to the body as a visceral presence.

SELECT BIBLIOGRAPHY

ARMSTRONG, R. 1983. Political anatomy of the body. Cambridge: Cambridge University Press.

AXSOM, R. 1987. Frank Stella at Bedford in Tyler Graphics: the extended image. Minneapolis: Walker Art Center.

BERGER, J. 1977. Ways of seeing. London: British Broadcasting Corporation.

BRAIN, R. 1979. The decorated body. London: Hutchinson.

BRYSON, B., HOLLY, M., & MOXEY, K. (eds.). 1991. Visual theory: painting and interpretation. Cambridge: Polity Press.

BURKE, S. 1992. The death and return of the author. Edinburgh: Edinburgh University Press.

CAPRA, F. 1982. The turning point. London: Flamingo.

CARLEY, M. Living on earth/ buried alive. Fibrearts. Sept. - Oct. 21. no. 2: 40-44.

CHOPRA, D. 1990. Perfect health. Toronto: Bantam Books.

DAWKINS, R. 1986. The blind watchmaker. Essex: Longman Scientific and Technical.

ELDERFIELD, J. (ed.) 1992. Essays on assemblage. New York: Museum of Modern Art.

FOUCAULT, M. 1975. The birth of the clinic. New York: Vintage Books.

GOULD, S . J. 1981. The mismeasure of man. New York: W. W. Norton.

HARTER, J. 1991. Images of medicine. New York: Bonanza Books.

HAYLES, N . K. 1993. Virtual bodies and flickering signifiers. October. Fall. 66: 69-91.

HONNETH, A. 1991. The critique of power. Massachusetts: MIT Press.

HUGGAN, G. 1994. Territorial disputes. Toronto: University of Toronto Press.

JANIS, E . P. 1991. Deviation and its imperatives - the plight of the 'unique print'. The Print Collector's Newsletter. Jan.- Feb. xxi: 211-213.

JENCKS, C. (ed.). 1992. The post-modern reader. London: Academy Editions.

JORDANOVA, L. 1989. Sexual visions: images of gender in medicine between the 18th and 20th century. Wisconsin: Wisconsin University Press.

KOTZ, M . L. 1990. Rauschenberg/ art and life. New York: Harry N. Abrams.

KUSPIT, D. 1988. The new subjectivism. London: UMI. Research Press.

LEDERMAN, E. K. 1986. Philosophy and medicine. Aldershot: Gower.

LOPREATO, J. 1984. Human nature and biocultural evolution. Boston: Allen and Unwin.

LUKES, S. 1986. Power. Oxford: Basil Blackwell.

MILLER, J. 1978. The body in question. London: Jonathan Cape.

MOORE, R . H. 1986. Medical physics and medical imaging. Johannesburg: Witwatersrand University Press.

OWENS, C. 1992. Beyond recognition: representation, power and culture. Berkeley: University of California Press.

RIAN, J. 1993. What's all this body art? Flash Art. Jan. - Feb. 168: 50-53.

ROSENTHAL, M. 1993. Artists at Gemini G.E.L. Los Angeles: Harry N. Abrams Inc.

SCARRY, E. 1985. The body in pain. Oxford: Oxford University Press.

SCHLEIFER, K . B. 1991. Inside and out: an interview with Kiki Smith. The Print Collector's Newsletter. Jul. - Aug. xxii: 84-87.

SCOTT, S. & MORGAN, D. 1993. Body matters. London: Falmer Press.

SPECTOR, B. 1989. A profusion of substance. Artforum. Oct: 120-128.

STAFFORD, B. 1993. Body criticism. Massachusetts: MIT. Press.

THOMPSON, J. 1990. Ideology and modern culture. Cambridge: Polity Press.

THORNTON, J. & REEVES, C. 1983. Medical book illustration: a short history. Cambridge: Oleander Press.

TILLEY, C. (ed). 1991. Reading material culture. Oxford: Basil Blackwell.

TURNER, B. 1984. The body and society. Oxford: Basil Blackwell.

WOLFRAM, E. 1975. History of collage. London: Studio Vista.

WOOD, D. 1992. The power of maps. London : Routledge.

WRIGHT, P. & TREACHER, A. (eds.) 1982. The problem of medical knowledge. Edinburgh: Edinburgh University Press.

YAU, J. 1990. Jasper Johns: printed symbols. Minneapolis: Walker Art Center.