

Volatility, Liquidity and Malleability: Replicating the Art of the 1960s

Bryony Rose Bery

UCL

Research Degree: History of Art

I, Bryony Rose Bery, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Abstract

Reviewing Robert Morris' *9 at Leo Castelli* exhibition of December 1968, Max Kozloff used the terms volatility, liquidity and malleability. These physical characteristics suggest the precarious nature of the objects exhibited and are deployed throughout this thesis to explore the material, theoretical and ethical implications of sculpture replication in the twentieth century. A methodological approach that bridges art history and conservation-based perspectives will allow many of the current concerns surrounding replication to be expanded upon. The 1960s is seen as a key moment for the types of art objects being produced but also reproduced and a shift in practices and attitudes is traced. Issues of authenticity, materiality, authorship, historical narrative, conceptual intention and the various meanings ascribed to the term replica are considered. The purpose and status of the original or replica is scrutinised in the context of a history of replication.

As a museum and artistic strategy, there are various motives for creating replicas. Here, a series of carefully selected historical case studies are used as test cases to draw attention to the acute problems posed when works are made from ephemeral or vulnerable materials, works that have to be performed, works that perform a process or behave naturally and works within a replicated exhibition enterprise. Concentrating on artworks produced in America and Europe, the thesis recasts artists and their works to highlight the precariousness of materials and meanings, documentation and actions, performativity and duration. A work's inherent vice is seen in terms of what will be termed its 'ephe-materiality' and its replica as a re-action in the continuous present. The relationship of surface to support, materials that act out or perform their own instability, provides a platform from which to readdress the idea of a single, finished work and its exhibitable life and afterlife within a museum today.

Contents

Acknowledgements	4
List of Figures	6
Introduction	16
1. Framing Marcel Duchamp: The Case of Richard Hamilton's <i>Large Glass</i>	38
2. Process and Precariousness: The Ephe-materiality of Richard Serra, Gilberto Zorio and Barry Flanagan	76
3. With Time Re-Action: The Performative Remakes of Robert Morris and Michelangelo Pistoletto	107
4. Nature and Second Nature: Barry Flanagan and Rafael Ferrer	136
5. When Attitudes Become All About Attitudes Towards Form: Recasting the latex works of Keith Sonnier and Eva Hesse	167
Conclusion	202
Notes	212
Figures	260
Bibliography	302

Acknowledgements

Firstly I would like to thank the AHRC for funding this collaborative PhD project.

This thesis would not have been possible without the support, knowledge and enthusiasm of my supervisors; Professor Briony Fer at UCL and Dr Matthew Gale at Tate. Throughout my academic career, Briony Fer has been invaluable and I am extremely grateful for her insightful observations and guidance. Matthew Gale has also provided support not only for the Tate-related cases but also to the project as a whole.

The collaborative aspect of this PhD has enabled me access and experience that has benefited the project and I would therefore like to take this opportunity to thank both UCL and Tate. Staff and colleagues in the History of Art Department at UCL and the Research, Conservation and Curatorial Departments within Tate have been a constant source for discussion and I feel very fortunate to have been part of the research communities at both institutions. As well as my supervisors then, I would like to give particular thanks to Dr Jennifer Mundy, Head of Collection Research, Tate, who invited me to co-edit the 2007 autumn issue of *Tate Papers* which was based on *Inherent Vice: The Replica and its Implications in Modern Sculpture*, a closed workshop held at Tate Modern on 18-19 October 2007. This workshop provided an excellent forum to better understand the field of replication as my project started and I am grateful to have been asked to attend and contribute to the online publication. Dr Emma Richardson has always been available to discuss any material matters and has been extremely helpful since joining the History of Art department at UCL as Lecturer in Material Studies. I would also like to thank Professor Robert Lumley and Libby Sheldon for their feedback at my upgrade.

Art historians, conservators, curators, artists, artist studios and estates and various museums worldwide have provided much primary and archival material for the project. I would therefore like to thank, in particular, the following people for giving up their time to assist me: Susan K. Anderson, The Martha Hamilton Morris Archivist, Philadelphia Museum of Art; Sylvia Bandi, Hauser & Wirth; Sebastiano Barassi, Acting Head of Collections and Exhibitions, Perry Green, Much Hadham; Mette Carlsen for sharing her research on the topic; Lynne Cooke, Senior Curator, Special Projects in Modern Art, at the National Gallery of Art, Washington DC; Deborah Cullen, Director & Chief Curator, The Miriam & Ira D. Wallach Art Gallery, Columbia University in the City of New York; Kathleen Dickson, Access Officer, BFI National Archive; Rafael Ferrer; Elizabeth Fisher, Curator for *Beyond Measure: Conversations Across Art and Science*; Ceri-Anne van de Geer, Arts Administrator, Kettle's Yard; Annika Gunarsson, Curator, Prints and Drawings, Moderna Museet, Stockholm; Susan Hapgood; Margaret Iverson, Professor of Art History and Theory at the University of Essex; Martin Langer, Conservator; Francesco Manacorda; Trina McKeever, Richard Serra's Studio; John Naylor; Barry Phipps, Fellow, Tutor & Curator of Works of Art, Churchill College, Cambridge; Christian Scheidemann, Contemporary Conservation Ltd; Barbara Sommermeyer Conservator, Hamburger Kunsthalle; Keith Sonnier, his assistant, Jason Reppert, and Lesley Raeside from his studio; Michael R. Taylor, Deputy Director/Chief Curator, Virginia Museum of Fine Arts; and Thea Winther, Conservator, Moderna Museet, Stockholm, Sweden.

At Tate, Dr Mark Godfrey, Senior Curator, International Art, ensured that I was involved in the Tate Modern rehang in 2009; and Catherine Wood, Curator, Contemporary Art and Performance, and Kathy Noble, then Assistant Curator, were extremely helpful in relation to Robert Morris' *Bodyspacemotionthings* in 2009. Karl Bush, Sculpture Conservation Technician; Katie Dungate, Conservation Administrator; William Easterling, former Sculpture Conservation Technician; Tim Green, Paintings Conservator; Dr Pip Laurenson, Head of Collection Care Research, Marcella Leith, Photography Manager; Elizabeth McDonald, Sculpture Conservator; Derek Pullen, former Head of Sculpture Conservation; Melanie Rolfe, Sculpture Conservator; Patricia Smithen, former Head of Conservation; Gates Sofer, Sculpture Conservator; and Andrew Wilson, Curator Modern and Contemporary British Art and Archives, have all been incredibly helpful and generous with their time, experience and expertise. Staff at Tate Archives and Library have also assisted greatly.

Finally, I would not have been able to complete this PhD without the love and patience of my family both young and old. Thank you Robbie, Ella and Delphi especially.

List of Figures

Figure 1

Robert Morris

Untitled 1965, reconstructed 1971 and 1976

Mirror glass and wood, 914 x 914 x 914 mm

Tate, purchased 1972

© ARS, NY and DACS, London 2015

Figure 2

Robert Morris

Untitled 1965, made in 2008

Exhibited at *Beyond Measure: Conversations Across Art and Science* in St Peter's Church, 5 April 2008 - 1 June 2008

Image courtesy of Ceri-Anne van der Geer, Kettle's Yard

Figure 3

The destruction of Robert Morris' *Untitled* 1965 exhibited at *Beyond Measure: Conversations Across Art and Science*

Image courtesy of Ceri-Anne van der Geer, Kettle's Yard

Figure 4

Marcel Duchamp

The Bride Stripped Bare by Her Bachelors, Even (The Large Glass) 1915-23

Oil, varnish, lead foil, lead wire, and dust on two glass panels, 2775 x 1778 x 86 mm

The Philadelphia Museum of Art, bequest of Katherine S. Dreier, 1952

© 2012 Artists Rights Society (ARS), New York / ADAGP, Paris / Succession Marcel Duchamp

Figure 5

Marcel Duchamp

The Bride Stripped Bare by her Bachelors, Even (The Large Glass) 1915-23,

reconstruction by Richard Hamilton 1965-6, lower panel remade 1985

Oil, lead, dust and varnish on glass, 2775 x 1759 mm

Tate, presented by William N. Copley through the American Federation of Arts 1975

© Richard Hamilton and Succession Marcel Duchamp/ADAGP, Paris and DACS, London 2015

Figure 6

Richard Hamilton

Large Glass 1965-6

As published in the *The Almost Complete Works of Marcel Duchamp* (exh. cat., Tate Gallery and the Arts Council), London, 18 June-31 July 1966, unpaginated

Figure 7

Richard Hamilton's screenprint poster for his reconstruction of Marcel Duchamp's *Large Glass*, Hatton Gallery, Newcastle upon Tyne, 16-27 May 1966

<https://twmuseums.org.uk/>

Figure 8a
Julian Wasser
Duchamp Playing Chess with a Nude (Eve Babitz)
Duchamp Retrospective, Pasadena Art Museum 1963
Gelatin silver print, 8 x 10 inches
© Craig Krull Gallery, 2012

Figure 8b
Yasumasa Morimura
A Requiem: Theater of Creativity / Self-portrait as Marcel Duchamp 2010
Photograph, 1500 x 1875 mm
Copyright the Artist, Courtesy ShugoArts

Figure 9a
Marcel Duchamp's *Large Glass* 1915-23

Figure 9b
Richard Hamilton's *Large Glass* 1965-6 with Tate conservation lower panel reconstruction 1985

Figure 9c
Ulf Linde's *Large Glass* replica 1991-2

Figure 10
Marcel Duchamp
Glider Containing a Water Mill (in Neighbouring Metals) 1913-15
Oil and lead wire on glass, 1508 x 837 mm
The Philadelphia Museum of Art, The Louise and Walter Arensberg Collection, 1950
© Artists Rights Society (ARS), New York / ADAGP, Paris / Estate of Marcel Duchamp

Figure 11
Amédée Ozenfant's *Foundations of Modern Art*, John Rodker, London, 1931, p.118

Figures 12a and 12b
Richard Hamilton's shattered *Large Glass* 19 June 1984
Tate Archives

Figure 13
Christopher Holden and Roy Perry working on the Tate conservation lower panel
Tate Archives

Figures 14a and 14b
George Heard Hamilton and Richard Hamilton
The *Green Box* with page detail, 1960

Figure 15
Richard Hamilton's shattered lower panel including the *Chocolate Grinder* with Marcel Duchamp's inscription 'Richard Hamilton/pour copie conforme/Marcel Duchamp/1966'

Tate Archives

Figure 16

Marcel Duchamp at the Philadelphia Museum of Art, 1965

Photographed by Mark Kauffman

Figure 17

Lower damaged panel of Richard Hamilton's *Large Glass* at Tate Stores

Photographed by author, 20 June 2012

Figures 18a and 18b

Richard Serra

Shovel Plate Prop 1969

Lead, 2500 x 2035 x 800 mm

Tate, purchased 1973

© ARS, NY and DACS, London 2015

Figure 19

Eva Hesse

Sculptures in Richard Serra's Guggenheim exhibition, 1969 1969

Pen on envelope, recto. Allen Memorial Art Museum, Oberlin College, Oberlin, Ohio

Published in 'Another Hesse' in Wagner, A. M. *Three Artists (Three Women):*

Modernism and the Art of Hesse, Krasner and O'Keeffe, Berkeley and Los Angeles, 1996, p.276

Figures 20a and 20b

Richard Serra

2-2-1: To Dickie and Tina 1969, 1994, lead antimony alloy

Unconfirmed: 1320 x 3490 x 1320 mm

Tate, purchased with assistance from the American Fund for the Tate Gallery 1997

20a Lead version (destroyed) photographed by Peter Moore

20b © ARS, NY and DACS, London 2015

Figure 21

Richard Serra

Shovel Plate Prop 1969

Steel, 2030 x 2134 x 813 mm

Solomon R. Guggenheim Museum, New York Panza Collection, 1991

© 2015 Richard Serra / Artists Rights Society (ARS), New York

Figure 22

Richard Serra

Shovel Plate Prop 1969

Installed at Galerie Ricke in 1969

Tate Archives

Figure 23

Richard Serra

Shovel Plate Prop 1969

Undated image from the conservation record

Tate Archives

Figure 24

Richard Serra

Shovel Plate Prop 1969

Installed at the Tate Gallery, October 1993

Tate Archives

Figure 25

9 at Leo Castelli

Castelli Warehouse, New York, December 1968

Figure 26

Gilberto Zorio

Piombi (Leads) 1968

Lead, copper, water, sulphuric acid and hydrochloric acid

Exhibited at *9 at Leo Castelli*

Figures 27a and 27b

Barry Flanagan

Sand Muslin 2 1966

Sand and muslin, 181 x 302 x 302 mm

Tate, transferred from the Victoria & Albert Museum 1983

27a Image from 1977 Van Abbemuseum exhibition catalogue

27b © The estate of Barry Flanagan, courtesy Plubronze Ltd

Figure 28

Barry Flanagan

4 casb 2'67 1967, canvas and sand, 1829 x 381 x 381 mm

ringl 1'67 1967, linoleum

rope (gr 2sp 60) 6'67 1967, rope, 67 x 67 x 18290 mm

Tate, purchased 1976

© The estate of Barry Flanagan, courtesy Plubronze Ltd

Figure 29

Barry Flanagan installing *4 casb 2'67*, *ringl 1'67* and *rope (gr 2sp 60) 6'67* for *Arte Inglese Oggi 1960-76*, Milan, 1976

Tate Archives

Figure 30

Gilberto Zorio

Piombi (Leads) 1968

Lead, copper, water, sulphuric acid and hydrochloric acid

Exhibited at the Serralves Museum of Contemporary Art in Porto Portugal, 30 May - 27 September 2009

Figure 31

Gilberto Zorio

Piombi II (Leads II) 1968

Sheets of lead, copper sulphate, hydrochloric acid, copper braid, rope, dimensions variable

Exhibited at Blain|Southern in London, 9 August - 28 September 2013

Figure 32

Robert Smithson

Glue Pour 1969

Robert Smithson / James Cohan Gallery

Figure 33

Michelangelo Pistoletto

Standing Man 1962, 1982

Silkscreen on steel, 2500 x 1250 x 25 mm

Tate, purchased 2006

© Michelangelo Pistoletto

Figure 34

Robert Morris

Untitled 1967-8 remade 2008

Felt, display dimensions variable

Tate, presented by the Tate Americas Foundation 2013

Photographed by author installed at Tate Modern, 9 March 2009

Figure 35

Untitled 1967-8 destroyed

Black and white photographic image of RM-28

Castelli Archives

Figure 36

Michelangelo Pistoletto

Sfera di giornali 1967

Photographs from Ugo Nespolo's film *Buongiorno Michelangelo* 1968

<http://www.pistoletto.it/it/gallerie/amz02.htm>

Figure 37

Michelangelo Pistoletto

Newspaper Sphere 2009, London

Photographed by author, 23 May 2009

Figure 38

Ugo Nespolo

Bongiorno Michelangelo 1968 with *Scultura da passeggio* (Turin, January 1968)

Film

Photographs from Ugo Nespolo's film *Buongiorno Michelangelo* 1968

<http://www.pistoletto.it/it/gallerie/amz02.htm>

Figure 39

Michelangelo Pistoletto

Mappamondo (Globe) 1966 - 1968

Newspaper and wire, 1800 mm

Courtesy of the artist and Galleria Christian Stein, Milan

Figure 40

Michelangelo Pistoletto

Walking Sculpture 2013, Paris

<http://art.monnaiedeparis.fr/en/events/walking-sculpture>

Figure 41

Robert Morris exhibition 1971, Tate Gallery

Tate Archives

Figure 42

Images used for the Robert Morris exhibition 1971, Tate Gallery

Tate Archives

Figure 43

Robert Morris

Neo-Classic 1971

16mm black-and-white film, silent; 15:30 minutes

The Art Institute of Chicago, gift of Society for Contemporary Art

© 2015 Robert Morris / Artists Rights Society (ARS), New York

Figures 44a, 44b and 44c

Robert Morris

Bodyspacemotionthings 2009

Tate Modern

Photographed by author, 22 and 23 May 2009

Figure 45

Robert Smithson

Drawing of *Floating Island to Travel around Manhattan Island* 1970

Robert Smithson / James Cohan Gallery

Figure 46

Robert Smithson

Floating Island to Travel around Manhattan Island 2005

Robert Smithson / James Cohan Gallery

Figure 47

Land Art 1969

Series of films organised by Gerry Schum for Fernsehgalerie 1969

<http://barryflanagan.com>

Figure 48

Rafael Ferrer *Chain Link* 1968

Barry Flanagan *two space rope sculpture (gr 2 sp 60)* 1967

When Attitudes Become Form, Institute of Contemporary Arts, 28 August - 28 September 1969

<http://barryflanagan.com>

Figure 49
Barry Flanagan
june 2 ' 69 1969
Canvas and wood, 2921 x 5080 x 889 mm
Tate, purchased 1973
© The estate of Barry Flanagan, courtesy Plubronze Ltd

Figures 50a and 50b
Rafael Ferrer
Three Leaf Piece (Leo Castelli Gallery and Castelli Warehouse) 1968
Images by Ron Miyashiro
<http://www.davidcastillogallery.com>

Figure 51
Rafael Ferrer
Ice 1969 (exterior of *Anti-Illusion: Procedures/Materials*)
Photo courtesy of the artist <http://www.e-flux.com>

Figures 52a and 52b
Allan Kaprow
Poster for *Fluids* with score 1967
Courtesy Allan Kaprow Estate and Hauser & Wirth

Figure 53
Allan Kaprow *Fluids* 1967
Pasadena Art Museum, Pasadena, California
Photo: Julian Wasser

Figure 54
Fluids 2005
Art Unlimited, Art/36/Basel, Basel Switzerland
Photo: Stefan Altenberger Photography Zurich

Figure 55
Fluids 1967/2008
Tate Modern, London, for *UBS Openings: Saturday Live. Happening Again: Allan Kaprow's Fluids and Scales*
Hauser & Wirth

Figure 56
Fluids 2008
Out of Actions Geffen Contemporary at the Museum of Contemporary Art, Los Angeles, California, by MOCA Contemporaries
Photo: Aandrea Stang

Figure 57
Barry Flanagan
a hole in the sea 1969
Film, 3.44 minutes

Filmed with Gerry Schum in Scheveningen, Holland, February 1969, for *Land Art TV* exhibition

<http://barryflanagan.com>

Figures 58a and 58b

Barry Flanagan

rope/bag (gr 2sp 60) 6 '67 1967

Rope, Hessian/Sacking, 80 x 1829 mm

Kaiser Wilhelm Museum, Krefeld

<http://barryflanagan.com>

Figure 59

Rafael Ferrer

50 Cakes of Ice 1970

The Museum of Modern Art, New York

www.moma.org

Figure 60

Keith Sonnier

Mustee

Flock, latex, string, size dictated by the wall area available

9 at Leo Castelli New York 1968

<http://www.keithsonnier.net>

Figure 61

Eva Hesse

Augment, 18 sheets of latex-impregnated canvas, each 78 x 40 inches

Aught, 4 double sheets of rubberised canvas stuffed with polyethylene drop cloths, each 78 x 40 inches

9 at Leo Castelli New York 1968

<http://www.hauserwirth.com>

Figure 62

When Attitudes Become Form Bern 1969

Exhibition view as reproduced in *When Attitudes Become Form Bern 1969/Venice 2013* (exh, cat., Ca' Corner Della Regina), Venice, 1 June - 3 November 2013, p.110

Figure 63

When Attitudes Become Form Bern 1969/ Venice 2013 Venice 2013

Sonnier's *Mustee*, re-enacted by the artist, Barbara Bertozzi Castelli Collection

Hesse's original *Augment*, lent from the Helga and Walther Lauffs Collection

Courtesy of Fondazione Prada

Figures 64a and 64b

Keith Sonnier

Mustee and Flocked Wall

When Attitudes Become Form Bern 1969

As reproduced in *When Attitudes Become Form Bern 1969/Venice 2013* (exh, cat., Ca' Corner Della Regina), Venice, 1 June - 3 November 2013, p.115 and p.118

Figures 65a (cover), 65b and 65c (inside cover)
Catalogue for *Anti-Illusion: Procedures/Materials* New York 1969

Figure 66
Eva Hesse
Sans III 1969
© The Estate of Eva Hesse. Courtesy Hauser & Wirth

Figure 67
Lucio Fontana
Spatial Concept 'Waiting' 1960
Canvas, 930 x 730 mm
Tate, purchased 1964
© Fondazione Lucio Fontana, Milan

Figure 68
Keith Sonnier
Flocked 1969, condition at the Moderna Museet 2007
Moderna Museet Archives

Figure 69
Keith Sonnier
Red Flocked Wall 1969, condition at Tate 2008
Tate Archives

Figure 70
Detail of *Augment* before treatment by Martin Langer
© The Estate of Eva Hesse. Courtesy Hauser & Wirth

Figures 71a and 71b
Eva Hesse *Sans III* 1969, condition in 1997
© The Estate of Eva Hesse. Courtesy Hauser & Wirth

Figure 72
Keith Sonnier
Flock Pulled from Wall with String 1968 installed at *When Attitudes Become Form*,
ICA, London
As reproduced and described in Harrison, C *Looking Back* Ridinghouse, London
2011, p.163

Figure 73
Augment being remade for Mario Garcia Torres' *Passengers: 2.11* at the Wattis
Institute, San Francisco, 7 July - 1 August 2009
<https://www.flickr.com/photos/jerkhaircut/3675652803/in/photostream/>

Figure 74
Augment at Mario Garcia Torres' *Passengers: 2.11* at the Wattis Institute, San
Francisco, 7 July - 1 August 2009
Image from Killian, K. 'Mario Garcia Torres' 12 July 2009,
<http://openspace.sfmoma.org/2009/07/mario-garcia-torres>

Figure 75

Eva Hesse *Sans III* and *Augment*

When Attitudes Become Form: Bern 1969/Venice 2013 Venice 2013

Exhibition copy of *Sans III*, lent from the Estate of Eva Hesse

Hesse's original *Augment*, lent from the Helga and Walther Lauffs Collection

Photo: Roberto Marossi

Figure 76

Thomas Demand's image reproduced on the catalogue cover of *When Attitudes Become Form Bern 1969/Venice 2013*

Figure 77

Marcel Duchamp: Work and Life

Front cover of the exhibition catalogue for Marcel Duchamp's exhibition at Palazzo Grassi, April - July 1993

Reproduced in Naumann, F. M. 'The Bachelor's Quest' in *Art In America* vol 81, no.9 September 1993, p.73

Figure 78

Ulf Linde's 1991-2 reconstruction of Duchamp's *Large Glass* exhibited at Palazzo Grassi, April to July 1993

Collection Moderna Museet, Stockholm,

Photograph taken by Francesco Turio Böhm and reproduced in Naumann, F. M. 'The Bachelor's Quest' in *Art In America* vol 81, no.9 September 1993, p.72

Figures 79a and 79b

Roger Hiorns

Seizure 2008-2010, 151-189 Harper Rd, London SE1

Photographed by author, 18 September 2009

Figure 80

Roger Hiorns

Seizure 2008-2013, Yorkshire Sculpture Park

Photograph Nigel Roddis, <http://www.ysp.co.uk/exhibitions/roger-hiorns-seizure>

Introduction

‘In short, the idea of the object is engulfed by the volatility, liquidity, malleability, and softness - all the unstable characteristics - of the substance which embodies it.’
Max Kozloff, 1969.¹

‘As long as the replica is understood as documentation ... and as long as it is positively stated, there lies a world of possibilities.’
Yve-Alain Bois, 2007.²

This thesis will explore the material, theoretical and ethical implications of sculpture replication today as a response to a historical shift in practices and attitudes. A series of carefully selected cases will focus on the 1960s as a key moment of transformation and change, marking a watershed in terms of the ways in which art objects were produced but also reproduced. The subsequent proliferation of replicas on the market and exhibited in museums as well as works that have to be remade each time they are displayed reflects the urgency of this topic, both as an institutional and art-historical concern. It is not surprising then that amongst collecting museums, artists, curators, conservators and art historians there is an ongoing discussion surrounding good practice and the ethical dilemmas replicas pose. As part of this current and much needed discourse on replication, this thesis will draw upon a wide range of theoretical approaches and combine both art historical and conservation-based perspectives to argue the complex nuances of replication in art museums at present. Overall, a material approach will be used to investigate works that are made from ephemeral or vulnerable materials, works that have to be performed, works that perform a process or behave naturally and works within a replicated exhibition enterprise.³

The subject of replication is complex and problematic not only for artists, art historians, curators and conservators but also in terms of how we even think about the

status of the objects being replicated. Artworks created in the twentieth century often now pose material and ethical questions within institutions if they are to be displayed as intended if at all. Material degradation, again intended or not, site-specific, process, conceptual, performance-based, fragile or destroyed works all demarcate different problem areas within the current discourse surrounding replication. In most cases the act of replication means a replacement, whether it is deemed an adequate replacement or not, for a decayed or absent artwork. Their replication marks a desire to repair literally, to have something in the round, but also poses theoretical questions in that very process. These instances also reflect the different moments, motivations and modes of replication, for example, due to collapse, to exhibition demands, to better understand materials and techniques but also due to an ever more voracious art market. These issues have been addressed in a series of recent symposia including *Inherent Vice: The Replica and its Implications in Modern Sculpture*, held at Tate Modern in October 2007, and *The Object in Transition: A Cross-Disciplinary Conference on the Preservation and Study of Modern and Contemporary Art*, held at the Getty Center in January 2008.⁴ Both were important forums for the current multi-disciplinary debate and, as such, were instrumental in highlighting the proliferation of replicas being made in institutions by artists, assistants, fabricators, conservators and material experts, sanctioned by artists, artists' assistants, artists' estates, museums and dealers, available on the market and displayed in museums, as this research project began.

In 1990 the art historian and curator Susan Hapgood mapped out the specific themes surrounding replication that she felt had emerged since the 1960s.⁵ The title for her text, published in *Art in America*, was 'Remaking Art History' and it is interesting to

note that the 1990s was very much a period for reconsidering artworks made in the 1960s. For Hapgood, remakes were shaping art history and it is worth emphasising her point that theoretical considerations went hand in hand with historical ones when exploring that 1960s moment.⁶ Hapgood noted a shift in the philosophical attitudes surrounding art production, preservation, reproduction and display which, in turn, raised challenging questions regarding an 'authentic' work of art. She referred to refabrication as a 'thorny issue' arguing that replicas being made would have previously been referred to as 'fakes', 'fraudulent' or 'irresponsible conservation policy'.⁷ As she illustrated, artists of this period 'deliberately repudiated the permanence of the art object (and the art museum!)'.⁸ Just before this text was published, the Whitney Museum of American Art put on an exhibition entitled *The New Sculpture 1965-7: Between Geometry and Gesture* which included works from the 1960s by Lynda Benglis, Eva Hesse, Barry Le Va, Bruce Nauman, Alan Saret, Richard Serra, Joel Shapiro, Keith Sonnier, Robert Smithson and Richard Tuttle.⁹ Sculptures and installations were in some instances re-created; the artists either made the works anew or authorised others to do so.¹⁰ For Hapgood, 'Early installations that one sees only in reproductions - disparate junk materials spread across the floor, site-specific installations and art slapped together from ephemeral materials - were suddenly reincarnated'.¹¹ Originally created as temporary installations which were often destroyed, to deny refabrication the artists could have been helping to write themselves out of (art)history.

In 1990 Hapgood believed that the dilemma for art institutions was that they were torn between traditional notions of the art object and the 'mutable products' and 'defiant gestures' of a period of art history when 'site, spontaneity, process and

ephemerality' were becoming the driving forces behind objects being made.¹² Lucy Lippard's notion of the dematerialisation of the art object is key here and is acknowledged as such in Hapgood's text. Lippard argued for a progressive de-emphasis of the material aspects of art, such as uniqueness or permanence, and an increasing interest in the conceptual aspects of art-making.¹³ Lippard cites instances from 1966 - 1972, a similar timeframe for this thesis. However, the approach here will not be 'dematerialised' and the thesis will take issue with its broader understanding to think through how material processes can be reconfigured now: in short what material considerations have become. It will be seen that the material becomes ever more present or pertinent when a replica or reconstruction is made or exhibited today. Degraded, lost or fragile materials can lead to new materials. It is the material, the physical and tangible thingness, as well as the theoretical concept that are at stake and remain the crux of every decision surrounding whether to replicate or not. The thesis will concentrate on the artists who were working with processes and physical forces that effect sculptural form, site-specificity and the use of malleable and ephemeral materials in the 1960s.

Examples such as Hapgood's text and recent symposia in major museums reflect the shift of concerns regarding replication, not least in response to the amount of replicas being accessioned into museum collections, being made by museums or being duplicated for exhibition purposes and exhibited as the original works. 'A Statement on Standards for Sculptural Reproduction and Preventive Measures to Combat Unethical Casting in Bronze' approved by the College Art Association Board of Directors, 27 April, 1974 pre-empted that the 'dubious practices' of unethical reproductions would get worse and Hapgood has recently acknowledged that the

subject of replication must be even more ‘prevalent’ today.¹⁴ Things are moving on legally too, reflected by the fact that copyright laws have changed and, as of 1 June 2014, museums can create preservation copies without obtaining specific permission from copyright holders. In the past, directive came from the legal guidelines of the Copyright, Designs and Patents Act of 1988. In the United Kingdom, copyright expired after a period of seventy years from the end of the calendar year in which the artist died so decisions about twentieth-century art were often based solely on the artist’s own wishes or that of his or her estate. Time has also meant that, in some cases, dramatic degradation has occurred and not to do anything would be to lose a work. The impetus to make decisions rather than to just wait for consensus is apparent. These shifts, then, have provided a platform for this thesis to reconsider the changing perspectives of the replica and the act of replication within the last fifty years. But the case studies selected will go further to gain a deeper understanding of the problems that can arise, for example, the demands placed on the replica as a material object or a theoretical concept, its purpose and status. A historiography of changing attitudes, a periodisation of replication, concentrating on polemical moments in replication’s twentieth century history, will provide a much-needed historical contextualisation.

Briefly, these seminal moments include Arturo Schwarz creating editions of Marcel Duchamp’s ready-mades; replicas of destroyed Constructivist works, for example Aleksandr Lavrent’ev’s reconstructions of his grandfather’s Alexander Rodchenko’s *Constructions* using different materials and imposing a minimalist aesthetic; Giuseppe Panza di Biumo recreating Minimalist, Post-Minimalist, and Conceptual art works; and Richard Hamilton’s remake of Marcel Duchamp’s *The Large Glass*. The main

surge or proliferation of different types of replicas occurred in the 1960s based on an enthusiasm for the lost works of modernist pioneers. This was at a time when authorship and materiality were being radically reconceived: seriality and performance offered new ways of thinking and invoked a replicative mode within their own logics. Concentrating on artworks created anew in this period, this thesis will attempt to unravel their display histories and afterlives as material objects. The idea of performative remakes as well as the importance yet often subversive nature of materiality for artist, institution and viewer will also be explored. This moment of synchronicity demonstrates the two aspects of the project that will be considered and coincides with the expansion of concepts of replication from actual objects to performances or whole installations. What counts as replication in this approach is conceived of in the most expanded terms, including the development of replicated singular objects to replicated performances or whole installations to bring to bear larger questions.

If the enthusiasm for replication that held sway in the 1960s has meant that replicas have been accessioned and accepted as museum works there are now new anxieties concerning the practice of replication. These anxieties pivoting on the dialectic of ageing and newness are dramatised by the history of twentieth-century replication and Walter Grasskamp even inscribed all those concerned to the ‘Sect of the Scrupulous’.¹⁵ Terms such as ‘anxiety’, ‘catastrophe’, ‘trauma’, ‘horror’, ‘kidnap’, ‘death’ and ‘pathos’ all heighten the collective sense of drama and urgency. Grasskamp contextualised the moment by discussing the current phase of the replica debate in terms of ‘The Rules of the Game’ for conservator, artist and museum to maintain some sort of control of the situation.¹⁶ If replication is an option and the

artist has approved their creation then is this reason enough to have a replica?

Equally, just because a replica *can* be made is it ethically right as a quick fix solution for object and owner? Stephen Bann's idea of a forced choice between the museum of authentic fragments and the museum of perfect simulacra is an interesting one.¹⁷ But are authentic or perfect objects desirable or even possible? To attempt to answer this question, the changing attitudes towards replication will be traced and unravelled throughout the thesis.

The kind of contemporary art that has become common, even ubiquitous, exhibited in institutions worldwide today has weakened the conceptual and professional resistance to replication even if there are underlying concerns regarding the ethics of doing so.¹⁸ If the transparency of bad replicas or replicas that use different materials to the original are deemed less deceptive than a good replica, what claims can, and should, be made for the replicated object? Replication in relation to conservation professionalism and practice, as well as the increased concerns of professionals in art of this period, also needs to be considered, especially as conservation treatments have traditionally been associated with preserving and restoring an original object or material.¹⁹ If the replica can become a temporary and provisional solution for vulnerable works, conservators creating or overseeing the creation of new works goes against traditional conservation principles as they are preserving the intangible as well as the tangible, that is the concept as much as the material.²⁰ But as Derek Pullen, former Head of Sculpture Conservation at Tate, has recently acknowledged, replicas are now a key strategy for preserving the most vulnerable works of art in museums.²¹ So then the ethical issues, 'the shark-infested waters of replication', the murky areas within a hidden history of replication, such as replicas presented as *the* original work,

will be addressed.²² The counter logic of the simultaneous duplicate and surrogate, the disputed original object and the museum context where works are displayed, will be the main concerns driving the thesis as a whole.

Sculpture has an inherent reproducibility through its own historical technical processes including casts and editions: it is after all, in many ways, reproducible. Famously beginning her analysis with a discussion of reproduction in the work of Auguste Rodin, the myth surrounding originality was explored by Rosalind Krauss in a now seminal text. But in this thesis it will become clear that as well as 'original' the term 'replica' is also just as problematic and challenging - even more than Krauss acknowledged.²³ Artist re-interpretation, artist replica, copy, duplicate, facsimile, fake, proto-replica, pedagogical tool, reassembled work, reconstruction, re-fabrication, remake, re-performance, reproduction, substitute, surrogate and artist remake all demarcate the act of returning to the creation of an artwork, a repeated gesture.²⁴ And more recently Martha Buskirk, Amelia Jones and Caroline A. Jones have looked at the terms readymade, reconstitute, reconstruct, re-create, re-enact, refinish, relic, remake, rephotograph and represent acknowledging the need for the 'flexible and loaded prefix'.²⁵ The numerous terms reflect a reluctance to use the term replica. But why?

The origins for the English use of the word replica, as distinct from reconstruction, have been entwined with linguistic, legal and historical terms. Replicate derives from *replicare*, the Latin to fold back, to reflect on and to reply. From 1824 a replica was defined as a 'copy, duplicate, or reproduction of a work of art; *esp.* a copy made by the original artist'.²⁶ The term became linked to a copy, a reproduction or facsimile by

someone other than the original artist, the artist's hand having transferred to someone else and 'something rather more like derogatory imitation'.²⁷ The negative associations of replica: fake, forgery, counterfeit and copy have remained and the reluctance to use or clarify the term adequately in museums today has clearly led to an abundance of further terms: renewal, remake, mock-up and proto-replica, for example, which seem to sit better within institutional discourse.²⁸ The case studies selected will attempt to clarify the confusion and demonstrate how museums have come to define and deal with the objects being replicated or entering their collections as replicas. According to Matthew Gale, the 'contradictory desires for authenticity and reproducibility, for a real experience in a world of continuing multiplication' remains the crux of the current problem.²⁹ New objects mark the flux or slippage of material, historical narrative and status of *the* artwork. They establish the 'replica' as material or concept, acknowledged or dated, temporary or perpetual, a work which is remade each time it is displayed, parts that are replicated, performative remakes including re-enactments or re-performances as well as do-it-yourself works that have been revisited, posthumous casts, replacements in a different material, replicas made for pedagogical purposes and exhibition copies.

However the ethical problems of replication go beyond language and terminology. The chapters that follow will show that artists, as well as institutions, can also make decisions regarding replication that are questionable and perhaps not in the best interest of the work. The remake is necessarily a re-interpretation of the original work, an artist's re-interpretation can be that much more loaded for artist and work. Intent can shift, improvements can be made or significance retrospectively assigned. Robert Morris' *Untitled* (mirror cubes) of 1965, for example, demonstrates complexities

within the parameter of an authenticated replica. Morris first made the work for his exhibition at the Green Gallery, New York, in February 1965. He subsequently destroyed the piece because the boxes were made of Perspex and the mirroring would not adhere correctly to this support. Morris noted in 1974 that already three versions of the work existed. A smaller version of the same work in Tate's collection is dated 1965/76. According to the most complete Tate Gallery Catalogue of 1981, this version is possibly the sixth version of *Untitled*.³⁰ It was first fabricated in London in 1971 for Morris' exhibition at the Tate Gallery and was then remade in 1976, with his permission, in more permanent materials [Figure 1].³¹ When Hapgood asked Morris about the original in 1990 he replied, 'There was no original, but the market changes all that. Somebody buys something and it becomes the original'.³² In 2008 Morris agreed to a replica being made for *Beyond Measure: Conversations Across Art and Science*, a display at Kettle's Yard, Cambridge, with slightly different dimensions to Tate's version [Figure 2].³³ As the cubes differed in size, the work was not labelled or listed as a replica, rather an exhibition copy, and was destroyed after the exhibition as per the artist's instruction [Figure 3].³⁴ This case therefore demonstrates that authenticated replicas can be numerous, made in different materials and to different specifications and perhaps not replacing *an* original.

This thesis aims to concentrate on the recent discourse surrounding replication and extract current concerns and problems through the examination of specific and focused case studies. The contextual framework and overriding structure of this project has come out of the case studies drawn from Tate in the context of a series of other examples. The part played by the current proliferation of replicas, whilst important, is not the focus of the dissertation. It is the responsibility of major

museums to create rules and guidelines and, therefore, the thesis looks at museums as cultural institutions and polemical ideas rather than conclusions in relation to replication. As such, museums and their interesting and relevant material will also be considered case studies: subjects to be scrutinised. Part of an ever-expanding archive of replicas being made, Tate, the Solomon R. Guggenheim Museum and the Moderna Museet amongst others will be explored in the broader landscape of replication. Rich in comparative material the thesis will necessarily have critical distance from the institutions where works are remade or exhibited as replicas to consider the possibilities and solutions that the replica presents today as well as the ethics behind the gesture of replication itself. Degraded superseded material relics and the duplicity of works when exhibition copies or numerous editions of the 'same' work exist will be explored. The status of relegated and replicated works will be an area of consideration and concerns surrounding replication (repetition) but also destruction (absence) will be investigated for it is very rare that either an original or a replica is destroyed.³⁵

In the first chapter Richard Hamilton's reconstruction of Marcel Duchamp's *Large Glass* will be used as a way of introducing the 1960s as a moment of prolific replication in the history of twentieth-century art and replicated art. This case will be deployed to better define the terms replica and reconstruction by providing a narrative account of a single work. It will be seen that this work is just as much about Hamilton - who would himself be given a major retrospective at the Tate Gallery in 1970 - as Duchamp working at the beginning of the twentieth century. Without doubt, the crisis of authorship, the 'death of the author', does precipitate problems in relationship to replication and vice versa, not one as the cause of the other. This case is important to

the whole thesis, not so much regarding Duchamp's legacy which is widely found elsewhere and not my main concern here, but to demonstrate the problem of authorship in relation to Duchamp as well as the impact of authorship in the making of replicas. This is perhaps a unique case as Hamilton is a named artist - rather than an unnamed conservator - and therefore does not reflect the typical ethical decisions usually required. In some ways then this work is an exception, however, it will be seen that the implications are still felt. The piece opens up to the larger problems inherent to replication and its wider repercussions. The history of this *Large Glass* and the relationship of Hamilton to Duchamp will be explored in order to provide a basis for understanding 1965-66 as a seminal moment for *the* replica. The untold story of the dramatic incidents in the work's life will also provide a platform for thinking about machine aesthetics and organic materials, culture and nature. This juxtaposition is intended to shed light on the multi-faceted history of a single replicated and reconstructed work within the context of the history of twentieth-century art whilst also providing a new way of looking at *the* piece.

In chapter two the thesis will then focus on Richard Serra's *Shovel Plate Prop* 1969, Gilberto Zorio's *Piombi, (Leads)* 1968 and Barry Flanagan's *4 casb 2'67, ringl 1'67* and *rope (gr 2sp 60) 6'67* 1967 to introduce the themes of ephemerality and process. This case study will investigate the varied reasons for replication when works have a performative of ephe-material aspect to them. Ephe-materiality, a term employed here, will be used as a way of thinking about how works age and the implications of degradation over time in the context of replication. It will look at the process or processes performed on a material and question what is at stake when these need to remain in place when a work is exhibited. Ephe-materiality will be discussed as a

condition prevalent in works made in America, Britain and Italy in the 1960s, linked to the precariousness of the object and problems of materiality and finish.

Chapter three will take as its starting point the relationship of performance to documentation. The idea of a repeated action, a re-enactment, will be addressed by looking at works by Michelangelo Pistoletto and Robert Morris that were made, exhibited, performed and experienced over forty-five years ago and repeated more recently. It will further explore the idea of performativity (as established in the preceding chapter) in order to consider the more performative aspect of replicas and reconstructions (re-performances). Attending to the particular problems of material behaviour and documentation of active materials and works as part of the 1960s moment, performance here will be seen as a different logic to that set out by Amelia Jones and others who contributed to ideas of the performative in the 1990s.³⁶

Although the performative by its very nature would seem to be exempt from problems outlined here, the thesis will propose that issues of replication and documentation are just as problematic. The role of the institution, the artist, the original object and action as well as existing forms of documentation will be reconsidered.

Replication, normally related to mass or industrial production, will be seen to be just as relevant an issue in relation to nature and natural materials. In chapter four then the idea of replication as second nature, habituation and repetition, will be introduced.

The culture versus nature paradigm will also be set up by exploring two artists that have never been looked at together; the British artist Barry Flanagan and the Puerto Rican artist Rafael Ferrer. Notions of nature and the natural as well as materials behaving 'naturally', the process and life of a work, will be scrutinised in some detail.

Replication as a problem *in* or *of* nature will be explored to question the conventional opposition of nature and industry. The chapter will argue for the ‘natural’ and ‘mechanical’ as two different logics within repetition which need to be thought of in combination or in some relation to one another. It will test the idea of an authentic artwork as well as ‘nature’ itself by considering different manifestations of nature or natural processes.

The thesis will end with a chapter that positions Keith Sonnier and Eva Hesse together to explore their use of latex in various pieces from the 1960s. Paying particular attention to latex as active agent, the agency of the material itself will be emphasised. The idea of an agent driving change and causing materials to behave differently is a core theme throughout the thesis and will be explored here in relation to the work of these two artists. It will consider how the material has aged and how the works are presented today. The chapter will come back to the idea of process and performance, decay and rejuvenation. Sonnier and Hesse’s works were recently exhibited at *When Attitudes Become Form Bern 1969/Venice 2013* and this reiteration of a whole exhibition from the 1960s will reflect upon a more recent development of replicating entire exhibitions. This revisited exhibition brings together several of the case studies discussed in the thesis so will provide a relevant contextualisation with which to finish.

Replicas and reconstructions involve, but are not reducible to, repetition, the *re-*, which implies something that is emphatically repeated, something that can be made to happen again and again. This thesis will look at the what, the why and the how of reiterations made. It will tease out the nuances, differences and controversies. What

does it mean to replicate today? What has it meant for a work to be replicated in the past? What are the possibilities for the future? These questions will be asked in relation to the original material object, the artist's concept, the museum, the audience and the art historical narrative. It will also ask how can, and should, a replica be understood. If, as the art-historian and curator Yve-Alain Bois argues, the replica is a document in time it is interesting that Maria Gough believes each age makes its own replicas.³⁷ And, in the 1980s and early 1990s, a more liberal attitude prevailed which, as will be seen, is now in question.³⁸ Alex Potts has also recently asserted that replicas should be provisional objects and serve their purpose at particular points in time. For him their status should be left open for a re-evaluation at any point in the future.³⁹ Temporary surrogates? Duplicates? As noted at the beginning of this introduction, in 2007 Yve-Alain Bois believed the replica should be documentation positively stated. Simultaneously, the conservator Pip Laurenson felt, 'When the historical becomes optional, then replication becomes a possible solution'.⁴⁰ But is it enough for a replica to be a document? And surely documentation, especially in relation to Conceptualism, is just as fraught a term as replication? Can and should the historical become optional? In order to consider these two points of view, this thesis will look at how replicas have been presented since the 1960s. It will attempt to determine their status in museums and their possibilities in the future.

The landscape of replication in general is one of much trepidation. The much-vaunted cult of originality may not be the key issue here but it would be wrong to underestimate the power of the claim. The introduction of a replica poses dilemmas for artists, art historians and museum curators and conservators. As noted, there are anxieties for all parties involved. And, just because replicas are a possible strategy, it

does not necessarily mean they are always a viable option. This thesis will look at the 1960s and certain works that were exhibited in seminal exhibitions including: *Live in Your Head: When Attitudes Become Form, 9 at Leo Castelli* and *Anti-Illusion: Procedures/Materials*. In his review of *9 at Leo Castelli* Max Kozloff used the terms ‘volatility’, ‘liquidity’, ‘malleability’ and ‘softness’, three of which form the title of this thesis.⁴¹ These will be deployed throughout the thesis to develop a full understanding of the physical and conceptual implications of materials that change, decay, act out or are performed.

Robert Fiore’s images for the catalogue of *Anti-Illusion: Procedures/Materials* held at the Whitney Museum of American Art in New York in 1969 documented the artistic processes involved in making the works for the show.⁴² They include some of the artists and works that are discussed in this thesis so it is interesting that his photographic stills are also presented in a process-led way, that is sequentially, a cinematic or filmic effect, whereby the final work is created by the artist *and* Fiore’s images. However this thesis will pull apart this idea of process, dissect what processes are at play in a work when made, when exhibited, when degraded, when lost, when remade. If Fiore’s images are themselves representations of ‘process art’ this project will discover the possible processes acting on a material work as well as the processes available for works to remain exhibitable and seen or experienced in the round.

The methodology for the thesis will be both art historical and conservation based. Given the complex set of problems faced by art historians, curators and conservators, a bridging of art history and conservation approaches is now urgently needed. A comprehensive understanding of conservation literature will mean that it can be

translated and incorporated into an art-historical discourse and the language of technical art history will be deployed where necessary. This methodology complements other approaches including the socio-historical but, as a material history, a history of techniques, is distinct from a purely formalist approach. Although there have been studies of individual cases, this thesis attempts a more detailed and broader synthesis of a number of case studies drawn from major museum collections at this pivotal 1960s moment.

Jill Sterrett, Director of Collections and Conservation at the San Francisco Museum of Modern Art, has recently emphasised, ‘Traditionally thought of as a solitary pursuit in backrooms of museums, art conservation is rapidly emerging as a collaborative and relationship-based practice in the museum of the 21st century’.⁴³ And, similarly, technical art historian and conservator Carol Mancusi-Ungaro, Founding Director of the Center for the Technical Study of Modern Art, Harvard Art Museums and Associate Director for Conservation and Research, Whitney Museum of American Art, believes conservation and curatorial processes are very much linked in museums collecting modern art today.⁴⁴ The dialogue between conservator, curator, artist and art historian brings science and art history together and has become very much part of the mechanism within institutions wanting to exhibit works that are made from materials that were never meant to last. International initiatives, conferences and roundtable discussions are now organised to highlight concerns, tackle issues and agree on ways forward for the preservation of modern and contemporary art for future generations.

The 1990s marked a turning point for this tendency with various institutions worldwide organising experts in their field to come together to discuss and publish their thoughts on the preservation of twentieth-century art. *From Marble to Chocolate* organised by the Tate Gallery in London in 1995; *Modern Art Who Cares?* organised by the Foundation for the Conservation of Modern Art and the Netherlands Institute for Cultural Heritage and held in Amsterdam in 1997; and *Mortality Immortality? The Legacy of 20th-Century Art* organised by the Getty Conservation Institute and held at the Getty Center in Los Angeles in 1998 are three such examples.⁴⁵ Speakers for the latter two included artists, conservators, curators, art historians, philosophers, collectors, dealers, scientists and lawyers and the approaches were therefore ethical, philosophical, technical and art-historical. The demand for a diversity of disciplines was all too clear. This trend has since continued demonstrated by *The Object in Transition: A Cross-Disciplinary Conference on the Preservation and Study of Modern and Contemporary* in 2008; *Contemporary Art Who Cares?* organised by the Netherlands Institute for Cultural Heritage, the Foundation for the Conservation of Contemporary Art in the Netherlands and the University of Amsterdam, in 2010; *Authenticity and Replication: The 'Real Thing' in Art and Conservation* an International Conference held at the University of Glasgow, in 2012; *FAIL BETTER*, a VDR-Symposium about conservation practice and decision making in modern and contemporary art, organised by the Hamburger Kunsthalle, in 2013; and *Authenticity in Transition: Changing Practices in Contemporary Art Making and Conservation* held in Glasgow, in 2014.⁴⁶

The Eva Hesse retrospective in 2002 held at the San Francisco Museum of Modern Art also marked a significant moment in this field.⁴⁷ A roundtable discussion,

moderated by Ann Temkin, The Muriel and Philip Berman Curator of Modern and Contemporary Art, Philadelphia Museum of Art, was held in New York where curators, conservators, people who had known Hesse, and people who were writing about Hesse, all looked at her late deteriorated work in its crates and then discussed the different possibilities for the material objects.⁴⁸ The discussions raised important questions and highlighted different views and were later published as part of the exhibition catalogue. As such, it is now commonplace to find a technical or conservation thread in exhibitions and their respective catalogues, demonstrated quite openly with the Mark Rothko exhibition held at Tate Modern in 2008.⁴⁹ Included in the exhibition was a materials and techniques display and the catalogue also contained a chapter entitled ‘The Substance of Things’ by conservators Leslie Carlyle, Jaap Boon, Mary Bustin and Patricia Smithen.⁵⁰

The Mellon Foundation supports such research and collaboration and has been instrumental in funding more recent projects including The Artists Documentation Program (ADP), the Panza Collection Initiative (PCI) as well as The Artist Initiative. There is also the International Network for the Conservation of Contemporary Art (INCCA) which is a network of professionals connected to the conservation of contemporary art. Its members include conservators, curators, scientists, registrars, archivists, art historians and researchers. Through the INCCA Database, members allow each other access to unpublished information including artist interviews, condition reports, installation instructions. Since 1999, the network has grown from 23 to over 1200 members reflecting the need for such collaboration.⁵¹ The ADP headed by Carol Mancusi-Ungaro was set up in order to gain a better understanding of artists’ materials, working techniques and intent for assisting in the conservation of

their works with interviews conducted by conservators in a museum or studio setting.⁵² Between 1990 and 1992, the Solomon R. Guggenheim Museum acquired over 350 works from the collection of Giuseppe Panza and in 2010 the museum launched an initiative to address the long-term preservation and future exhibition of artworks of the 1960s and 1970s. Led by curator and scholar Jeffrey Weiss and conservator Francesca Esmay, the PCI's main focus is to ensure that these works are 'researched, preserved, and presented to the public with proper consideration for historical context, material integrity, and artistic intention'.⁵³ During its first three-year phase (2010-13), the initiative looked at the work of Dan Flavin, Bruce Nauman, Robert Morris, Donald Judd and Lawrence Weiner with thorough archival research; interviews with the artists, artists' estates, fabricators, former assistants, and other relevant experts; and the installation and physical examination of selected works. The PCI was initially conceived by Carol Stringari, Deputy Director and Chief Conservator, Solomon R. Guggenheim Foundation, and Nancy Spector, Deputy Director and Chief Curator, Solomon R. Guggenheim Foundation.⁵⁴ Finally The Artist Initiative, led by Jill Sterrett, has recently been launched at the San Francisco Museum of Modern Art. This long-term project will involve collaborations with living artists to allow their opinions to become the core of a more integrated approach to conservation and collections research.

While museums have shifted their way of thinking, so too recent publications have prompted such reconsiderations or replication in relation to sculpture, building on Krauss' seminal discussion. Martha Buskirk's *The Contingent Object of Contemporary Art* of 2003 and Helen Molesworth's *Part Object Part Sculpture* of 2005 are two such examples.⁵⁵ In terms of replicas and the museum, as mentioned,

Hapgood's 'Remaking Art History' text was important in marking changing attitudes in 1990.⁵⁶ Hillel Schwartz's *The Culture of the Copy: Striking likenesses, unreasonable facsimiles* in 1996 presents a more anthropological approach to replication.⁵⁷ And, Robert Dean's recent paper on Ed Ruscha used the term inherent vice to unpack the artist's work.⁵⁸

In her text for *Mortality Immortality? The Legacy of 20th-Century Art* Ann Temkin accepted somewhat wistfully, 'it often seems, we are dedicated to preserving something larger than individual works of art; we are dedicated to preserving the fiction that works of art are fixed and immortal'.⁵⁹ Rather than attempting to find some material truth, the idea of fiction, fictions or layered fictions will be a central strand in this thesis and it will be seen that fiction is not quite the strict opposite of 'materiality' as it would first appear. The metaphorical will be seen as a crucial and unavoidable aspect of material objects, and the importance of the metaphors of materials emphasised. The unfixedness that Temkin refers to remains pertinent today and will open up a discussion surrounding the precarious and performative nature of objects that are part of the very fabric of the 1960s moment. The idea of perpetual or immortal works will also be explored.

It is hard to imagine a situation where the historical is merely optional. But nonetheless the decisions to be made are always complex and fraught. It is with this in mind that this thesis will think through the possibilities and problems of the repeated art object as well as the realities of the replica for all involved. Hapgood noted, 'When artists and institutions approve the remaking of works that distort the primary intentions, however, refabrication merely reflects a nostalgic attempt to resurrect

something that should only exist in the form of documentation'.⁶⁰ But who and how can we decide if the original intentions have been distorted? Documentation can also distort so there are problems here too, as noted, even if in relation to possibilities. What does it mean to replicate? To reconstruct? Does it always mean a possibility becomes a reality? What does it mean for the dematerialised object? The process-led work? The anti-form? Can we talk of a permanent ephemeral work? By using a materials-based methodology and wide-ranging critical perspectives, this thesis will explore the current main issues. It will unpick and unravel the layers of art historical context and conservation documentation and treatments in relation to replication and in so doing will present a new and much needed methodology to tackle the topic. Art historical and conservation perspectives then will be brought together to present not just a history of changing practices but changing attitudes. These attitudes will reflect possibilities for the future, as it will become evident that both the ethics involved and the solutions suggested are neither straightforward nor standardised. The thesis aims to document a historiography of changing attitudes, in order to provide a periodisation of replication itself.

Framing Marcel Duchamp: The Case of Richard Hamilton's *Large Glass*

'Duchamp has buried himself for many years in the propagation of his achievements through the media of printed reproductions and certified copies, so that now we begin to accept the substitute as the work.'
Richard Hamilton, 1964.⁶¹

'Our Tate *Large Glass* is very different from the Philadelphia Glass, increasingly so ... It was made in the 1960s and is Richard Hamilton's view of the *Large Glass*.'
Christopher Holden, 2003.⁶²

It is September 1961 and Richard Hamilton is conducting an interview with Marcel Duchamp which is later broadcast as part of the BBC *Monitor* series.⁶³ The backdrop is a full-size photographic transparency of Duchamp's *La Mariée mise à Nu par ses Célibataires, même* (The Bride Stripped Bare by her Bachelors, Even) or the *Large Glass* which provides a frame of reference for the discussion. Its presence marks an historical moment in the life of the original work by Duchamp as well as for the two men; the *Large Glass* frames interviewer and interviewee yet simultaneously the two protagonists frame the work. After the interview was televised, the BBC gave the transparency to Hamilton. This may seem incidental except that the story of the *Large Glass* has also framed each artist and their artistic legacies, and our understanding of *the work* in Britain is now as much about Hamilton in the 1960s as it is Duchamp at the beginning of the twentieth century. This moment in the 1960s will be seen to be pivotal as well as exemplary of specific problems in the more recent history of replication. The chapter will locate Hamilton in relation to Duchamp and the *Large Glass* to demonstrate changing attitudes towards replication. It will do so by foregrounding the material and conceptual reciprocity of Hamilton and Duchamp as indicative of the major shifts in thinking about the status of the artwork in the 1960s, rather than simply a footnote to Duchamp's legacy from the early twentieth century.

From the very outset, Duchamp's *Large Glass* has a long history of vicissitudes in its physical state. The work, a complex and ironic representation of human lovemaking as a mechanistic and endlessly frustrating process, was made using oil, lead wire, lead foil, dust and varnish on two large panels of glass, which together make the piece nearly three metres high and two metres wide. The lower glass, slightly larger than the upper, contains the *Bachelor Apparatus: Chocolate Grinder, Glider, Malic Moulds, Sieves and Oculist Witnesses*. The *Bride Machine* above consists of three main parts: *Bride, Blossoming* and *Shots*. It is well documented that Duchamp pronounced the *Large Glass* incomplete or definitively unfinished in 1923. He had begun making the piece in New York in September 1915 and Walter C. Arensberg bought it in 1918. When Arensberg moved to Los Angeles in 1921 he sold it to Katherine S. Dreier so that it could remain in New York and Duchamp could continue to work on it. The *Large Glass* was also considered too fragile to travel, a concern well founded as the work shattered whilst returning from its first public appearance at the International Exhibition of Modern Art at the Brooklyn Museum in 1927. The exhibition had been organised by Dreier who, at the time, still owned the work. The damage was only discovered in 1931 when the case was opened and Dreier informed Duchamp in 1933.⁶⁴

In fact the whole glass had splintered, the lines propagating from the upper right part which included the end of the top inscription and the region of the *Nine Shots*, probably due to the nine holes which had weakened its structure. The work was repaired in 1936 by Duchamp himself using the lead wire and varnish that had helped to hold the pieces together, which he then secured between two sheets of heavier plate glass clamped together by a new steel frame. The 'marmalade' effect that the damage

had caused was improved upon but cracks were still visible, to Duchamp an acceptable addition, to Hamilton an ‘accidental finality’.⁶⁵ The *Large Glass* was exhibited once more at the Museum of Modern Art from 1943 to 1946; Duchamp accompanying the work and repairing it at the museum after some of the glass pieces had slipped out of place during transportation. At Dreier’s bequest, it then joined the Arensberg Collection of Duchamp’s works in the Philadelphia Museum of Art in 1953. By this time then the *Large Glass* had been declared unfinished, bought, sold, exhibited, broken, repaired and exhibited once more before entering a permanent collection of art where it remains today, cemented into the floor [Figure 4].

You could not mistake, therefore, the *Large Glass* in Tate’s collection as the *Large Glass* that can be seen in Philadelphia. Tate’s *Large Glass* was accessioned as a work by Marcel Duchamp, presented by William N. Copley through the American Federation of Arts in 1975 [Figure 5]. Its label refers to the work’s dates as 1915-23 with a reconstruction by Richard Hamilton in 1965-6 and a lower panel remake in 1985. If **the** *Large Glass* has been discussed extensively in terms of its iconography and chance methods, the impact of Hamilton’s reconstruction and Tate’s remake to which the label refers have seldom even been acknowledged and relatively little has been written about the complete life story of the work and the questions it raises.⁶⁶ And, if the artist himself was unable to definitively finish the *Large Glass*, does this precarity complicate our understanding of the work and its possibilities for the future? Does a state of incompleteness give institutions and/or artists the license to replicate, to attempt to freshen up, fix or finish? How does an ‘accidental finality’ impact our understanding of *the* work? Here, the implications for the status of the *Large Glass* by the introduction of Hamilton’s 1965-6 reconstruction and the 1985

Tate remake as well as the future of the *Large Glass(es)* will be considered. This will be done by looking at the precariousness of materials and meanings, the slippages that occur when replicas become part of the story of a work, artist and institution, the protagonists that frame understandings as well as materials.

This chapter then will concentrate on the Duchamp - Hamilton trajectory, combining art historical and conservation perspectives, telling the story of the *Large Glass* as a way of unravelling the precarity of the work both materially and theoretically. The story is worth telling in detail because it demonstrates how notions of authorship and replication have been closely entwined, as well as transformed, by the case of Duchamp. The process of revisiting this iconic work was documented by Hamilton himself in *The Bride Stripped Bare by Her Bachelors Even Again*, 'Son of the Bride Stripped Bare' and 'In Duchamp's Footsteps' all of 1966 as well as in 'The reconstruction of Duchamp's Large Glass: Richard Hamilton in conversation with Jonathan Watkins' in 1990.⁶⁷ Similarly, the Tate Gallery conservators who worked on the lower panel remake also published a text documenting their project in *The Conservator* in 1987.⁶⁸ Though these publications are informative, with critical distance, it is now possible to consider Hamilton's involvement and the impact of the conservation reconstruction. The agreed strategy between artist (Hamilton) and museum shaped the history of the works, which is to say, that the lines have blurred between the Duchamp original, the Hamilton replica, and indeed, for the physical object held in an institution today. I want to question how its various reconstructions have been written into the work's life and whether the reoccurring presence of the *Large Glass* unsettles our understanding of *the* work. Is the *Large Glass* we see today a Duchamp? A Hamilton? A Tate? Concentrating on how meanings have changed,

transformed and even broken, much like the materials employed in the *Large Glass*, the case will be seen as a turning point for how we understand Duchamp. But, it will also open up to the larger problems of replication discussed throughout the thesis; the implications for originality, authorship, conservation and art history that are still felt today. In some ways the case of the *Large Glass* is a one-off but also symptomatic of a larger set of problems of replication. The aim of this chapter is to set the scene for the subsequent discussion.

The *Large Glass* as Replica: The ‘original replica’

The history of replicating the *Large Glass* starts with Ulf Linde’s version for the exhibition *Rörelse i Konsten* (Art in Motion) of 1961 at the Moderna Museet in Stockholm. There is then Hamilton’s reconstruction for the Duchamp retrospective, *The Almost Complete Work of Marcel Duchamp*, which the British artist curated at the Tate Gallery in London in 1966 [Figure 6].⁶⁹ Both these *Large Glasses* were approved and authenticated by Duchamp who added the phrase ‘*Pour copie conforme* (Certified copy)’ to each. Hamilton even noted in 1990 that whilst working on the *Large Glass* he realised that Duchamp was very interested in the idea of replication revealing that when the older artist came to London to sign the reconstruction, he thought it would be nice to have three *Large Glasses*.⁷⁰ And, since Duchamp’s death in 1968, three more replicas have been made: one by the students of Tadashi Yokoyama and Yoshiaki Tono at the University of Tokyo in Japan; one by the staff and students at the college Louise Michel at Manneville-Sur-Riste (Eure) in France; and another replica was made by Ulf Linde with Henrik Samuelsson and John Stenborg in Sweden in 1991-2 in an attempt to improve on his first version.⁷¹ The

original Swedish replica was deemed too vulnerable to travel because in 1977, after years of appearing in Duchamp retrospectives, shortly before the major Duchamp retrospective at the Pompidou Centre in Paris of that same year, a break in a lower corner formed whilst the work was in transit.⁷² By the 1990s, then, five replicas existed and, as Duchamp expert Michael Taylor acknowledged, ‘there is nothing to suggest that this figure will not increase in the future’.⁷³

Technically, any object made with the intention of physically re-creating the appearance of an original work of art is a copy and it is worth noting that Duchamp himself authorised the first Linde and Hamilton replicas as certified copies. In the literature on Duchamp the terms ‘replica’, ‘reconstruction’, ‘copy’ and ‘edition’ are used interchangeably to refer to the replication of many of his works including the readymades. Unlike the *Large Glass*, these works were manufactured objects selected by the artist and given a title. With the introduction of the readymade, Duchamp highlighted that it was the artist that defined art. And the replica? Reconstruction? Copy? Edition? Duchamp himself was generally positive about later versions of the *Large Glass* but he did note in 1967 that copies were not meant to replace originals, ‘a copy remains a copy’.⁷⁴ More recently, Hamilton acknowledged that he himself preferred the term reconstruction as opposed to copy.⁷⁵ In 1993 Francis Naumann attempted to distinguish replica, reconstruction and copy in relation to Duchamp’s works.⁷⁶ For him, the term ‘replica’ should be used for an object made with the intention of re-creating a single example of a given work; the object should have been selected or physically constructed by Duchamp himself with the intention of emulating the appearance of the original.⁷⁷ The very nature of the readymade meant that a replica was not necessarily an accurate facsimile of the original. He continued

by claiming that the term ‘reconstruction’ suggests a precise and accurate facsimile of an original: ‘it refers to the involved process of creating a second example of a given painting, sculpture or a work on glass, in which the size and appearance of the original work of art are replicated and the object is faithfully reconstructed in a way that repeats the process and techniques used by the artist himself in creating the original’.⁷⁸ More recently Martha Buskirk, Amelia Jones and Caroline A Jones have also attempted to clarify similar terms and they acknowledge that the verb to reconstruct usually implies consultation of original plans, scripts, photographs, or surviving fragments.⁷⁹ Accordingly, Hamilton’s version of the *Large Glass* is a replica and, as a subcategory of that term, it is also a reconstruction. Whilst broadly accepting this usage, the key question addressed here is how Hamilton went about reconstructing the work and whether this act of recreation is evident in the material work and its documented history.

In May 1966, nearly five years after the BBC interview, the *Large Glass* reconstructed by Hamilton was exhibited as *The Bride Stripped Bare by Her Bachelors Even Again* at the Hatton Gallery in Newcastle before travelling down for the Tate Gallery’s Duchamp exhibition [Figure 7]. But why was it necessary to remake a work that already existed in two forms, one in Philadelphia and one in Stockholm? Obviously, it was impossible to borrow Duchamp’s original because of its fragile state and permanent fixture but Hamilton could have used the recent Swedish replica. Duchamp himself was satisfied with Linde’s full-size replica which was exhibited for the first Duchamp retrospective, *by or of Marcel Duchamp or Rrose Selavy*, held at the Pasadena Art Museum in 1963. After all, Duchamp himself personally helped to install the work and its place in the history of the *Large Glass*

was firmly secured by Julian Wasser in his famous photograph of Eve Babitz and Duchamp playing chess at the museum on October 18, 1963, as they are framed by it [Figure 8a].⁸⁰ For curator Walter Hopps, the replica was included as a reference and in the exhibition catalogue he referred to Linde's work as 'The Large Glass / 2nd version (unbroken replica) / c.1961 (Stockholm)'.

Hamilton attended the Pasadena exhibition and gave a lecture on the *Large Glass* whilst there. He had three objections to Linde's *Large Glass*; firstly, Linde had not seen the original; secondly, the replica was made from photographs not the original; and thirdly, the replica was made too quickly. Uncomfortable with using the Swedish replica or photographs of the Duchamp original which he felt were a poor substitution, Hamilton decided to make a full-scale reconstruction. The Tate Gallery Trustees were unable to make payments towards the cost of an artwork which did not yet exist so Hamilton went to New York and contacted William N. Copley who was a friend of Duchamp. Copley agreed to pay a sum to cover the cost of the materials and, at Hamilton's suggestion, to give Duchamp an equal amount as a fee. It was made in the Fine Art Department of the University of Newcastle upon Tyne where Hamilton was teaching at the time. Hamilton's decision to reconstruct the *Large Glass* would ultimately link his history as an artist with Duchamp's legacy. It also gave him the opportunity to further the relationship. It has even been suggested that Hamilton's motives for reconstructing the *Large Glass* may have been rather calculated in that he felt himself to be the rightful son and heir of Duchamp.⁸¹ Younger and older artist, new and original work, a son to father relationship was also highlighted in the titles of publications on Hamilton and the *Large Glass* at the time.⁸² As with the BBC interview, where the *Large Glass* framed both artists, the act of reconstructing this

major work would allow the *Large Glass* to reflect Hamilton with the critical veneer of Duchamp's legacy.

But his motives were also practical as well as conceptual. Hamilton claimed his reconstruction would be a 'recapitulation of intention', an 'echo of a masterpiece'.⁸³ Unlike Linde, who had worked from photographs, Hamilton revisited Duchamp's processes using the detailed documentation in Duchamp's *Green Box* to repeat the various steps the artist had taken to create the original work. The *Green Box* together with the *Large Glass* comprise the entity known as *The Bride Stripped Bare by Her Bachelors, Even* so it made sense that Hamilton worked from it so closely. The first *Green Box* of an intended, signed edition of 300 appeared in 1934 and contained 94 replica documents in random order in a flat case including photographs of the *Large Glass*, a reproduction of the *Large Glass* itself, the plan and elevation for the *Large Glass*, notes and drawings relating to the sections never completed and Man Ray's photograph of dust, *Dust Breeding*. Richard Hamilton had in fact previously collaborated with George Heard Hamilton on a typographic version of the notes from the *Green Box*, which was published in 1960.⁸⁴ For Hamilton the *Green Box* provided the framework for his thinking throughout the reconstruction. Part of an ongoing project, then, it is significant that Hamilton had already reframed Duchamp's initial fragments and was now about to reframe the work itself. In 2002, when asked why he had reconstructed the *Large Glass*, Hamilton responded that the process of working with Duchamp for three years, between 1957 and 1960, had been very important to him, 'I worked on the notes of the *Green Box* as a translator, in a sense'.⁸⁵ Arguably Hamilton revisiting Duchamp's processes to create a reconstruction made him a translator of the *Large Glass* as well; a translator who, in time, I believe would come

to take full ownership of his version of the work.⁸⁶ Ultimately, Hamilton played a crucial role in Duchamp's 'rehabilitation' as translator, decipherer, and decoder.⁸⁷

I now want to look at how he went about retracing Duchamp's footsteps.⁸⁸ For Mary Yule, former Assistant Director of *The Art Fund*, 'Hamilton's was the first authentic reconstruction of the making of Duchamp's Glass' as he replicated Duchamp's methods rather than copying the appearance of the original.⁸⁹ In May 2003 Christopher Holden, then Senior Conservator at Tate Britain, referred to Tate's *Large Glass* as the 'original replica'.⁹⁰ Original and replica, as terms, seem to be at odds with one another and yet the history of the *Large Glass* is filled with recreations, reinterpretations and misconceptions regarding authorship and originality.⁹¹ Indeed, Hamilton's recreation of the *Large Glass* extended over a period of thirteen months, not Duchamp's thirteen years or Linde's three months, returning to Duchamp's original notes in an attempt to 'reconstruct procedures rather than imitate the effects of action'.⁹² Hamilton's *Large Glass* revisited processes rather than imitating the look of the original and for Paul Thirkell, a print expert, it should be considered a 'new prototype' rather than an exact facsimile.⁹³ For Hamilton himself, 'this monstrous construction in glass and wire and foil and paint, turns out to be a series of logical steps in a long process of contact with materials - with media'.⁹⁴ He followed Duchamp's processes using the *Green Box* much like a recipe book, equivalent to Cennino d'Andrea Cennini's *The Craftsman's Handbook "Il Libro dell' Arte"* perhaps, which enabled him to glean information about pigments, working methods, media and themes within the work.

Duchamp had made two studies on glass for parts of the composition, *Glider Containing a Water Mill (in Neighbouring Metals)* and *Nine Malic Moulds*, and gave permission for these studies to be repeated for the reconstruction as a means for Hamilton to gain experience in drawing on glass with lead wire and filling these boundaries with paint.⁹⁵ This layer of paint was then covered with lead foil, pressed down whilst the paint was still wet, in order to isolate the paint from contact with the air at the back and avoid oxidisation. It also prevented a stained glass effect as light could not shine through. In addition, Hamilton made two further studies: a small glass of the *Sieves*, to experiment with a dust breeding process, and another of the *Oculist Witnesses*. Duchamp felt that the two studies were new and, on his suggestion, were published by the Petersburg Press in editions of 50, signed jointly by Hamilton and himself. This gesture illustrates Duchamp's apparent ease with authenticating other artists' editions of his work but also represents another instance of Hamilton being written into the life of the *Large Glass*.

Framing Duchamp

Hamilton was meticulous in his attention to the details of Duchamp's methods and materials but it is also worth considering whether he used his own artistic skill to change anything. Comparing the *Large Glasses* of Duchamp (1915-23), Hamilton (1965-6) and Linde (1991-2), the most obvious difference is that of the frames used to hold the glass panels in place [Figures 9a, 9b and 9c].⁹⁶ Whereas Duchamp's aluminium frame, which he added in 1936, is literally cemented into the gallery floor in Philadelphia, both Hamilton and Linde opted for stand-alone frames. These were meant to facilitate transportation which in itself is significant as it reflects how these

versions had, and have, the potential to travel and be seen by viewers worldwide whilst also marking them as distinct from the Duchamp original. Hamilton recalled in 2005 that he purposefully screwed the extrusions together rather than welding them as a piece so that the frame could be taken apart and put together again and used in different locations.⁹⁷ As such, Hamilton's *Large Glass* crossed the Atlantic for William Rubin's *Dada, Surrealism and their Heritage* exhibition that opened at the Museum of Modern Art in New York in March 1968, which then travelled to the Los Angeles County Museum and the Art Institute of Chicago later that year.⁹⁸ It was exhibited by Rubin as a replica. More recently Hamilton's *Large Glass* was exhibited at Tate Modern in London and MNAC in Barcelona as part of the *Duchamp Man Ray Picabia* show in 2007-2008 and at the Stadtische Galerie im Lenbachhaus in Munich as part of *Marcel Duchamp in München 1912* in 2012.⁹⁹

In 1991-2, Linde constructed a large wooden frame, one designed to resemble the scale and format of that used by Duchamp and displayed at the Société Anonyme International Exhibition of Modern Art at the Brooklyn Museum from November 1926 to January 1927. Remarkably it was this version, not the Hamilton version, that was used for the exhibition *The Bride and the Bachelors: Duchamp with Cage, Cunningham, Rauschenberg and Johns* at the Barbican Centre in London in 2013.¹⁰⁰ Linde's version, belonging to the Moderna Museet in Stockholm where he was former director, has been widely shown in recent years. It was exhibited at Palazzo Grassi in Venice in 1993 and at the Centre Pompidou in 2005 when, in fact, Hamilton went to have a look at his second attempt at replicating the piece.¹⁰¹ More recently it was displayed as part of the permanent collection at the Centre Pompidou from 2014 to

2015. The wooden frame appears solid and sturdy, it defines and holds the material work in place whilst providing a contrast to the transparency of the glass support.

It is Hamilton's choice of frame on which I would now like to focus as it marks an important departure from the original and so of course, also from Linde's. Hamilton found shop-fitting aluminium sections which would have been used mainly for constructing shop windows.¹⁰² Having sourced his frame, Hamilton then had to support it and, instead of using columns that were built into the floor, he chose to add semi-circular feet. In 2005 he revealed, 'I thought since an associated work which is the *Glider (Glider Containing a Water Mill (in Neighbouring Metals) 1913-15* is a semi circle and has hinges which look a little bit like the feet round them. I made these semi-circular pieces that screw onto the sides to support them. It seems to me still to be a successful solution because the times I've seen struts it doesn't work for me' [Figure 10].¹⁰³ Hamilton made an interesting addition to the work using another Duchamp piece as part of the framing device. This is Hamilton interpreting Duchamp, much as he had with the *Green Box*, but also Hamilton adding a new component where he believed it to be appropriate. The significance attributed to the semi-circular shape of the *Glider* is symptomatic of Hamilton's take on Duchamp's *Large Glass*. His aluminium frame is not the same design as the original wooden frame nor the fixed metal frame in Philadelphia and I would argue that Hamilton and Linde both opted to frame *the* work, their Duchamp work, differently, providing a framed material representation of the *Large Glass* literally as well as framing its meaning metaphorically.

Hamilton focused on Duchamp's process and working methods but his techniques and materials did, in some instances, differ slightly. For the *Oculist Witnesses*, for example, the right-hand section of the lower glass had been silvered on the back and a drawing transferred to the silver by Duchamp through a piece of carbon paper. The silvering was then scraped away up to the drawn lines leaving a brilliantly reflective image. With the help of a cartographer from the University of Newcastle upon Tyne Geography Department, this long process was shortened in the reconstruction by means of a silk-screen made from a blocked-in redrawing of the carbon paper. Pigment screened on to the mirror formed a resist which allowed the redundant silver to be etched away. Duchamp appears to have been happy with this modification of technique, authenticating its appearance as well as the process. Another significant difference in Hamilton's reconstruction is the fact that he did not attempt to repeat the cracking of the original glass stating, 'The breaking was an unpredicted calamity which caused, however, little distress in its victim. This new version is made on armour plate glass - a provision likely to preserve the appearance of its model's youth'.¹⁰⁴ Hamilton ends his conversation with Jonathan Watkins published in May 1990, 'it is nice to see the *Glass* as it was when young. I think the reconstruction serves that purpose'.¹⁰⁵ What is interesting here is Hamilton's assertion that he has created a youthful *Large Glass*, that a replica of the unbroken work can be regarded retroactively as part of its pre-history and life-cycle.

Before the break in transit, an image of Duchamp's *Large Glass* on display at the 1926 Société Anonyme exhibition in Brooklyn was published in Amédée Ozenfant's *Foundations of Modern Art* in 1931 [Figure 11].¹⁰⁶ Hamilton owned a copy and had already reproduced this photograph in his version of the *Green Box* in 1960. Hamilton

had reservations about replicating the shattering of the original preferring instead to reproduce the *Large Glass* as it was 'prior to its completion by smashing'.¹⁰⁷ In 1994 Michael Taylor was very critical of Hamilton's decision as he believed chance was not harnessed as a process as it should.¹⁰⁸ But how practical would it have been for Hamilton to attempt to shatter his version? Any and every break would have been different, and not the accidental finality Duchamp accepted in his original version. Today we are acquainted with various versions and reproductions of the *Large Glass* but rarely the Ozenfant image. This is significant in that the *Large Glass* has been understood as a work that is partly shattered and yet the reconstructions that travel and are viewed worldwide today are supported on unbroken sheets of glass.

Hamilton's version of the *Large Glass* remained faithful to most of Duchamp's processes yet he chose a specific moment in the original work's history to reconstruct. His decisions were based on a desire for an authenticity of process, for the piece to stay sound and intact. In a sense, Hamilton was trying to make up for the very factor that prevented him from borrowing the original in the first place, that is, to compensate for its inherent fragility or inherent vice. Hamilton's *Large Glass* was a younger, unbroken version which had the potential to travel and be exhibited worldwide. In reality, the work remained on loan from William N. Copley to the Tate Gallery until it was requested for the exhibition *Dada, Surrealism and their Heritage* in 1968. After travelling to the two other exhibition venues, it returned to Copley's apartment in New York until it was presented to the Tate Gallery by Copley in 1975 as a work of art by Marcel Duchamp. Ronald Alley, Keeper of the Modern Collection at the Tate Gallery, even acknowledged in a letter to Hamilton, dated 27 July 1976, 'I remember seeing the glass in an unfinished state when I went to Newcastle in, I think,

March 1966 ... We are delighted to own it at last after so many vicissitudes'.¹⁰⁹ The piece had arguably returned to its rightful home, now housed and cared for by the Tate Gallery. The authorship and artistic lineage for the *Large Glass*, the vicissitudes of original and reconstruction, had clearly by this time had a complicated history and continue to do so.

The Aftermath

In 1966 Andrew Forge declared, 'Richard Hamilton's replica of Duchamp's *Large Glass* is nearly complete and already it is clear that the upshot of his devoted study will be nothing less than an addition to the Duchamp *oeuvre*'.¹¹⁰ On the other hand, in that same year, on seeing the reconstruction, Hamilton's friend the artist Marcel Broodthaers felt that the Tate Gallery did not fully appreciate the fact that they had an original Hamilton.¹¹¹ In 1981 Ronald Alley catalogued the *Large Glass* as a Marcel Duchamp and Richard Hamilton.¹¹² By 1994 he noted that the *Large Glass* is listed under Marcel Duchamp but is described as by Marcel Duchamp and Richard Hamilton: 'Its primary interest to the Tate was of course that it was an exceptionally accurate reconstruction of one of the key works of 20th century art which would otherwise be impossible to represent in the collection but the fact that it was made by Richard Hamilton and not Mr Smith or Mr Brown was also an important factor and removed any misgivings that the Trustees might otherwise have had. It would probably be true to say that we thought of it as roughly $\frac{3}{4}$ Duchamp and $\frac{1}{4}$ Hamilton (or perhaps $\frac{4}{5}$ Duchamp and $\frac{1}{5}$ Hamilton)'.¹¹³ In 1970 the Tate Gallery had put on a Hamilton retrospective exhibition which is important as it reinforces the idea of the author of the *Large Glass* reconstruction as a named and significant artist. For Taylor

in 1994, 'It is best understood as a reply to the original work, rather than a copy', an addition to Hamilton's oeuvre, rather than Duchamp's.¹¹⁴ He believed that Hamilton's reconstruction should be regarded as 'an original work of art in its own right for, despite having its genesis in the work of another artist, the end product is an artistic creation rather than an ersatz recreation'.¹¹⁵ And, as has been described, Hamilton the artist is not completely concealed in the replica so perhaps the notion of an original Hamilton replica is an appropriate label in this instance.

So how comfortable were artist and institution to acknowledge Hamilton's involvement at the time and in the years that followed? In 1990 Hamilton stated, 'I had the advantage of not having to act creatively. It was simply fulfilling a need of the exhibition'.¹¹⁶ So, arguably, Linde's replica would have served this same purpose. Regarding his own reconstruction, Hamilton was reluctant to have his name as large as Duchamp's on the label, revealing in 1994 that, 'It would be totally absurd to see this as a proper weighting of contribution. The only virtue of the imbalance is that it warns the public'.¹¹⁷ In July 1994 Jennifer Mundy, then Assistant Keeper of the Modern Collection at the Tate Gallery, explained that the replica was swiftly rejected for inclusion in the gallery's Hamilton 1992 exhibition as, 'it was not a work by Hamilton in the same sense as the others'.¹¹⁸ And today? Tate's *Large Glass* is listed as a work by Marcel Duchamp and can only be accessed under his name. However, at the same time, it was included in Hamilton's retrospective exhibition at Tate Modern in 2014, marking a significant shift, as well as drawing attention to its past contradictions, in the museum's interpretation and presentation of the *Large Glass*.¹¹⁹ This shift will inevitably affect our understanding of the piece, the story of the work but also the history of the work in terms of Duchamp and Hamilton. The slippage

from Duchamp to Hamilton may have occurred organically for the museum but it also suggests that a legitimisation of the change which will now have to be written or authenticated into the story of Hamilton's oeuvre. Perhaps we might also note the fact that neither artist is here to dispute the question of authorship having rendered it more open.

It can be seen that replication like Hamilton's has the power to create a break in history or ancestry, materially and conceptually. But that disrupted lineage of the Tate's *Large Glass* is complicated by further twists in the tail. Today, Tate's *Large Glass* is not the complete piece that Duchamp authenticated and legitimised, nor is it solely Holden's 'original replica' Yule's 'authentic reconstruction' or Thirkell's 'new prototype'. In the early hours of 19 June 1984 the lower glass panel of Hamilton's *Large Glass* shattered, 'like a car windscreen cracking', due to an inherent fault in the glass [Figures 12a and 12b].¹²⁰ On making his night patrol, a gallery warder had heard a strange noise and turned on the gallery lights to investigate only to watch in dismay as cracks began to radiate from the right of the *Chocolate Grinder*. Like Duchamp's *Large Glass*, which had shattered in transit on its return from its first public appearance, the fate of the original and the original Hamilton replica seemed uncannily similar. The precariousness of the glass had become a reality once again; hereditary characteristics could not be avoided and the material had failed. Following Taylor, this rupture could perhaps be seen as the chance process Hamilton's reconstruction needed, fate playing his or her role in the authorship of this work. With Duchamp's original the damage was not discovered or known to the public for several years. However, Tate's original replica had cracked into approximately two hundred

thousand pieces whilst on display in Gallery 36. It is hard to imagine a more dramatic crisis once again to put in question the issues that have been discussed here.

The most urgent issue was to secure the work and move it away from the public gallery.¹²¹ Once this had been done, decisions needed to be made. Duchamp had repaired his *Large Glass* but a similar approach was not appropriate here. Only the lead from the damaged area could be transferred safely and it would need reworking during the process. The mirroring, resin and paint elements could not be transferred making a substantial proportion of the reconstruction of new material unavoidable. Partial transfer of the image would have also dispersed the damaged original irretrievably, 'whereas retaining it intact would leave it as an interesting archival relic for reference during the reconstruction of the image and in the future'.¹²² In August 1984 the Tate Gallery decided the best strategy was to make a completely new reconstruction of the bottom half, the damaged *Bachelors* domain. They felt this the most 'practical and ethical' solution, as it would be 'in effect' 'retracing' Hamilton's 'footsteps'. This is an interesting phrase to have chosen as Hamilton had himself retraced Duchamp's footsteps as acknowledged by Andrew Forge.¹²³ But the motives for recreation were far from those of Hamilton in 1965-6. Hamilton had been asked by the Arts Council to organise a major retrospective exhibition of Duchamp's work to be held at the Tate Gallery; he had created his replica as a practicing artist and a curator. In contrast, the Tate conservation replica was a collaborative decision involving conservators, curators, the director and, after his initial anger at the situation had subsided, Hamilton himself.

For the Tate Gallery conservators Christopher Holden and Roy Perry, their end product would be a museum replica, not an original artwork. In order to create their replica, Holden went to see the Duchamp original first hand in Philadelphia, referred to Hamilton's working drawings and measurements from Duchamp's original, the *Green Box* and the damaged glass itself.¹²⁴ Methods and materials employed in the Tate reconstruction were similar to those used by Hamilton [Figure 13]. Of note, the first image revisited was the mirrored *Oculist Witnesses* which was formed by silvering the glass, silk-screening the image onto it in a protective metallic ink and washing away the excess silvering with dilute acids. As previously mentioned, this was the technique used by Hamilton in preference to Duchamp's laborious scraping away excess silvering from around the shapes. The selection of pigments for the conservation reconstruction followed that of the *Green Box* and experiments were made based on what Hamilton remembered. Lighter tones were used to take into account the ageing of Hamilton's original colours. An important consideration in all decisions about materials and techniques was the wish to reproduce the appearance of the oil paint, lead and resin consistent with that of the twenty-year-old *Bride* panel above. The conservation reconstruction was approved by Hamilton in February 1986 and was assembled with its upper panel so it could go back on display in November 1986.

So now there was a part replica and part copy of that replica, a copied replica which had replaced part of the original replica, *The Bride Stripped Bare by Her Bachelors Even Again*. It is worth asking in this context, why the *Again* of the title of Hamilton's reconstruction seems to have been dropped from the history of the work.¹²⁵ And this also leads me to question what would be an appropriate and transparent title for the

piece today: *The Bride Stripped Bare by Her Bachelors, Even, Again and Again? Partially Again? Again after a break?* And, for continuity, if Hamilton was satisfied with the conservation remake, is it enough to say it was reconstructed and he approved it, Duchamp authorised Hamilton, Hamilton authorised the Tate conservators?¹²⁶ Ironically though inherent to the choice of material, both Duchamp's and Hamilton's attempts to express Duchamp's complex multi-dimensional concepts in a permanent physical form have been subject to dramatic structural failures and changes, the glass performing its own physical presence precariously on the work by its broken surface. The breaking of Duchamp's original, still present once repaired by Duchamp, produced an acceptable addition for the artist himself and has been exhibited since. In contrast, Hamilton and the Tate Gallery felt that the crazing of the replica's glass made the panel illegible and sought to return the replica to a 'coherent image'.¹²⁷ There is an irony here, the breaking of the glass in both the Duchamp and the Hamilton has caused a fault line in our understanding; materially, repair and reconstruction, but also theoretically, a degradation of meaning. And the shattered lower panel, the younger victim, remains preserved at Tate Stores, an example of the problems encountered by working on, exhibiting and conserving works on glass.

The Visible History of the *Large Glass*

In Hamilton's typographic version the *Green Box* there is a reference to a subtitle 'Delay in Glass' [Figures 14a and 14b] which suggests for Duchamp, the *Large Glass* was not a picture or a painting on glass, but a delay. It may be an exaggeration to claim Duchamp's note as a prediction, foreseeing the possibility of replica or reconstructions. But nevertheless it reminds us of Hamilton's assertion that he was

making an ‘echo of a masterpiece’, a delayed echo now with the conservation remake. There is a reciprocal action between the original and the later version, with Hamilton echoing Duchamp’s artistic processes, and the conservation reconstruction becoming an echo of an echo; a reverberation even. Thinking of the reconstruction and the remake of the reconstruction as a delay adds a temporal element: a delay in meaning, a delay in making but also a delay in becoming a material thing. Remarkably, on the reverse of the lower panel of the original *Large Glass*, in the region of the *Chocolate Grinder*, Duchamp wrote the word ‘inachevé’ meaning unfinished. This French word has associations for artists and art historians relating to the problem of ‘finish’ in modern art.¹²⁸ The story of the *Large Glass* lends multiple meanings to Hamilton’s title for the Tate exhibition, *The Almost Complete Work of Marcel Duchamp*, anticipating the *Large Glass* as always in a state of almost being complete or finished but never quite there, delayed in a state of perpetual becoming, performing its inherent precariousness, and ‘definitively unfinished’.¹²⁹ That these ideas are part of the Duchampian legacy is certain, but they also relate laterally to the 1960s context of the chapters that follow; they link to contemporary concerns with process as both material and concept, *the work is precarious and ephemeral, acted and re-enacted, finished but not finite, a duplicate surrogate, hidden, at once volatile, liquid and malleable.*

Unfortunately, the piece of lead foil from the upper part of Hamilton’s *Chocolate Grinder* bearing Duchamp’s inscription ‘Richard Hamilton/pour copie conforme/Marcel Duchamp/1966’ was part of the damaged panel that the conservators had to remake [Figure 15]. After much deliberation it was decided that this inscription would be transferred and attached to the conservation reconstruction.

To avoid possible damage and to keep it easily removable, this signed lead foil was applied to the back of the new lead foil and not directly onto the wire and paint.¹³⁰ This gesture in itself marks a major slippage in the story of the work. The inscription is now attached to a work only half of which was seen and approved by Duchamp. The ethical ramifications are obvious as are those of what and who this inscription now authenticates. Yule lamented in her unpublished text of 1990 that the most complex half technically and iconographically ‘has not felt the hand of the artist or his Master, yet bears Duchamp’s signature’.¹³¹ And for Michael Taylor, although the Tate conservators did a remarkable job of reconstructing the lower panel, the inclusion of the label ‘does suggest that what you are looking at today is what Hamilton made and Duchamp approved, when in fact the lower glass section is a complete remake of an earlier replica of a shattered original’.¹³²

The conservators argued, ‘The inscription does not form part of the concept of the work but is a unique addition made by Duchamp in approval of Hamilton’s completed work. It refers to both panels and is thus as relevant to the upper undamaged panel as to the damaged lower panel upon which it happened to be inscribed’.¹³³ They also noted that their remake consisted largely in the realisation of Hamilton’s drawings requiring minimal intervention on their part. Small variations resulting from the handling of the materials do not significantly alter the content of the work which still represents Duchamp’s concepts as realised by Hamilton.¹³⁴ The alternative would have been leaving the inscription on the shattered original now kept in storage. In fact, it was Hamilton that suggested the lead foil bearing both his and Marcel Duchamp’s signature be transferred to the new work and not left on his original glass as he regarded this section ‘essentially defunct and worthless’.¹³⁵ Tate conservators,

then, justified their decision by referring to Hamilton's wish that the continuity of Duchamp's work be retained. So Hamilton, at this point, was involved as curator and artist of the work and expert for its reconstruction.

Half a reconstruction of an original work and half a remake of that reconstruction, it will now be seen how these two halves have been written into the history of the *Large Glass*. When the work first went on display after the lower panel had been reconstructed by the conservators a new label included the following information: 'the glass to the lower panel shattered in 1984 and was reconstructed in 1985 incorporating the inscription from the 1965 replica'.¹³⁶ However, over the years, this information has been edited down to the original Duchamp dates, 1915-23, acknowledging a reconstruction by Richard Hamilton in 1965-6 and a lower panel remake in 1985. It is now not clear that the reconstruction of 1985 is not a Hamilton reconstruction, nor is the reason for the reconstruction given. But could or would the conservators' role ever be acknowledged fully? Hamilton signed off every stage of the conservation reconstruction so, in 2003, Holden felt that it was wrong for Tate Conservation or himself to be acknowledged, stating that, in a sense, it is still a 'Hamilton and Duchamp work'.¹³⁷

Little has been written about the break and repair of the *Large Glass*, Duchamp's or Hamilton's. As has been noted, published information about the Tate reconstruction can be found in a technical journal.¹³⁸ Hamilton did not mention the material failure or reconstruction in his interview with Jonathan Watkins in 1990 or in subsequent texts or interviews. In their unpublished texts Taylor and Yule both acknowledge an unease surrounding the Hamilton remake and the conservation reconstruction, Taylor

goes as far to suggest a ‘conspiracy of silence’ from the Tate Gallery to promote the ‘cult of the artistic genius’ and to avoid any embarrassment.¹³⁹ This hidden history of the *Large Glasses* reflects a characteristic embedded in the discourse on replication and conservation in general which is somewhat surprising given the proliferation of replicas in existence and being exhibited and cared for *as* original works. There does appear to be a continuing nervousness about the question of authorship for artist, art institution and art history, a desire to play down the significance of the reconstructions. However the majority of texts on replicas have usually been written by those actually involved in their replication, here Hamilton and Holden respectively.¹⁴⁰ Justifying their motives and creations through their writings could be seen to highlight their own anxieties. It is remarkable that Tate, Hamilton and Taylor all play their part in editing out the introduction of the conservation reconstruction into the story of the work. The consequences of the accident to Hamilton’s *Large Glass* or the conservators’ achievement as well as the questions raised by the second reconstruction of the lower panel are clearly very much required now.

An invisible or hidden replica could be regarded as a controversial or deceptive replica. And yet, as has been shown, there are circumstances where it is deemed appropriate to maintain a fiction, or rather that in representing the work in shorthand it would be deceptive to document every intervention (which we would not expect say in a painting by Nicolas Poussin). As more replicas or reconstructions are made and exhibited, with some entering collections around the world as the original work or which *become* the original work after time, their presence needs to be acknowledged visibly and transparently. And, obviously this case is further complicated by the present day work which is a reconstruction and a later remake of part of that

reconstruction. Soon after Holden and Perry had completed their work the Tate Gallery had planned an exhibit relating to the *Large Glass* and its new reconstruction. It was to include the reconstructed work, the shattered lower panel displayed horizontally and a tracing of design components after breaking as well as Hamilton's original drawings for the lower panel, various photographs and drawings, 260 slides of the piece breaking and being reconstructed, various materials used in the reconstruction and notes made of the original glass.¹⁴¹ Unfortunately this exhibit was never realised but its relevance remains important today, even more so perhaps, as all versions of the *Large Glass* continue to age, and so face the possibility of failure.

The Life Expectancy of the *Large Glass*

I now want to look at how time has played its part in the life of Tate's *Large Glass*. Hamilton refers to the *Glider* study on glass in parentheses as, 'the first work on this unforgiving material and the only one to remain unbroken'.¹⁴² In 1912 Duchamp was using plate glass as a palette. The reverse of this transparent surface created flat brilliant colours and it occurred to him that using glass as a support could also solve the problem of the impermanence of oil pigments. He stated, 'After a short while, paintings always get dirty, yellow, or old because of oxidation. Now my own colors were completely protected, the glass being a means for keeping them both sufficiently pure and unchanged for rather a long time'.¹⁴³ And Hamilton too understood that this method had been employed to prevent the main factor in deterioration.¹⁴⁴ It seems that for both Duchamp and Hamilton process and permanence were important even when working on such a 'monstrous' or 'unforgiving' material. Duchamp believed that his colours would be protected from oxidation by painting them on glass and then

covering them with lead foil. Unfortunately the shattering of the *Large Glass* only exacerbated the oxidising process allowing the lead red paint and lead foil to react. There is an irony here still visible in the original today which has aged very badly. This red pigment, originally bright and even in colour, has discoloured dramatically to form a white dust-like substance. In his reconstruction, Hamilton considered preventing the deterioration by mixing a red using good quality oil paint, substituting red lead for cadmium. Hamilton noted, 'We could do it as Duchamp did it so that the cycle of change taking place in his original Glass will be followed by our Glass fifty years behind'.¹⁴⁵ The added irony here of course is that there is now another cycle of change which started in 1985 with the Tate Gallery's conservation remake.

Hamilton was aware that his replica would change over time and was sensitive to the changes that had already taken place in the life of Duchamp's original *Large Glass*. He experimented with tin wire instead of lead wire using it for the *Glider* study. Tin would have avoided the problems of corrosion but Hamilton admitted he could not use it for the *Large Glass* as, even with Duchamp's approval, it was too big a departure and he did not feel comfortable changing the 'life expectancy of my version of the glass'.¹⁴⁶ He was also 'romantically attached to the beauty of the deterioration in the original'.¹⁴⁷ By admitting he was emotionally invested in the materials and their life cycles, Hamilton was not the detached or objective creator of a reconstruction: but it was an honest statement of the state of affairs and important and significant to the story of the *Large Glass*. As Holden put forward in 2003, the *Large Glass* reflects Hamilton's view of the Duchamp original in the 1960s. Hamilton then helped form and influence our understanding of the life expectancy of Duchamp's *Large Glass*

and his *Large Glass*. A new life, a different life, which has its own kind of performative degradation.

In 1966 Hamilton declared, ‘Our Glass, we hope, will remain unbroken so another major difference between it and the Philadelphia Glass is that deterioration in the paint colour caused by breakage of the original, should not occur, so that this one in London will always look like a younger brother – or should we say a Son of the Bride Stripped Bare? – rather than an equivalent of it’.¹⁴⁸ Hamilton also believed that Duchamp was happy that the original glass had been reconstructed fifty years later revealing, ‘maybe, it should be reconstructed every fifty years ... it’s just another generation’.¹⁴⁹ This idea of a son, a younger sibling or a new generation to which Hamilton refers could equally be valid for the conservation remake. And perhaps this explains Hamilton’s reluctance to break the glass as part of his reconstruction as he sought a more youthful version, an idealistic desire that would not, or could not, be fulfilled. The history of the *Large Glass* can be seen as an ‘attempt to create a work of art that would never die’.¹⁵⁰ The continuity of Hamilton’s replica and the conservation replica perpetuate this aim but not unproblematically. Like the original, Hamilton’s reconstruction has aged and like the reconstruction the remake has also aged and will continue to do so.

It is worth pausing to consider Duchamp’s views on ageing and conservation.

Duchamp chose to repair his broken *Large Glass* and travel with the piece to help install it properly in New York and Philadelphia. In 2000, art historian Mark B. Pohlاد focused on Duchamp’s relationship with his works and what he terms, ‘an artist’s post creative strategies’.¹⁵¹ Pohlاد felt Duchamp had an ‘intimate relationship’

with his works, personally conserving, repairing, cleaning and preserving them.¹⁵² This was all the more needed as glass is obviously more vulnerable than other materials prone to damage and shows up dirt very obviously. Duchamp's repair involved the restoration of the top inscription, the *Nine Shots* and the *Brides* clothes. It was time-consuming and required meticulous attention. Much like the scraps of paper of the *Green Box*, the broken shards of glass could be seen to represent fragmented potential and meanings. The *Large Glass* became a mixture of old and new, Duchamp's treatment almost but never quite completing the unfinished work. Along with the title the artist also inscribed the words 'cassé 1931 / réparé 1936', revealing that, for Duchamp himself, the history of the piece, including its restoration, was important to document and mark up visibly.¹⁵³ It is a possible example to be followed by museums displaying Duchamp replicas and reconstructions worldwide today.

Duchamp restored the *Large Glass* in 1936 and this date coincided with the moment when he started to work on multiples and the *Green Box*. Both demonstrate his ease with the dispersal and proliferation of his works through editioning and replication. Mark Kauffman's image of Duchamp at the Philadelphia Museum of Art in 1965 [Figure 16] frames the artist through the cracks of his original *Large Glass*. It was taken in the same year that Hamilton was working on its younger successor. A year later Duchamp said, 'No painting has an active life of more than 30 to 40 years ... it helps me to make that distinction between living art and art history'.¹⁵⁴ He believed that artworks could and should die. And the year Hamilton's replica was exhibited for the first time, Duchamp said that *9 Malic Moulds* were 'senile and [could] no longer travel'.¹⁵⁵ Looking around him at the work of younger artists using ephemeral or

perishable materials, he also said they were ‘killing themselves’ because their works would simply cease to exist, and so mark a professional suicide.¹⁵⁶ Taking his argument concerning the limited lifespan of works of art to its logical conclusion, he first agreed to the replication of the *Large Glass* forty years after he finished working on the original (or left it in a state of being ‘definitively unfinished’) and to a series of other editions. 1964 saw the production of the Arturo Schwarz editioned replicas which had the look of the originals rather than being multiple editions of standardised readymades which, for many, signalled the betrayal of his original intentions. Linde and Hamilton were given permission to replicate the *Large Glass* and Duchamp himself was working on his later editions of the *Boîte-en-valise* (box in a suitcase).

When first completed, Hamilton thought the Tate conservation reconstruction should be left for about a year before being displayed so that the new shiny lead foil backing could start to corrode and match the foil on the upper panel which had a patchy dull matt surface and white lead corrosion. Several months later, Hamilton decided that the work could be displayed earlier even though the two areas of lead foil still looked different. Rather than have the fresh lead artificially patinated it was noted that he preferred ‘to allow it to corrode naturally’.¹⁵⁷ By 1996, however, Hamilton wanted Tate Gallery conservators to speed-up the corrosion process of the lead foil on the remake so as to match the appearance of the upper panel.¹⁵⁸ The only signs of ageing of the lead foil was a slight uneven dulling and mattness of the surface and no white corrosion at all.¹⁵⁹ In 2003 it was recorded that Hamilton was particularly concerned that the red lead of the *Malic Moulds* and *Chocolate Grinder* still looked too fresh. Hamilton had noted that the Philadelphia original was deteriorating and he was deeply concerned that his authorised version may gain in authority while misrepresenting

Duchamp's original.¹⁶⁰ And by 2009 Hamilton was still worried that the back of the lead foil had not oxidised or tarnished sufficiently and was not consistent with the appearance of the lead in the top panel.¹⁶¹ Whereas the published history of the conservation remake had become less visible, the material object reflected a different story.

In 1985 Tate conservators had attempted to reconstruct a part of Hamilton's 1965-6 *Large Glass*. Thereafter, artificially ageing the materials could have been an acceptable conservation treatment to achieve a coherent whole. And, as the lower panel was entirely reconstructed not conserved, there is a strong argument for frankness regarding this history in order to avoid any misunderstandings. It is noteworthy that we have now passed the life expectancy of Hamilton's reconstruction according to Duchamp. If we fall into the trap of equating Hamilton with Duchamp, this might explain why Hamilton became increasingly concerned with the fresh appearance of the bottom panel and the coherence of the two sections of his *Large Glass*. Hamilton at this point was now an older artist possibly more concerned with his own artistic legacy than he had been when he first embarked on the project. To the untrained eye, the discrepancies between the ageing of the upper and lower panels may not have appeared obvious or relevant but for Hamilton, near the end of his life, it was an issue that needed resolving. There is an added irony here as the shattered lower panel in its case at Tate Stores has degraded, the lead ageing due to acetic acid [Figure 17]. In fact Roy Perry, who arrived as the cracks were still propagating and witnessed the shattering of the glass in 1984, noted that the grey parts of the paint on the *Malic Moulds* 'instantaneously' turned a red lead colour as the cracks reached

them, when oxygen reached the paint.¹⁶² That is to say, the shattered surface and support have enabled Hamilton's materials to continue to react.

Before Hamilton passed away in September 2011 the issue of ageing and coherence was resolved for artist and museum. Tate Conservation had put forward two possible options: In-house modification of the 1985 lower panel reconstruction or a new panel carried out by Hamilton's assistant under his supervision. The most straightforward approach was to adjust the patination on the lead elements as another panel would result in adding to the proliferation of objects. Tate noted, 'Hamilton is likely to have a different attitude to making the panel compared to 1965-6. Previously he approached it as 'Duchamp' but it may be more 'Hamilton' this time.'¹⁶³ This is a telling observation and one which might also reveal the institution's concerns regarding the objectivity of replicas. Hamilton's agency here, his authoritative position, marks a shift in perception and context, demonstrating how the *Large Glass* had gradually over time become a Hamilton for Hamilton himself.

In 2010, Tate conservators found a way to create a patina on the lead foil of the lower panel that would resemble the existing patina on the upper panel.¹⁶⁴ Derek Pullen, then Sculpture Conservator at Tate, devised a method of changing the natural appearance of the lead. From May to June 2010, after much experimentation, a boxed enclosure was created in which the lead was exposed to controlled concentrations of weak acetic acid fumes while the vulnerable signed lead panel, which had already naturally aged, was protected by a latex resist. This date is significant as it is a year before Hamilton died but is also consistent with Duchamp's views of the life expectancy of a work of art. What makes this treatment stand apart, though, is the fact

that it was carried out in order to achieve the appearance of the aged panel not to create a newer or younger version. Pullen noted, 'Until shortly before his death, Hamilton regarded his *Large Glass* as incomplete. The most recent conservation treatment resolved his concerns'.¹⁶⁵ The conservation life of the lower panel then now includes a museum replica and a later treatment which suggests that a work's life expectancy is both a material and conceptual matter, requiring approximation and even fiction where necessary.

For Taylor, 'Hamilton's efforts to reincarnate, reconstruct and re-present something that is dead can be seen as an inherently melancholic activity'.¹⁶⁶ With the introduction of the conservation remake, perhaps the cycle of a work that will never die has been set in motion. Taylor distinguishes between 'hard' and 'soft' replicas to put forward a theoretical model that categorises the copies of Duchamp's readymades commissioned by Linde and Schwarz in the 1960s as 'soft' replicas where craftsmen recreated the appearance and dimensions of the lost readymades using photographs. In contrast, a 'hard' replica replicates the procedures that Duchamp followed in his work, and aims at an approximate copy of how the original work would have looked. Taylor asks where Hamilton's reconstruction fits into this model. It was certainly process-driven but Taylor is also very critical, we may recall, of the omission of the chance shattering of the glass. On the other hand, it is surely important to point out that the shattering of the glass was not part of Duchamp's process, but an acceptable addition. Hamilton's reconstruction managed to satisfy the Tate Gallery's desire for a work of art by Duchamp but, for Taylor, as a replica, it lacks the lustre of the original object.¹⁶⁷ This lustre or patina has been further removed by the introduction of the conservation remake and an additional conservation treatment. In short, the surface

finish has altered significantly, a condition that will be further developed in the next chapter.

The 'pathos' that the viewer is invited to project to which Taylor refers is made more apparent in the cased relic now permanently left in storage. Regarded a failed attempt to fix Duchamp's *Large Glass* it has also succumbed to the same fate and ageing process. So perhaps Duchamp's authenticating *pour copie conforme* should have remained in place and not transferred to the later reconstruction. Is it better to have a dead work or an attempted failure? As Hamilton revealed, 'I've tried to compromise and produce something which will have a life of its own but which will be a different life. We can't copy deterioration which has taken place accidentally, but we can set up a situation which may produce some kind of quantitative change between two areas which were originally very similar'.¹⁶⁸ The recent conservation treatment has allowed process and appearance to coalesce, material ageing has been manipulated to even out the quantitative change and make the two areas seem coherent. This suggests we need a more 'malleable' sense of the replica in this instance, neither 'hard' nor 'soft'.

For Hamilton the accident to the original Duchamp *Large Glass* was consistent with the life of that work, 'an expression Duchamp would have been happy to hear associated with his Bachelor machine'.¹⁶⁹ But Hamilton was not so happy for this rupture to occur in his version. His initial anger at the subsequent break only subsided once he realised that the damage had been caused by an inherent fault in the glass rather than any negligence on the museum's part. The inherent vice of Tate's original replica had emanated from an area next to the right wheel of the *Chocolate Grinder*. The technical representative from Pilkington Glass Ltd was in no doubt that the cause

of the failure was ‘spontaneous stress relief’ brought about by the presence of micro-particle impurities of nickel sulphide included in the glass during its manufacture.¹⁷⁰ As glass is an amorphous structure, the deformation was sudden and the fault had allowed the cracks to propagate dramatically. Schwarz notes, ‘At one and the same time glass is both one of the hardest extant materials (only diamond and hydrofluoric acid attack it) and one of the most fragile’.¹⁷¹ Even reinforced glass is fragile and weighty with visible and invisible flaws, so that at any moment a glass object can undergo sudden, unexpected, and catastrophic failure.¹⁷² There is no way of detecting minute impurities so the upper panel of the *Large Glass* remains, to this day, at similar risk of disintegration.¹⁷³

The ageing of the reconstruction was a problem for Hamilton during his lifetime but this tells us more about his changing attitudes regarding his own work, rather than Duchamp’s. So again it is important not to confuse the two artists, or substitute one for the other. The problems of impermanence and precarity remain an issue today. We might stop to consider whether shattering *is* the chance process that is needed to complete *all* versions of the *Large Glass*. Only when the materials under their protective glass support are dramatically exposed to air, when the work becomes a victim to its own inherent vice, can its material life actually start. But smashing the glass is not replicable. By its very nature it has to be left to chance or, indeed, fate. And what, then, if another catastrophe occurs to the piece? It is clear that whatever direction is taken, the multiple authors, multiple histories and multiple meanings, all framed precariously by a metal shop fitting, will need to be taken into account.

The Almost Complete *Large Glasses*

The task of organising a Duchamp retrospective outside America posed many problems for Hamilton. A high proportion of the artist's oeuvre was fragile, lost, broken or unable to travel making them, in one sense, prime candidates for replication. Hamilton's creative interest in Duchamp's ideas as well as his friendship with the artist was rooted in an exchange brought about by the *Large Glass*. Their dialogue had begun in 1956 when the two artists started to correspond regarding the *Green Box* and ended with Duchamp's death in 1968. Reconstructing Duchamp's *Large Glass* was for Hamilton, 'a technical and intellectual operation of staggering complexity - at once devoutly, almost perversely concerned with the practicalities of decipherment and craft, yet at the same time inhabiting empyrean realms of psychology, aesthetic philosophy and enacted myth'.¹⁷⁴ Hamilton's work remains a great accomplishment within twentieth-century art history. As a case study, it is also an exceptional example of the who, what, when, why and how replicas have been approached more recently in museums and the implications for conservation treatments today. It represents a prime example of the problems regarding the ethics and transparency of replicas, partly because it has been deemed more successful than other comparable examples such as Aleksandr Lavrent'ev's reconstructions of his grandfather's Alexander Rodchenko's *Constructions* and Harry H. Holtzman's Piet Mondrian reproduction paintings.¹⁷⁵ The ethical and material questions remain: Is it more important to have a cohesive whole or an obvious later reconstruction? The *Large Glass* demonstrates that replication itself is an historical problem as well as historical objects being problems *of* and *in* replication - a claim that will be developed throughout the thesis. Reconstruction, remake, 'recapitulation of intention',

‘replication of process’, ‘echo of a masterpiece’, ‘authentic reconstruction’, ‘new prototype’ and ‘original replica’ have all been used in the life of **the** *Large Glass* to refer to the replicated physical object. As such, this chapter has provided a new way of looking at or through the *Large Glass*.

If Hamilton was right in 1964 that we begin to accept the substitute as the work, what does this mean for Hamilton’s role? Should we substitute Hamilton or the conservator for Duchamp himself too? The *Large Glass* represents an important part of the story of shifting attitudes towards replication be it an authenticated artist reconstruction or a museum remake. This case then reflects a particular problem of authorship but it also extends to replication in general and the many impacts of the author problem. The chapter has helped define what the act of reconstruction meant in the 1960s and the 1980s and what it has meant for the work since, materially and conceptually. The changing meanings thereof will continue to be explored throughout the thesis. The material object, as a reliable witness has been tested in relation to how the story of the life of the *Large Glass* has been told. History and materials change theoretically and physically. The *Large Glass* opens up the topic of replication in the twentieth century as it dramatically demonstrates the instability of an art object as a singular fixed object and of an artist being a sole author of a work. Tate’s *Large Glass* has undergone several transformations, it is not simply one piece and also continues to change, to perform, and perhaps will have to be remade or treated in the future. Now there is no Duchamp or Hamilton to advise, the fate of different reconstructions and remakes, as well as future victims, is precarious.

It is now clear that there are three *Large Glasses* in the Duchamp / Hamilton trajectory of the work. There are also three moments in history acknowledged: 1965-6 with the complete substitute reconstruction, the reconstructed bottom panel of 1985 but also the Tate Hamilton exhibition of 2014. All three moments could be seen to radiate from the BBC interview where the photograph of the *Large Glass* framed Duchamp and Hamilton. Hamilton's observation in 1964 of substitution is again pertinent, the history of Duchamp and his *Large Glass* is inextricably linked to replicas and substitutes, but so too now is the history of Hamilton and his *Large Glass*. And, as Holden noted in 2003, 'I don't think it's the end of the story somehow'.¹⁷⁶ It is clear that the narrative or history of a work is disrupted when a replica, reconstruction or remake is made. For me, the *Large Glass* continues to be in a state of almost being complete. The title of Hamilton's Duchamp retrospective remains an excellent way in to thinking about the physical object and meaning of the *Large Glass*, always in a vulnerable and volatile state, materially and theoretically precarious.

Process and Precariousness: The Ephemeral Materiality of Richard Serra, Gilberto Zorio and Barry Flanagan

‘Lead with its low order of entropy is always under the strain of decaying or deflecting. So what you have is a proposed stable solution which is being undermined every minute of its existence.’
Richard Serra, 1976.¹⁷⁷

‘... the object becomes largely a reference to a state of matter, or, exceptionally, a symbol of an action-process about to be commenced, or already completed.’
Max Kozloff, 1969.¹⁷⁸

Comparing the works exhibited at *9 at Leo Castelli* at the Castelli Warehouse in December 1968 with those at *Primary Structures* at the Jewish Museum in 1966, Max Kozloff noted a considerable shift in American sculpture.¹⁷⁹ No longer ‘monumental or public’, objects were now ‘intimate, portable, even dispensable’.¹⁸⁰ Kozloff’s review of the Castelli Warehouse show in *Artforum* focused on the physicality of the works exhibited and highlighted the precariousness of the materials employed; in particular their ‘volatility, liquidity, malleability, and softness’ as he described their ‘unstable characteristics’ mentioned in the introduction.¹⁸¹ Serra exhibited works in this show and later acknowledged the instability of his propped lead pieces.¹⁸² The last chapter focused on a reconstruction of an artwork in the 1960s and here process and precariousness will be further explored in relation to an artwork’s inherent vice and the shifting attitudes to authorship and authenticity. Precariousness will again be understood as being subject to physical danger or insecurity, at risk of falling or collapse.¹⁸³ The precarious materiality of art objects that were made in America and Europe in the late 1960s, their inherent action-processes, will be considered for the instability of their conceptual as well as physical character.

Group exhibitions including *9 at Leo Castelli*, *Anti-Form* and *Anti-Illusion: Procedures/Materials* in America and *Con temp l'azione*, *Arte povera + azioni povere* and *Live in Your Head: When Attitudes Become Form* in Europe demonstrated that, at this time, experimentation, activity and the unpredictable were becoming not just strategic aspects of avant-garde practice but possible material catalysts for making. It is on these 'process' works, where making was not by any means 'dematerialised', that I will focus so as to unravel the instances where artists used materials that can be regarded as active, materials used as catalysts for change, but also materials as residues for an action that once was.¹⁸⁴ The axis of object, material and action will be employed to discuss the precariousness of the cases presented and argue for a different kind of dematerialisation.¹⁸⁵ This chapter refers to well known and much written about exhibitions, including *9 at Leo Castelli*, which have become part of the currency of the exhibition history of this period, but the approach will use works as test cases or laboratory experiments to draw attention to the acute problems posed when works are made from ephemeral or vulnerable materials, works that insist on being 'definitively unfinished', in ways both made possible by Duchamp's *Large Glass*, as discussed in the last chapter, but also moving beyond it. Within this small range of case studies, many of the different problems surrounding replication will be presented and the idea of a hidden history of replication will continue to be addressed.

The 'unresolved tension between material presence and ephemeral time-based events' to which Andrea Tarsia referred in 2000 will be pertinent to the discussion of materiality, ephemerality and what I will call ephe-materiality.¹⁸⁶ By concentrating on a critique of the labels of process and process art, this chapter will recast artists and their materials to consider the 'enduringly ephemeral', a phrase introduced by Alex

Potts, the continual materiality of works and their possible repeatability and replication.¹⁸⁷ Kozloff's terms - volatility, liquidity, malleability and softness - will be used to think through a literal and conceptual idea of precariousness and finish where provisional and ephemeral will be juxtaposed with fixed and permanent to see whether these oppositions can be kept in place. Material presence, the duration of a specific action or process, the possibilities of sustaining that action or process as well as the actions or processes of materials over time will be explored. If the art object was, as Kozloff suggested, a reference to a material state, the problematic of surface finish and finishedness in the context of materials that *act out* or perform their own precariousness will be explored, be it surface deterioration, material degradation or literal collapse.¹⁸⁸ For, as well as employing precarious materials, works have been presented and re-presented since their initial installation, often making their condition now even more precarious for curators, conservators and art historians. Issues raised in this chapter will also expand upon many of the current concerns surrounding the replication of twentieth-century sculpture.

Recasting Richard Serra

Richard Serra made *Shovel Plate Prop* in 1969 [Figures 18a and 18b]. It was purchased from Galerie Ricke in 1973 and has remained in Tate's Collection where it has gone on display on several occasions.¹⁸⁹ Weighing 190 kilograms, it comprises two parts, a lead sheet and a lead roll. The roll is balanced on the sheet and simultaneously keeps the sheet propped in place, whilst itself only resting on a wall at its top edge. With no join, gravity and balance are literally performed each time the work is shown. However, during the installation of *Richard Serra Sculpture: Forty*

Years at the Museum of Modern Art in New York in 2007, Serra stated that *Shovel Plate Prop* ‘looks dead on its feet’.¹⁹⁰ It did not get exhibited. Serra’s authority as its maker allowed him to withdraw the piece from the retrospective. His decision raises various questions, both materially and conceptually, regarding the status of the sculpture which will be addressed here.

Serra made a series of *Prop Pieces* during 1968-9. The first was for Galerie Ricke in Cologne in October 1968 and in December a similar work with different dimensions was erected at the Castelli Warehouse show (*Prop*). Tate’s *Shovel Plate Prop* was made in March 1969 for an exhibition at Galerie Ricke where the sculptor created five distinct *Prop Pieces*.¹⁹¹ Works from a similar series made in June 1969 were also exhibited at the Guggenheim Museum in 1969. Eva Hesse’s pen drawing of that exhibition, as discussed by Anne Wagner in her essay ‘Another Hesse’ in 1996 [Figure 19], captures the different possible permutations; roll on sheet, as with *Shovel Plate Prop*, roll propped against sheet, as with *Prop*, sheet propped on roll and so on.¹⁹² In each, a carefully considered calculation achieves the counterbalance required to allow gravity and heavy lead parts to remain balanced, albeit precariously. In the extensive writing on these works, focus has rested on Serra’s manipulation of mass and weight using industrial materials.¹⁹³

On the other hand, Hesse’s sketch in ink is presented on a piece of ephemera, an envelope, a throw away item. A seemingly quick notation of six *Prop Pieces*, the sketch is neither solid nor permanent, the material will have started to degrade and the envelope’s surface will have aged. The drawings themselves also seem to portray little of the solidity and weight that these lead works command.¹⁹⁴ I would like to

push this idea further to recast Serra as an artist more concerned with ephemera than the dominant emphasis on industrial materials normally allows, to rethink his *Prop Pieces* in terms of what has been called, in another context, the ephe-material.¹⁹⁵ My use of the term ephe-materiality is quite simply the drawing attention to the palpable materiality of the work through the ephemerality of the materials. This is obviously counter-intuitive in certain respects, but by considering the inherent materiality and surface finish of the lead pieces, it will become evident that they have a complex relationship to sculpture's monumentality and permanence. The tension, real and metaphorical, from the instability of the heavy lead components arranged precariously will be key. As such, ephe-materiality will be deployed to reveal its specific implications for conservation. So then the *Prop Pieces* will also be used to unravel the issues at stake in discussing disintegration and the possible strategies for replication.

Serra's well known *Verb List* of 1967-8, lists various actions including 'to roll', 'to lift', 'to splash', 'to tear' and 'to scatter', a list of words on a piece of paper, which also echoes Hamilton's obsessive reworking on paper of Duchamp's notes. Omitting those actions which have traditionally been associated with *making* in the history of sculpture - to carve, to model, to mould, to cast - the *Verb List* also excludes the materials Serra was experimenting with.¹⁹⁶ However, Serra has more recently acknowledged that he was very much interested in the potential of materials, 'the matter of the matter'.¹⁹⁷ Serra sought a material that he could manipulate with his hands and like Hesse he began manipulating lead and latex to explore different possibilities, consistencies and processes.¹⁹⁸ Rubbery latex and molten lead are, in fact, the examples Kozloff uses in his review of *9 at Leo Castelli* to demonstrate the precariousness of works. Both Serra and Hesse exhibited at this show. Serra created

Splashing in molten lead, *Prop* with sheets of lead, and *Scatter Piece* in rubber, latex and wire. Hesse exhibited two works, *Aught* and *Augment*, using latex and canvas. It is obvious, perhaps, how soft and malleable Hesse's works were but it is Serra's use of lead that is of interest here.

Highlighting the dialectics of solid and liquid, rigid and malleable, lead, like rubber, can change shape and state, it is volatile, liquid, malleable and soft. In 1968 Serra began exploring these characteristics and produced nearly one hundred works involving simple manipulations of this metal. For example, he used his hands to rip away successive edges of a lead square and the accumulated tears were then left on the floor to form *Tearing Lead from 1.00 to 1.47*. His *Prop Pieces*, including *Shovel Plate Prop*, were made by propping flat and rolled sheets of lead. And *Splashing Pieces* were produced by throwing molten lead into the juncture of a floor and wall. For Gregoire Müller in 1972, the lead 'instantaneously solidified, preserving the record of all the energy necessitated by the projection. The form of the finished piece, including the smallest details, serves as evidence of the pure result of the simple actions (melting and projecting) that were performed on the material'.¹⁹⁹ Serra's explorations of lead reflect his interest in the physical properties of things and the traces that result from the manipulation of material. Like rubber, lead yielded to and presented the result of actions performed on it, the '*what is being done*', be it tearing, propping, rolling or splattering.²⁰⁰ The residue of an action is very apparent in *Shovel Plate Prop*; a lead roll is propping a lead sheet itself being propped against a wall. To achieve the simplicity of form, Serra had to roll a sheet of lead and also flatten a similar sized sheet with a hammer and in some instances the hammer marks remain visible on the sheet's surface testament to this process.

With his *Prop Pieces* Serra was clearly testing lead's potential as well as its weight in relation to gravity and, as has already been noted, gravity and weight are terms in which his work has often been interpreted. But Serra's explorations could also be considered as refusals of the idea of a fixed, complete object in so far as the act of making needs to be sustained whilst the work is on display. As well as the action performed, 'the process', there is also the potential action of lead over time. The soft material captures an action but is also active within and for itself, an action-process still to happen. As Serra noted in 1976, lead is always under strain, its stability constantly under threat.²⁰¹ The material composition and structure of the *Prop Pieces* means that the sense of rigid stability could be destabilised at any moment; the lead could bow and the original action could therefore be lost. If the material and laws of mechanics are part of the work so too is its inherent vice, the risk of literal collapse. Lead's mass and weight but also lead's softness and malleability seem to demonstrate the false antinomy of ephemerality and permanence much like Duchamp and Hamilton's works on glass. Lead as an active, vulnerable material, one which enters the realm of the ephemeral, transient, temporal and precarious also draws attention to the palpable materiality of the work. As with Hesse's sketch, the materiality and the work itself might have an ephemerality which acts out a different kind of permanence and state of change, a permanence that is very much subject to change, be it permanent change, or the work's unmaking. These temporal qualities actually cut against the grain of mass, weight or monumentality, the terms in which Serra's works are most often understood.

In fact, it may be surprising, for works that have been regarded as made of resilient even tough material, Serra's sculpture has presented problems for conservators. What

are, then, the problems in relation to replication here? Since the lead plates in Serra's *Prop Pieces* are prone to fatigue, individual parts have been replaced by the artist. These new parts have, in some instances, been artificially aged so as to conform aesthetically to the rest of the work.²⁰² For Serra, there is nothing unique or aesthetic about the specific plates first used to construct a work so swapping individual parts does not result in refabrication. Even if all the parts were replaced at the same time, he would not consider this a replica.²⁰³ One example is Tate's *2-2-1: To Dickie and Tina* [Figures 20a and 20b] which was made in 1969, destroyed by Serra by 1978, and remade in 1994 before acquisition. Using a lead alloy, Serra wanted to stabilise the original lead sheeting, which had sagged. He still regards this as the original work of 1969 as the only alteration is in the composition of the material, the addition of antimony establishing a harder and stronger metal. As Lynne Cooke acknowledged in 2007, if lead antimony had been available at the time, Serra would have used it.²⁰⁴ Clearly there is a material and dating issue here because the current propped sheets bring into question when the work was actually made as well as their materiality *of* and *from* the 1960s. Serra's gesture of substitution seems to indicate that, for him, the sustained action rather than specific materiality *is* what constitutes the sculpture. But what does this mean for institutions with fatigued lead sheets in their collections? Is it for them to decide when and how to 'keep alive' a work?

Serra replacing parts of his *Prop Pieces*, swapping lead for lead antimony and destroying original sheets, demonstrates how versions and replacements can be considered part of his history and work, be it acknowledged, as with *2-2-1: To Dickie and Tina* where both the original and reconstruction dates are listed, or a hidden history. But, as well as destabilising the idea of a fixed date of origin, it also reflects

how repeating a process has become part of the work in a deeper sense both materially and conceptually. As early as the 1960s, Serra had started producing different versions of works in specifically different materials. A steel *Shovel Plate Prop* [Figure 21], now in the Solomon R. Guggenheim Museum, New York, was also created in 1969.²⁰⁵ It is made from a different material, has a different surface, a different weight and, I would argue, a different ephemerality. On these terms, it is appropriate to think of the vicissitude of *Shovel Plate Prop* especially in light of Serra's rejection of Tate's lead piece in 2007.²⁰⁶

Admittedly, the claim for a potential ephemeral or precarious condition to Serra's lead sculptures could be taken too far. No longer *subject to* or *at risk of* but rather a literal collapse if the lead completely buckles or the balance of the elements is lost. And, in August 1989 whilst propped against a wall at Tate Liverpool, the lead version of *Shovel Plate Prop* did, in fact, collapse. The flat sheet was re-straightened and the sculpture was re-erected and remained on display for several months without any further movement within the lead sheet. When contacted regarding the incident, Serra suggested that, as with *2-2-1: To Dickie and Tina*, the work be remade using lead antimony to strengthen the sheets. At the time, Tate felt that the collapse was due to the way in which the work had been installed rather than any inherent instability of the material.²⁰⁷ Conservators were also not convinced that remaking the work with lead antimony would result in a stiffer, more stable piece so decided not to go ahead with a remake.

The dimensions of the lead sheet of *Shovel Plate Prop* are recorded as 1000 x 2035 x 8mm and the lead roll as 1500 x 100 mm with a variable diameter. It is this variability

that is of interest here especially when we consider that the work is made from a heavy yet malleable metal and relies on gravity, balance and counterbalance to stay in place. Any shift in dimensions would result in a slightly different tension and impact the overall structure of the piece as well as the process that needs to be maintained whilst the work is on display. So then the way the piece is installed is paramount and perhaps the conservators were right in challenging the decision to remake the work. The prop and the material are very much dependent on the roll and sheet working together physically and chemically, the energy of the atoms within their metallic bonding and the inherent vice of the piece is a very real material precariousness.

Returning to the variability of the diameter of the roll, it is important to note that an image of the piece as installed at Galerie Ricke in 1969 shows the lead sheet with various distinct markings including what appear to be the dimensions of the actual sheet (2000 x 1000 x 8) [Figure 22]. This image appears very similar to the Peter Moore photograph from the Guggenheim Serra exhibition in 1969, reproduced in various texts on Serra including *Richard Serra: Sculpture: Forty Years*. There is an undated Tate image [Figure 23] used in Ronald Alley's *Catalogue of The Tate Gallery's Collection of Modern Art other than works by British Artists* published in 1981 with the sculpture in a similar situation with similar markings.²⁰⁸ However, an image dated 25 October 1993 [Figure 24] reveals a sheet of lead with different markings as well as a roll that seems immediately thinner and longer.²⁰⁹ Records reveal that on 16 March 1989, prior to the Tate Liverpool display, the lead pipe was re-rolled over a 50mm diameter pipe. At the time it was noted that the roll appeared too narrow but it went on display anyhow.²¹⁰ Arguably the newly rolled, thinner pole, caused the collapse of the work by destabilising the material and prop structure

simultaneously. So then the variable diameter of the pole, detailed as part of the work's dimensions, is an issue.

Prior to *Shovel Plate Prop* going on display at Tate Modern in 2009 the lead roll was rerolled by Derek Pullen, then Head of Sculpture Conservation, and William Easterling, then Sculpture Conservation Technician, in the sculpture conservation studio at Tate Britain.²¹¹ However, after just over two years on display, on 8 July 2011, the two lead parts of *Shovel Plate Prop* were discovered on the floor. During the time the piece had been on display there had been progressive bowing to the lower sheet; the two top corners bending into the wall. According to Sculpture Conservator Elizabeth McDonald, the bowing of the lower sheet had been getting steadily worse, so much so that the work had been de-installed weeks earlier to allow a conservator to flatten the sheet before re-installing the piece again.²¹² Even so, on 7 July at closing time the piece collapsed, the sheet slid forward and the roll then fell.²¹³ Similar to the inherent vice of Hamilton's glass discussed in the last chapter, Serra's lead prop was precarious both literally and conceptually and its repeated failure an ongoing issue. *Shovel Plate Prop* has remained in storage ever since, its fate as a work, a Serra, still waiting to be decided upon.

What I am proposing is that when a Serra *Prop Piece* is displayed, it is lead's inherent tendency to sag, to change over time and to act out the material's potential to collapse, that is dramatised, not the monumentality of sculpture. On the contrary; it highlights the ephemeral, temporal and precarious nature of the work. Lead is malleable, heavy, unstable and dangerous. *Shovel Plate Prop* is also malleable, heavy, unstable and dangerous; gravity is performed by this active material and there is a literal

precariousness.²¹⁴ The choice of material is significant as is the envisaged structure of the work. In 2004 Hal Foster believed that gravity for Serra was about ‘forming’ or ‘structuring’ whereas for other artists at this time it was about ‘unforming’ and ‘unstructuring’.²¹⁵ *Shovel Plate Prop* demonstrates that it does not have to be either or, forming and unforming, making and unmaking are applicable when a malleable yet heavy material is used. As well as the gravitational pull and tension keeping the lead sheet and roll in position, the process of deformation or creep is also acting out *on* and *in* the material work. Creep, an engineering term, is a specific type of deformation and lead, over time and if subjected to enough of a load, will start to creep. It will slump and the material can fail.

Serra’s lead will have deformed with each installation relative to the time and force applied. The temperature at which materials start to creep also depends on their melting point. Lead has a melting point of 600K so room temperature at 300K, exactly half its absolute melting point, is a relatively high temperature enabling it to creep.²¹⁶ Creep and creep mechanisms can be seen in terms of ephemerality and arguably ‘to de-form’ would be an appropriate addition to Serra’s *Verb List*. So then how can and should Serra’s process be performed in the future? Does and should the repeated failure of the material, and ultimately the work, impact the decision to remake *Shovel Plate Prop*? New lead alloy sheets might allow for a safer work but is it still *the* work? If the original action and the potential action of collapse both underpin our understanding of *Shovel Plate Prop* there is also a sense of nostalgia to try and keep this alive in the original material. Object, material and action are all part of the logic of the moment in 1969 when Serra was working through the activities of ‘to roll’, ‘to lift’, ‘to splash’, ‘to tear’ and ‘to scatter’, all processes of *making*.

Catalysts: The Actions and Re-Actions of Gilberto Zorio

9 at Leo Castelli openly declared how artists were manipulating active materials. The canonic show, organised by Robert Morris, was held at an old textile warehouse in New York's Upper West Side, and included the work of Giovanni Anselmo, Bill Bollinger, Eva Hesse, Stephen Kaltenbach, Bruce Nauman, Alan Saret, Richard Serra, Keith Sonnier and Gilberto Zorio [Figure 25]. If *9 at Leo Castelli* presented a *material moment* of the late 1960s where new ways of sculpting included propping, lifting, piling and splashing the works, as residues of actions, often relied on raw materials with 'little structural integrity of their own'.²¹⁷ The striking variety of soft or malleable materials included aluminium, canvas, chickenwire, copper, cotton, felt, hydrochloric acid, latex rubber, lead, neon lighting and water. Even an uninvited contribution from the Puerto Rican artist Rafael Ferrer, that I discuss in a later chapter, left in the entrance of the warehouse on the day of the opening consisted of a pile of autumn leaves. It is the laboratory of thinking and experimentation that occurred during the making of the works and also their display that I am interested in, especially in relation to the works' ephemerality.

In his review Kozloff believed that works now visualised a material state, but what of works that were conceived of as changing over time? Works where there are possible multiple states or the potential for possible multiple states? The reviews, including Kozloff's, concentrated very much on the work of the American artists, Serra, Hesse and Nauman especially.²¹⁸ The Turin-based artists Zorio and Anselmo exhibited works here due to Leo Castelli's connections with the Sperone Gallery there and were, in the term coined by Germano Celant in 1967, associated with the *Arte Povera*

group.²¹⁹ Given less attention at the time, the Italian artists included work in the show that presented processes of physical and chemical change; Anselmo's cotton absorbed water from a steel bin and Zorio's copper bridge allowed acids and metal to react to form crystals. It is to Zorio's work, *Piombi*, (Leads) [Figure 26], which has often been overlooked, that I now want to turn as the implications for ephemerality and replication are very relevant to my argument here and possibly most vividly demonstrate the proposition. His omission from much of the literature regarding process work has tempered our understanding and coloured subsequent connections or misunderstandings of what was at stake at this time. Zorio's work in particular now needs reconsidering as it most clearly establishes ephemerality as a condition of the 1960s and does so in the most dramatically physical terms.

Zorio created a salt bridge with two shallow lead basins, both propped against the warehouse wall, much like Serra's *Prop* nearby, one containing sulphuric acid, the other hydrochloric acid. An arched copper rod linked the two bowls. When the sulphuric acid came into contact with the copper, it produced very intense blue copper sulphate salts; the hydrochloric acid produced green salts. Zorio stated, 'The work proceeds in this fashion; the crystals of copper sulfate climb the copper bar in a pyramidal pattern, the others ascend the copper vertically. When the two components meet at the top of the copper bridge, the work will be completed. It continues to live, all the while; the arch can be changed a few months later. The two elements are liquids, not colors, real liquids joined by this copper, which becomes corroded, modified'.²²⁰

Zorio's claim that 'the work will be completed' and 'It continues to live' seem initially contradictory and certainly incompatible with a traditional idea of finish. Finish is, of course, historically contingent and the 1960s was a particularly vivid moment for the problematic of finish, as in *to finish* or *to complete*. Explorations and experiments in America and Europe dramatically endangered the relationship between surface finish and the expectations of a finished work of art, a work in a 'finite state' (and, incidentally, 'to finish' is not included in Serra's list).²²¹ But is the idea of a state of finishedness, understood both materially and conceptually, still relevant to active works and materials made and used by artists at this time especially as it had accrued commercial connotations, for example, in Plexiglas? The labels of process and process art are obviously relevant here but again I want to push these further to think through finish in relation to material actions, re-actions and action-processes. Serra's *Prop Pieces* reveal the process of their making and I have argued for the precariousness of the attempt to fix, 'to suspend', the action of the artist and the work at its potential of maximum change in a material that is itself active.²²² In Zorio's *Piombi*, there is a different kind of materiality: a very visible electro-chemical reaction.²²³ As Zorio himself acknowledged in 1972, when the salts meet at the top of the copper bar, the work would be completed. However, he also notes that the work continues to live. Chemical change and the potential of materials to form salts and corrode metal *is* the process or life of the work and, as with Serra's lead pieces, this is a work in a necessary state of limbo. Zorio has not made a finished work, rather an event, which modifies the sculpture through a continuous chemical reaction.

Robert Lumley has called Zorio's works 'unstable objects' and 'scenarios of metamorphosis' which did not 'aspire' to the permanence of traditional works of

art.²²⁴ The inside front cover of *Art Povera: Conceptual, Actual or Impossible Art?* published by Celant in 1969 and including Zorio's *Piombi*, introduced the idea of works being 'fluid' and in a state of 'continuously becoming'.²²⁵ These observations are relevant as this fluidity signals and threatens the notion of finish and finishedness. *Piombi*, as a combination of lead, copper, water, and acids, produces the slow event of electrolysis and the viewer witnesses the physical processes the substances undergo: rather than a work *in progress*, then, a work *in process*. His sculpture presents 'an open-ended experience' that performs, 'dynamism and stasis, renewal and dissolution'.²²⁶ There is a complex set of relations here, always in the moment and permanently changing. The object, like the materials, is performative; it *acts out* over time. The artist has little control over the duration of this process and the end, the finishing line, is unknown. Instead, the materials control the work, time modifies it and the system of energy and change can only be maintained when the arch and chemicals are replaced. The precariousness of the duration of Zorio's time-based reaction and its material presence are heightened within the work's own system which is in an endless cycle of becoming. As such, the work 'becomes' through a process, the work is changed through this process and components can then be replaced in order for the process to start again.²²⁷

Celant acknowledged the instability of Zorio's events.²²⁸ In the terms I am proposing, this also points to their ephemerality as object, material and event are neither finite nor secure. *Piombi* could be thought to be completed when the salts meet at the top of the bar. However, this idea of a completed work is destabilised, as it is at this point that the metal is in its most corroded state highlighting both the material and ephemeral conditions of the work. Zorio's interest in alchemical transformation

informs his approach, as the pools of acid and copper corrode the metal whilst simultaneously making the piece, ‘at once a carefully constructed artwork and an organism undergoing unpredictable change’.²²⁹ The process itself can be replicated with new components but the condition of ephemerality allows for different temporal reactions, re-actions, or re-activations each time.

In 1987 Zorio made note of the changing nature of *Piombi*, ‘All this probably arose from my interest as a boy in oxidation of bronze statues I saw in museums. Only that here the arm, head, or body of the statue has been replaced by the process of mutation’.²³⁰ The nature of finishedness would suggest stasis, a static moment of completeness. The finish of a work can also relate to the finished surface of a sculpture, the highly polished marble of Antonio Canova for example or the polished brilliance of bronze in Constantin Brâncuși.²³¹ With Zorio’s *Piombi* the surface finish is unstable like the material components themselves and the artist has acknowledged his preference for fluid and elastic things, ‘things without lateral and formal parameters’.²³² Tarnish dulls and discolours material much like the oxidation of bronze to which Zorio refers. An object’s perfect finish is surrendered as a chemical process acts against the finishedness of the material.

A tarnished surface obviously reflects the temporal life and age of a material. Zorio’s *Piombi* follows a similar logic, where the copper’s surface is fluid not fixed. In this instance, the surface ‘finish’ or appearance could be regarded as the active chemical reaction. Like a patina, the surface texture of the copper is a result of its slow chemical alteration, permanently changing, corroding and mutating. So then, the ‘finish’ is precisely a token of an ongoing and ‘unfinished’ chemical reaction. As with

Serra's *Prop Pieces* the materials in *Piombi* signal its making as well as its unmaking, the work asserts its materiality through its ephemeral character. The conceptual and material precariousness of the work is heightened within the work's own system. There is a cycle of disintegration and regeneration each time the work is displayed due to the liquidity or volatility, which comes from the physical material but also the material's actions over time.

In the preface of the catalogue for *Live in Your Head: When Attitudes Become Form* of 1969 the curator Harald Szeemann emphasised, 'the shift away from the result towards the artistic process' and 'the interaction of work and material'.²³³ Scott Burton further stressed the relationship between material, work and time with: 'It is significant that several of the new artists use flexible or extendable materials like rubber. The interaction between time and material also determines the artists' continuing interest in 'common', 'non-art' materials ... These things are mutable, perishable, sensitive to manipulation to a degree that more usual materials like stone and wood are not'.²³⁴ Szeemann's major survey show included the work of Serra, Hesse, Zorio and other process and conceptual artists from America and Europe. Most of the work of the Arte Povera artists was clustered together in one room and, much like *9 at Leo Castelli*, sculptures were propped, hung, slung, spread out and scattered, the materials employed often relying on their inherent qualities, acting for and of themselves.

Szeemann's show was derived in part from *9 at Leo Castelli* so marks a 'logical' extension of Morris' enterprise and will be addressed in more detail in the final chapter. But in this context Zorio's lead work can be seen to draw attention to the

material impulse of the moment in particularly vivid ways. This work tests out what process meant and still means; his reactions and re-actions demonstrate how processes could, and can, be performed and re-performed. As such, he establishes a different consideration of process from that presented by Robert Morris in his essay 'Anti-Form' published in *Artforum* in April 1968. If Anselmo and Zorio especially have been excluded from much of the discussion of process and anti-form, it is perhaps because their material experiments go beyond Morris' claims. Zorio's *Piombi* further breaks down the idea of static materiality by presenting chemical transformation where ephemerality is performed in real time. The liquidity and volatility of the work and materials signal quite literally its inherent precarious condition, provisional, fluid and flexible.

Duplicate Surrogate: The Hidden History of Barry Flanagan

At Live in Your Head: When Attitudes Become Form, the British artist, Barry Flanagan's rope piece snaked towards Robert Morris' *Felt Piece no. 4*. Neither fixed nor finite, these works were soft and mouldable, their display variable. Like Jannis Kounellis' seven sacks filled with flour, pulses, coffee and coal, and shown on the stairwell at the Kunsthalle, the works were assembled - hung, placed and filled - for the duration of the show. Flanagan was also, at this time, experimenting with filling pre-stitched cloth 'skins' with amorphous matter. Not the beans, flour or coal of Kounellis, rather sand and wet plaster were employed to produce bulging, organic yet in-organic forms. Investigating the different ways in which these materials find their own shape and can be influenced by simple manual activities such as pouring, stuffing, folding and stacking, these explorations are comparable to those of Serra's

Verb List and his manipulations of lead. And again here, the act of making is emphasised rather than a work's status as a complete or finished object. Flanagan liked the idea that shapes virtually made themselves, materials enabling different states. In *Sand Muslin 2* of 1966 [Figures 27a and 27b] the bulge and sag of the two muslin bags is a result of the pressure of the sand they contain, which are variable and the piece can change with each new installation.

Muslin and sand are both soft materials and Flanagan brought them together to create a soft sculpture. Soft sculpture as Kozloff acknowledged in 1967, 'might suggest fatigue, deterioration or inertia ... it mimes a kind of surrender to the natural condition that pulls bodies down'.²³⁵ Unlike hard, permanent sculpture, which defies gravity and stresses fixedness, endurance and power, soft sculpture *acts out* sagging, hanging and collapsing, all terms relevant to a discussion of process and precariousness. Soft sculpture also adds a temporal dimension: 'For the very malleability of soft materials, slightly inflated or drooping, focuses on the way an action will alter (or possibly already has altered) a substance in time', an action-process in progress.²³⁶ Serra's fatigued lead plates, Zorio's eroding copper bridge, Flanagan's sand-filled muslin bags; it is interesting that the case studies being presented relied on, and continue to rely on, propping, gravity and temporal or temporary states. A process is performed and continues to be performed when the work is on display. Inertia and collapse are inherent to the mouldable and active materials; the sculptures are provisional rather than permanent as they have the potential to change. Emphasising the precarious nature of these installed material objects, the works and their display are malleable, *acting out* over time but also changing form each time.

4 casb 2'67, *ringl 1'67* and *rope (gr 2sp 60) 6'67* were made in 1967 and purchased by Tate in 1976 [Figure 28]. Each title is the abbreviation of a material or technical description derived from a system that Flanagan developed influenced by the writings of Alfred Jarry as well his interest in concrete poetry. Concrete poetry focuses on the physical 'concrete' existence of a poem on the page and likewise Flanagan experimented with abbreviations of material ingredients in his titles. Sometimes he added a vowel to create a word; *CASB*, for example, refers to **C**anvas **S**and **B**ag. *4 casb 2'67* can be decoded as 'four canvas sand bags number two 1967', while *ringl 1'67* is an abbreviation of 'ring lino number one 1967' and *rope (gr 2sp 60) 6'67* derives from 'Rope green two spaces sixty feet number six 1967'. Logical yet rather eccentric, these titles indicate specific dimensions and suggest multiple versions.²³⁷

4 casb 2'67 comprises four blue conical canvas sacks filled with sand. Each bag was made from two pieces of cotton duck canvas, stitched with white string. Sand and canvas are soft and, like *Sand Muslin 2*, there is an inherent flexibility or malleability to the forms. Each column takes over an hour to fill by pushing a quarter of a tonne of sand into each by hand. A plastic disc placed at the base of each bag prevents the sand from trickling out in the early stages of filling. For Flanagan, this is an important part of the installation of the work 'All physical work contributes to the final exhibition to the public'.²³⁸ The making of *4 casb 2'67* is based on Flanagan's knowledge of 'soft shuttering', a method used in building construction to mould concrete whilst it sets. This process could be related to Serra's use of molten lead as, similarly it changed state and solidified with his actions and the *active material* in both artists' works presents an action-process. Process, in this instance, has become *making*, or rather *remaking*, each time the work is installed. However, there is also a process *acting out*

within the materials, which is evident in the relationship between the two substances, the canvas and the sand. Both support each other; the sand forms and keeps the canvas bags upright whereas the canvas contains the sand so that together, they transform pieces of fabric and grains of sand into elegant but awkward, tapering uprights.

As with Zorio's *Piombi*, *4 casb 2'67* is not finished by the artist but by the materials themselves. *ringl 1'67* is a ring cut from blue linoleum which rests flat on the floor. Finally, *rope (gr 2sp 60) 6'67* is a length of thick sisal rope that the artist dyed an uneven shade of green. It snakes on the floor to connect the various components in this work. Flanagan deliberately questioned the convention that sculptures should be rigid and permanently fixed by making works that could never be replicated exactly in different situations. For example, each time sand is poured into one of the sacks it results in a slightly different form; each time the rope is cast down on the floor it creates a new line. There is no set arrangement of the three works individually or in relation to each other. Rather, it is open to the interpretation of the installer on each occasion. The three separate works have often been displayed together and therefore here they will be referred to as one composite work.

In 1985 the British Council proposed an exhibition replica be made of the piece. Both the British Council and the artist wanted *4 casb 2'67*, *ringl 1'67* and *rope (gr 2sp 60) 6'67* to be shown at the British sculpture exhibition in 1986, *Between Object and Image*, organised in collaboration with the Ministerio de Cultura in Madrid. Tate had turned down the loan request for the original, probably due to the fragile nature of the work. The fact that a remake was suggested at all reflects that in the 1980s there was a

more liberal approach to replication within institutions. In a letter from the British Council regarding the work and exhibition, the then director of the Fine Arts Department noted ‘There is of course, a long and honourable tradition of Museums making, for educational purposes, replicas of artworks which are fragile or difficult to move. The Victoria and Albert Museum is full of them’.²³⁹ And so in December 1985, in consultation with Flanagan, Tate had an exhibition copy made, which is referred to as a replica.²⁴⁰ Education purposes or not, the original and the replica are stored together and could be exhibited simultaneously in two different locations. And since the replica was made, the original has only been exhibited twice whereas the replica has been displayed at Tate and other institutions worldwide on several occasions.²⁴¹ The replica also allows the piece to be viewed and experienced without barriers. So then, the new version has affected or tarnished the perception of the original. Whilst the replica has made the sculpture more accessible this has been at the expense of experiencing the original materials Flanagan employed.

If two Flanagans exist, it is not completely transparent. To the public accessing the work, only the original date and artist are given, and nowhere is the replica, the duplicate work, acknowledged. Having been allocated the same accession numbers as the original, the replica is invisible, even when on display.²⁴² But, is this a problem for more conceptual works like this one? Is the language of original and replica even tenable in this instance? Is this a version like Serra’s lead and steel *Shovel Plate Prop*? or can it be seen in the same light as Zorio’s replacement copper and acids? This case is slightly different because the two works exist and can be shown as *the* work simultaneously. Imagining the two exhibited together, the various signs of age and history would be apparent. For example, damp sand was used to fill the canvas

sacks when the original work was first shown at the Paris Biennale in 1967 [Figure 29] and this caused white staining to their surfaces. With the replica, the stitching on one of the bags came undone and needed repairing by January 1986 and more recently one of the bags split. These instances represent two histories where surface marks, the patina, the wear and tear of the original and the replica are not consistent, nor could they ever be. And, perhaps in the future, since one replica has already been made, there could be more. The material information, samples and receipts collected in the process of remaking the work signal an anxiety regarding the traceable decisions made whilst making the replica and it is striking how easy it would be to make other replicas.

There is also an issue of the artist's inscriptions. On the original, each bag was inscribed, each disc was inscribed '4 CASB 2'67' and the ring was inscribed 'RINGL 1/67'. Flanagan had to replace the discs and ring when Tate acquired the work as sections were damaged or missing. He inscribed each new disc '4 CASB 2'67 (77)' and the ring 'RINGL 1/67 (76)'. The artist destroyed the original ring except for the section with the inscription. This gesture is reminiscent of Duchamp's authenticating inscription on Hamilton's *Large Glass* which is now part of the section remade by Tate Gallery conservators as discussed in chapter one. Flanagan also provided a spare piece of the same linoleum should the work need replacing again at anytime.

Flanagan was evidently aware of the precariousness of the work. He endorsed the making of an exhibition copy as well as replacing parts of the original. However, it is even more interesting that he preserved signed pieces and continued to systematically inscribe and date replacement parts. No such inscriptions exist on the replica.

Like Serra's *Shovel Plate Prop* and Zorio's *Piombi*, Flanagan's soft sculpture allows for the potential and inherent possibility of change, inertia, even collapse. The introduction of a new work and a new potential of change is clearly an important issue as the finishedness of the parts, surface finish and markings *are* different. In 1985, it was obviously felt by artist and respective institutions that it was better to have an exhibition copy than no Flanagan. But the situation of the two sets of works clearly prompts, still, a number of questions, especially concerning the open visibility and documentation of the different versions.

To Disintegrate: To Replicate

Returning to Serra's *Shovel Plate Prop* I want to end this chapter by considering the issues surrounding replication, the logic of replication and disintegration further. It is striking that 'to repair', 'to discard', 'to pair', 'to distribute', 'to complement' and 'of simultaneity' also formed part of Serra's *Verb List*. Documenting the actions of the artist in the 1960s, these verbs also pre-empt the key issues surrounding replicas today. As the current debate testifies, the growing numbers of replicas in museum collections worldwide should be ideally divided into different generic types: replicas made by artists; posthumous replicas; replacements in a different material; works that are remade each time they are installed and parts that are replicated. What is fascinating is that Serra vividly dramatises many of these problems and all these types of replicas could be relevant to his sculptures, now and in the future. And might we want to repose the question put forward to Serra by Liza Béar in 1976 and used by Hal Foster as a formal device to compose his text 'The Un/Making of Sculpture', 'What does making sculpture mean to you right now?' to *What would remaking your*

*sculpture mean to you right now? Or perhaps, rephrased again, What would someone else remaking your sculpture mean for you right now? Mean for the work right now?*²⁴³

If Serra's statement in New York is understood as the complete liquidation of the 1969 work, it is interesting that he has suggested remaking *Shovel Plate Prop*. The 'dead on its feet' statement in 2007 refers to Serra's original material work so arguably a replica, in this instance, would repeat (and keep alive) the performative gesture of the work, the active process or action-process. What then for the original lead sheets if now considered obsolete residues? Ethically is it right to replicate *Shovel Plate Prop* and, if so, when and by whom? It is clear that the issue of replication creates anxieties for the artist, art institution and scholars but also for the viewer and for interpretations of the sculptural object itself. If replicas are considered a reflection of ourselves Serra replicating himself is problematic; *what does making a replica mean to him right now?* If Serra does decide to make a new *Shovel Plate Prop*, revisiting the sculpture over forty years on is essentially a reinterpretation of the work and a reinterpretation of himself. A distortion may occur. In fact, Serra had made a cardboard mock-up of the *Prop Pieces* for the exhibition at the Museum of Modern Art. The mock-up of Tate's *Shovel Plate Prop* was not consistent to the work that arrived as there were discrepancies in the dimensions and the weight for the artist. So already there may be differences if a replica were to be made by Serra himself. Perhaps, as Serra believes, a remake by an artist does not constitute a replica rather it is simply another version, the new sculpture *is* the sculpture.²⁴⁴

In the UK, legally, the artist has intellectual property rights over the physical treatment of a work in his or her life-time plus seventy years post mortem. Serra does not, however, have complete control over the sculpture. *Shovel Plate Prop* now belongs to an art institution, in this case Tate, and any decision about its remaking will ultimately rest with the Tate Trustees.²⁴⁵ When *Shovel Plate Prop* collapsed in 1989 conservators decided not to endorse a remake. Derek Pullen, then Head of Sculpture Conservation stated, ‘Personally I believe it would be a mistake to let Serra revise, replace, or replicate this sculpture. Its structural weakness and appearance is part of the work and was known to the Trustees at acquisition. Since 1969 the sculpture has acquired a patina and conditions that is itself part of the work’.²⁴⁶ This surface patina is similar to Zorio’s in that it presents the ephemerality of the work, the temporality of the material, even if it is a slower ageing process. For curator Hilka Hiiop, patina in its broadest sense ‘describes all signs and traces left on an art object by its passage through time - a consequence of the life of an artwork from the moment of its creation to the present day’. For her, the physical changes should be considered ‘carriers of an immaterial dimension of historical, scientific and emotional values. Patina forms a sort of biography of the work of art’.²⁴⁷ This idea of a biography of a work of art as evidenced on the material object is key to what I have termed ephemerality. And, as I have noted, various surface markings including what appear to be dimensions are clearly apparent in the 1969 Galerie Ricke image and the undated Tate image of *Shovel Plate Prop*. The patina of the lead and the original markings could have been superficially produced on the surface of new lead sheets and there is, as has been mentioned, a precedent for this but this would have been at the cost of the original ageing material. A new lead sheet would also have

resulted in new markings and, simultaneously, the beginning of a new ageing process. Perhaps then the tarnish, the patina, saved the original material in this instance.

If, in the future, it is agreed that a remake is necessary, what should and could be replicated needs clarification. The material and conceptual issues are problematic; is it appropriate to have *Shovel Plate Prop* made, if possible, in the same way, out of the same material and with similar markings added? Or, is it better for *Shovel Plate Prop* to be an explicitly new version so that both works are different with their own histories, one more accessible than the other as with Flanagan's exhibition copy? Or again, like *2-2-1: To Dickie and Tina*, should *Shovel Plate Prop* be destroyed and a lead antimony version made? Recasting this work, and its surface patina, as ephemeral, temporal and fluid, like Zorio's *Piombi* and Flanagan's soft sculptures, allows it to become unmade and, as a result, possibly remade again and again.

The questions remain: What is *Shovel Plate Prop*? What was *Shovel Plate Prop*? And what will *Shovel Plate Prop* become? Today, is *Shovel Plate Prop* two sheets of lead? One flat and one rolled? Is the work the material action of 1969? Could it be the action of 2019? 2069? Is it the original lead with its original markings or is it the logic of the sustained material action of the work? Would a new version suggest a failure or tarnish our understanding of the original? Or, is this already jeopardised when we discover how the artist now feels about the work? If the replica determines the original surely the original must also determine and influence the replica. All these questions reflect those surrounding the discourse of replication in general. The desire for an original material residue may be outmoded and defining the status of Serra's work might mean separating an action that once was with the material that now is.

Serra has already destroyed works to make replacements as well as swapping certain parts for others thus destabilising the notion of an original work.

And might this be the point? Re-straightening the sheet repeatedly will make the material more and more supple and therefore quicker to sag in the future. As the lead gets more fatigued the work will become structurally weaker and therefore more precarious. The collapse in 2011 is testament to this argument. *Shovel Plate Prop* seems to exemplify why replication might not only be a possible strategy but also a necessary one. The process of making and the potential of the material's unmaking are key to Serra's *Shovel Plate Prop* but perhaps these cannot be maintained today in relation to Serra's original action *and* the original material. It may be impossible for Serra and the work to have it both ways. Unfortunately lead antimony does not seem to have resolved the problem of sagging completely as *2-2-1: To Dickie and Tina* demonstrates, Serra stating that the new bowing in this stronger material is 'a given'.²⁴⁸ This admission also highlights the precariousness of replicas. And perhaps the reality of material failure, as with Duchamp and Hamilton's *Large Glass*, is inherently part of the work even with a substituted material.²⁴⁹

Definitively Unfinished

Originally created for *9 at Leo Castelli*, Serra could, and did, recreate a number of different iterations of *Splashing*, each presenting the *what is being done* rather than *what had been done*.²⁵⁰ In his review of the show, Kozloff questions how the works would be de-installed without being destroyed, their lack of permanence resulting in a 'pathetic transience'.²⁵¹ *When Attitudes Become Form* saw pieces being recreated by

American and European artists. As such, the show was filled with works and events that had gained notoriety elsewhere, of interest here were those from *9 at Leo Castelli*. For Bruce Altshuler this was not surprising for such a large survey exhibition that took place at a time of highly experimental activity, 'But it does generate tension with the attempt to get beyond the fine art object, for multiple re-creations of ephemeral works begin to function as persisting entities, playing the old role in new ways'.²⁵²

In the cases so far discussed there has been a decisive shift towards the repeatability of the works and the regeneration of material systems. Serra's *Prop Pieces* can and have been re-installed and re-balanced but also remade in different materials. Zorio's lead and chemical reaction has had new components added to re-activate the piece and Flanagan's soft and malleable sculptures are formed with each installation and exist in two guises.²⁵³ In this context, it can be seen that Serra is as much an artist of ephemera as Flanagan and Zorio. There are complexities and subtleties within each work and its logic but to consider the moment after precariousness, to envisage whether a system can be repeated with new materials or in a new situation is necessarily also to engage with the idea of replication.

Replication looks initially like the opposite if not the death knell of precariousness, volatility, liquidity, malleability and softness. But, on reflection, it highlights the precariousness of an object, the vulnerability of its material status, both conceptually and literally. In this chapter a hidden history of replicas has continued to be unravelled and the idea of keeping a process active has been established, a theme that will continue to be addressed throughout the thesis. There are many different reasons

why works are replicated but here I have considered when an institution decided not to go ahead with a remake. In this instance the decision may have had implications for the status of the work twenty years on. It has also looked at different processes and (re)actions that have to be replicated each time for the work to *be* in process and in progress. It has also explored the consequences of a real exhibition copy, which was made for a set purpose but is possibly affecting the accessibility of the original whilst ageing differently with different inherent vices. In the next chapter, I take these issues further in the context of process or performance-based work that has to be re-made on each occasion that it is shown.

With Time Re-Action: The Performative Remakes of Robert Morris and Michelangelo Pistoletto

‘Personally, I’d rather break my arm falling off a platform than spend an hour in detached contemplation of a Matisse. We’ve become blind from so much seeing. Time to press up against things, squeeze around, crawl over’.
Robert Morris, 1971.²⁵⁴

‘Now images, the past tense of reality, begin to give way to duration, the present tense of immediate spatial experience’.
Robert Morris, 1978.²⁵⁵

In *Rundown* 1969, the filmmaker Robert Fiori shot the *making* of Robert Smithson’s *Glue Pour* [Figure 32]. It is a film of the work where making the work *is* the work. This specific pour piece was created as part of a project for Lucy Lippard’s exhibition, *955,000*, at the Vancouver Art Gallery in 1970.²⁵⁶ Five hundred pounds of a water-soluble material oozed down an incline of rock and soil only to be washed away hours later. This is approximately the same amount of molten lead that Serra threw for his *Splashing Piece* which was first created for *9 at Leo Castelli* in December 1968. Serra was drawn to Smithson’s views on materials and decay and believed him to be a ‘catalyst’ for artists at this time.²⁵⁷ Beside a road in the woods at the University of British Columbia, *Glue Pour* was witnessed by Lippard, Nancy Holt, photographer Christos Dikeakos and writer Dennis Wheeler. The glue was thick, viscous and paint-like. Its orange colour enhanced the tactile, optical and physical differences between manufactured and non-manufactured material. Smithson’s actions, both of pouring glue onto the landscape and having it captured on film signal the inherent performative nature of this piece. They also highlight the active roll of materials and their presentation, and preservation, through documentation.

As noted previously, for Susan Hapgood refabrication remains uncontroversial if the meaning of the original object is not compromised. But when artists and institutions approve the remaking of works that distort the primary intentions, 'refabrication merely reflects a nostalgic attempt to resurrect something that should only exist in the form of documentation'.²⁵⁸ Displays and installations featuring works to which Hapgood refers - works never realised, impossible to transport or those having degraded due to the use of ephemeral materials - demonstrate the different motivations when she was writing in 1990.²⁵⁹ More recently institutions have been grappling with the issues surrounding works that need to be replicated each time they are displayed, perhaps with new materials, and with instructions or actions to follow. It is these process or performance-based works that have to be remade *to be* the work that will be addressed here. The 'duration' or 'directness' of experience that Morris argued for in his essay 'The Present Tense of Space' will be reconsidered in the context of the replica as a present tense manifestation, the re-experience.²⁶⁰ The relationship between images, 'the past tense of reality', and that being documented or remade will also be thought through.

So far the thesis has set up the problem of replication as operating between competing poles of repetition and ephe-materiality. The complex set of relationships that are established when a work is remade, between the replica and the replicated, now needs careful consideration in relation to more performative material works. In this context, the term performative will be understood not only as an act that is performed by an artist but also the act or actions of the materials employed or the viewer as participant. The axis of original work to new work and the respective status of each as actions but also material objects will be crucial. The cases selected will signal how

documentation is both relied upon and created in the process of re-performing a work. And if, as Yve-Alain Bois put forward in 2007, a replica can most usefully be understood as documentation, then what remains to be said about the role of the document in these key cases.²⁶¹ With reference to the relationship of performativity and documentation, this chapter will argue that performative replicas, as a museum strategy, influence the narrative of the artwork being remade, as well as the narratives of the artist's initial intentions and the work's *being* as a material entity.²⁶²

As has been seen, replicas and reconstructions can be copies, doubles, substitutes, surrogates and duplicates. They enable the instant of the work's first appearance, its creation and materialisation, to be prolonged indefinitely, oscillating between, as Thierry Raspail noted, 'two modes of being; that of being once again and that of still being. Between resurrection and trace'.²⁶³ Smithson's *Glue Pour* juxtaposed glue and landscape. The glue was active as it flowed down an incline and yet the rain washed the material away allowing images to stand in for the action that *had been*. The trace of the material work was temporary, ephemeral, and yet the images of the performance have allowed the work to continue to exist. Here, the duration of a specific action and the possibilities of sustaining that action (the action-process established in the last chapter) will be deployed in the context of more performative remakes. By concentrating on two artists Robert Morris and Michelangelo Pistoletto, the Italian artist attached to the Arte Povera movement, the case studies chosen will look in detail at the performative aspects of remaking their works. The status of the original material relic and the residues of a performance and its re-performance will be addressed so as to demonstrate the different approaches to remakes for artists and institutions revisiting past actions.

In the 1960s and early 1970s both Morris and Pistoletto used mirrors to create works. For example, Morris' *Untitled* 1965, as mentioned in the thesis introduction [Figure 1], consists of four mirrored cubes each 91.5 x 91.5 x 91.5cm and Pistoletto's *Standing Man* 1962, 1982 [Figure 33] comprising a mirrored surface superimposed with a life-sized image of a man wearing a dark grey suit and standing with his back to the viewer. Pistoletto's piece forms part of his *Quadri specchianti* or mirror paintings where he used mirrors and silk-screened images to blur the distinction of the real and the reflected. The true protagonist of these works is the spectator, the relationship of the instantaneous encounter created between his or her own reflection, and the painted figure. In Morris' work the mirrors make the viewer more aware of him or herself participating in a theatrical setting. The mirrors in both examples situate the works in the here and now, a condition Morris was able to articulate in 'The Present Tense of Space'.²⁶⁴ As Claire Bishop has recently acknowledged, 'reflective surfaces were an obvious material with which to make viewers literally 'reflect on the process of perception'.²⁶⁵ A mirrored reflection is transitory and passing, and, of course, ephemeral. By contrast, replicas allow the ephemeral to become enduring as a gesture from the past is repeated to allow a work to exist again and again, as Jeffrey Weiss put it, as an 'Eternal Return' even.²⁶⁶

Both Morris and Pistoletto have recently sanctioned remakes of iconic works from the 1960s and early 1970s and these examples will be the core of the discussion here.²⁶⁷

The re-staging of their performed material 'processes' will be examined as a form of translation rather than a perfect simulation or copy. This is like a reflection, which appears to be a duplicate of a single image or object, but distorts. The chapter will consider to what extent distortions can occur in re-stagings without losing the work's

identity; and if, in fact, the idea and terminology of replication is even relevant to the instances discussed.

Robert Morris: Destruction to Re-Action

Untitled 1967-8 was remade by Robert Morris in his studio in the summer of 2008 [Figure 34]. Not only has Morris remade many of his works since the 1960s, he is also fully aware of the gains, commercial and professional, for doing so.²⁶⁸ In the 1960s Morris produced work in his studio, dismantled them for transportation, and then reassembled them in situ for exhibitions. If the objects remained unsold he discarded them. In the case of his plywood constructions, much like his mirrored cubes, he noted there was no original.²⁶⁹ This assertion highlights the ‘provisional’ nature of his early objects.²⁷⁰ These works were freely subject to refabrication and for Jeffrey Weiss, who has written about Morris’ remade works more recently, this ‘form of permissibility’ left the objects susceptible to rough handling and inadequate storage thereby perpetuating the need for a new material refabrication or refabrications over time.²⁷¹ Not then the specific object of Donald Judd; rather the nonspecific object of Morris.²⁷² Always closer to a Duchampian model than Judd, when Morris became more established, he would sanction an exhibition copy as a substitute for works too costly to pack and transport and sometimes new fabrications were made of early works that had never been realised. These exhibition copies were meant to be destroyed after the show, a protocol not always followed. For Weiss, the activity of making replicas is a characteristic throughout Morris’ career so that the,

‘true “hidden narrative” of his practice concerns agency, authenticity and the status of the object. Together medium and fabrication play two roles: a

practical one concerning the viewer's encounter with the object in the space of beholding, and an ontological one concerning the work's unstable material identity. The propositional nature of the work tells us that material identity is, in turn, subject to change. Consequently, the historicity of the object is, arguably, moot'.²⁷³

Weiss acknowledges that with more than five decades separating the new from the old there is a complicated albeit disregarded exhibition history of copies and refabrications but that through this very act of proliferation Morris' objects have 'attained an indelible status in practices after 1960'.²⁷⁴ I would like to consider then the status and historicity of *Untitled* 1967-8 and its relation to permanence through documentation.

The catalyst for this remake came from a curator at Tate who saw a black and white photograph of RM-28 in the Castelli Archives [Figure 35].²⁷⁵ The institution then approached Morris about acquiring the work. *Untitled* was first displayed in 1968 in Morris' show at the Stedelijk van Abbemuseum in Eindhoven and then at the Ileana Sonnabend gallery in Paris.²⁷⁶ It was destroyed so has never been exhibited since. Originally constructed from a strip of industrial-quality black felt, 3/8 inches thick, its diagonal cuts when flat were reminiscent of a Frank Stella painting.²⁷⁷ When lifted, and fed through a wall bracket, these concertinaed and folded like a paper cut-out template to achieve a random hang. In the 1960s then the piece consisted of a heavy pile of hanging felt, the shape of which was governed by the pull of gravity.

Morris made many more felt pieces than he sold in various colours and thicknesses.²⁷⁸

Remaking a destroyed work based on a photograph, nearly forty years on, whilst

enabling the work to be in its substituted form, might, for some, represent Hapgood's 'irresponsible conservation policy'.²⁷⁹ But Michael Compton acknowledged, 'if the felt itself is quite destroyed, the rules by which it is made are both complete enough and simple enough for the piece to be replaced'.²⁸⁰ Evidently, refabrication of the felt works was not an issue for the institution as early as 1971. And Morris himself has always found the process of remaking works unproblematic; he has remade many of his felt pieces that have been destroyed by instances of moisture or the presence of mice even.²⁸¹ Remaking *Untitled* in 2008 Morris was adamant that the date should remain 1967-8 even though it was not conceived as being repeatable at that time.²⁸²

Morris' felt piece demonstrates a unique category as it is based on a photograph of a destroyed work. The single black and white photograph from the Castelli Archives, by its very nature, is two-dimensional and documents a specific time, place and view, so as a reference for *the* work there are clearly already some issues. I would like to address the relationship between this photograph and *the* piece as it exists today both as a form of documentation and a translation of *Untitled* created in 1967-8. The relationship of document to remake is interesting as a visual comparison revealing the apparent differences between the works, as document and remake, as well as the similarities. Even though a comparable piece of felt and template were employed by Morris the overall appearance, when installed at Tate Modern, was rather different; the cascading visual effect was more contained and did not spill out onto the floor as far. Morris asserted at the time, 'Originality became identified with one photographic image. Of course every installation of a tangle felt will be in some way indeterminate and not match exactly the photograph'.²⁸³ *Untitled* 1967-8 demonstrates how concept and material created a work that was unfixed and variable; the felt was malleable and

soft and reflected Morris' ideas surrounding anti-form at the time.²⁸⁴ And, in its new material form, the piece will be re-performed with each installation. That is to say, it is a complex challenge to maintain the work in 'the present tense' as Morris insisted in 1978 it should, calling for the 'inseparability of the experience of the physical space and that of an ongoing immediate present. Real space is not experienced except in real time'.²⁸⁵

In 2013, Anna Dezeuze and Julia Kelly explored the multiple roles of photography, as artworks and documentation, 'as object and image, as material evidence and the dematerialising frame for the absent, the lost, the imagined'.²⁸⁶ They emphasised how Brassai's *Involuntary Sculptures* bring together two forms of 'dematerialisation': the emphasis on the ephemeral, and the use of photography as a record of these impermanent objects.²⁸⁷ In this instance, it was the black and white image of Morris' work RM-28 that secured the felt piece's place in Tate's Collection and it is this image that has stood for the work since its construction and destruction. The image was a stand-in for the absent, lost and imagined material work. With the remake, Morris sent instructions and new images as a reference for the new installation. These instructions reflect Morris as authenticator and director and the photographic images mark the beginning of the narrative of the new incarnation of the work, albeit dated 1967-8 not 2008. The original photograph and the original work have been superseded by new images and a new material piece. The artist himself acknowledges that the work is indeterminate and not fixed, each installation creating a remake of sorts as the felt cannot, and will not, hang in exactly the same way. As 'involuntary' as it might appear, the fixing of a work through a photographic image is also rather problematic. The last of Morris' instructions is a little ambiguous as it indicates that

the tangled felt should be spread and adjusted according ‘to taste’ or the photograph provided of the new work as made in his studio.²⁸⁸ So the image *or* the individual installer can dictate the overall look of the piece. Like the photograph of the destroyed original, the image of the remade work is also a document, it exists alongside the tangible remake. The new felt and the new bracket devised to reduce the strain on the felt mark a new moment for the work and a new history embedded in an old history; new and nostalgic, fixed and unfixed.²⁸⁹

This combination of destroyed original, archived image, artist remake and new image marks a distinct shift in the narrative of *Untitled*. Destruction has resulted in a remake made by the artist based on the evidence of a photographic reproduction. But, like the original, the remake also has the potential to degrade. The felt of the new *Untitled* could stretch and distort if on display for long periods and, as Melanie Rolfe Sculpture Conservator at Tate revealed, requires regular re-arrangement and vacuuming to discourage infestation when exhibited.²⁹⁰ The photographs, both old and new, as material objects themselves are prone to degradation much like the felt material they document; they are precarious and ephemeral. So, in fact, the photographic image can play a distorting role in what it represents and through its own precarious materiality.

Is there a limit or is the possibility of future remakes endless as Weiss’ title suggest? And what other destroyed works from the 1960s might come back to life having been deemed worth exhibiting? The remake itself has generated information regarding the process of making and hanging the felt piece as well as Morris’ intentions for the work today. Arguably the primary intentions of the work as it was made in a

particular time and place have been distorted by the artist himself. The process has marked a shift in the historical narrative of the work whilst also creating a new history for it. So, in fact, Hapgood is right in her assertion that it is changing philosophical attitudes that shape the way we think about when a replica should be made. And philosophical attitudes are bound to change in the future, both for the artist or his estate and the institution wanting to show a work. A remake, like this one of 2008, if superseded in the future, will also be a part of that historical process.

Michelangelo Pistoletto: With Time Re-Action

In 1971 Morris was critical of what he saw as a discredited modernist idea of detached contemplation, favouring instead direct experience and participation. His preoccupation with duration and the time of lived experience relates to other parallel strands, not least to the exhibition, *Con temp l'azione*, which was organised by Daniela Palazzoli in Turin in December 1967. Its title, of course, is a pun on contemplation but *with time action* also suggests that with time there will be action.²⁹¹ Occupying Il Punto, Christian Stein and Sperone, *Con temp l'azione* continued onto the streets of Turin linking the three galleries. The exhibition marked an important moment in the history of Arte Povera by introducing both action and time into the pieces presented.²⁹² Visitors were given an itinerary, an activity in itself, to follow. It is the actions and duration of one work in this show that will be considered to reflect upon a different instance of a performative remake. Michelangelo Pistoletto's *Sfera di giornali* (Ball of Newspapers) [Figure 36] was active; the artist and his wife, Maria Pioppi, rolled a large ball of pressed newspaper through the streets of Turin on 4 December 1967. The ball was mobile, spreading itself to the spaces it passed, shifting

attention from the object to the relationships which it produced with the spectators, the other works and the other spaces.

Sfera di giornali was first rolled in the streets of Turin in 1966 by Pistoletto and then exhibited in his studio. Similar to the performance of 1967, it involved a large ball made of newspaper, moved by the artist in a circuit of the city. The papier-mâché sphere was a physical articulation of the constantly changing newsworthy events of life, as reported in a two-year period, from which it was made. The act of rolling encouraged the ball's surface to pick up dirt and was therefore transformed by the spaces and places it moved through, as art historian, critic and curator Marie de Brugerolle has described, 'Like the scarab making its ball of earth mixed with straw, the sphere of newspaper picks up litter from the street'.²⁹³ This performance could be considered an exaggerated or speeded up version of the ageing process of the work. Much like the surface patina and tarnish of Serra's lead *Shovel Plate Prop* as discussed in the last chapter, the ball's surface reflects its own biography. These surface marks also record the performance of the work, specifically the performative gesture of rolling, the indexical traces of that 'time-action'.

Newspaper is ephemeral and throw away, a material with no value and so 'poor'. Its content reports on the constantly changing events of daily life. In this work, as it were, old news was, as Briony Fer notes, 'recycled, propelled into another kind of action'.²⁹⁴ There was a physical recycling of materials, the sculpture presented and re-presented material and yet simultaneously the ball performed an action and had an action performed on it, both documented explicitly on its papier-mâché surface. This combination of materiality and the ephemeral is, for me, the crux of what I have

termed the ephemer-material. An ephemeral material has been transformed by an action but is still *material*, with the marks of its duration as a performance, and the marks of its action as performance, imprinted on its surface. Process as action and action as process are all key here.

Since Pistoletto initially made this work he has repeatedly stated, ‘If my action is authentic, it will not need to be repeated, for its very accomplishment will have effectively exhausted the possibilities it contains’.²⁹⁵ *Sfera di giornali* could not look the way it did and reconstructing that look would be too nostalgic.²⁹⁶ But, the point is, works can, and need, to adapt to different sorts of situations in order for them to remain alive; to have an afterlife as it were. In 2009 a new newspaper sphere was made at Pistoletto’s Foundation, Cittadellarte, in Biella, and was transported to London so the artist, his wife, Maria Pioppi, and assistant, Luigi Coppola, could roll it as part of a procession in London near Tate Modern on 23 May [Figure 37].²⁹⁷ During the re-performance, Pistoletto stressed this was a copy of a work made in 1966.²⁹⁸ Outside of the institution of the museum *Newspaper Sphere* re-enacted a similar journey to the one *Sfera di giornali* had seen previously. With newspaper collected from all over the world to create a multi-coloured and multi-national surface, this new newspaper sphere, together with a new circuit or itinerary for the ball, artist and audience to follow, reflected a desire for both institution and artist to revisit the 1966 performance in Turin. A contemporary replica of the original sculptural ball made using contemporary newspapers represented contemporary political and social conditions but as Pistoletto himself acknowledged, ‘it is not something that we make for the first time and we know already what is going on and it can be a representation

of something that has been already done but at the same time it will be a kind of re-creation, a re-creation of the fact'.²⁹⁹

A new title, *Newspaper Sphere*, as well as a new film to document the new performance mark a shift in narrative for the work.³⁰⁰ The new ball with its new surface, a new city to work through and new performance markings appear to reflect that, for commissioning curator, in contrast to Morris' *Untitled* 1967-8 this is a new piece *and* a re-enactment.³⁰¹ By re-visiting the event, rather than showing the film of the original performance, the performative aspect of the work was emphasised, direct experience favoured.³⁰² And, by remaking a sphere rather than re-rolling the original, the fabrication of a *new* work and a *new* physical presence was made more explicit. *Sfera di giornali* of 2009 was a new experience, a new presentation, a new surface. But, as the artist himself acknowledged, it was also a re-creation of an already performed work and the original performance, as such, cannot be ignored. For Marie de Brugerolle the mirror, like the city streets in *Sfera di giornali*, 'is a place of crossings-over and passings-by. Images of the present, past and future are endlessly rolled out and then rolled up again ... that which does not yet exist can be incarnated'.³⁰³ And so too, this argument holds true for performative remakes. Past, present and future are blurred and desires to keep a work alive in the present, the present tense, often focus on the authentic gesture of the reincarnation as if an authentic experience of the work can in this way be secured.

If *Sfera di giornali* was created in a specific time, place and system, was the 2009 version simply a new work neither nostalgic nor repeating the look or action of the original?³⁰⁴ Turning to Pistoletto for clues is useful. He notes, 'For me it's like seeing

an old movie ...It is an historical consideration but the sphere still has meaning. The idea of communication and interaction; everyone can take part and roll the ball'.³⁰⁵

The analogy of watching an old film, historical but still relevant, suggests that nostalgia *and* a contemporary context are at play here. Perhaps then, the 2009 version is neither old nor new but somewhere in between, neither fixed in a time or place and, as with the performances themselves, part of a myth of participation. *Newspaper Sphere* can be seen to represent a nostalgic longing for a moment and an event that *has been* for institution and viewer, it is a re-performance, a rerun of an event, a new work and a reflection of its former self all in one. Much like replicas of process or ephemeral works from the 1960s, presenting a work in the present highlights the temporal ambiguities of the artwork.

In 2001 the original sphere was exhibited at Tate Modern as part of the Arte Povera exhibition *Zero to Infinity*, whilst simultaneously a 1996 version of the sphere was exhibited at the Italian cultural Institute in London.³⁰⁶ Duplicated, translated and reflected, the ball existed as original and replica. Repeatability is, however, embedded in the material work and its performativity especially when we discover that, in contrast to Morris' *Untitled* felt work, there have been different incarnations of the piece since its original appearance and performance in 1966. As mentioned, *Con temp l'azione* meant that with time there was another action, a year later, in 1967. This performative gesture appeared as *Scultura da passeggio* (sculpture to take for a walk) in *Buongiorno Michelangelo*, a film by Ugo Nespolo, 1968 [Figure 38].³⁰⁷ Other incarnations of the work include *Sfera sotto il letto*, part of the *Minus Objects* series 1965-6, *Mappamondo* 1966-8 [Figure 39], where the sphere was enclosed in a circular iron frame and exhibited at *RA3 Arte povera + Azioni povere* in Amalfi and

Grande sfera di giornali. The material in each instance was active, the work becoming the protagonist in its own system. Once encased, however, the piece appeared to have lost its mobility.³⁰⁸

These repeated gestures demonstrate how *Sfera di giornali* has been rolled, slid under a bed and encased, all performative gestures made by the artist. With time action has become with time new actions and new works; what I would like to call re-enactments or re-enacted works. Indeed, each action that was repeated in the life of *Sfera di giornali* was not the same, each considered different works presenting presentness, *what is being done* based in part on *what had been done*. There is then a sense of the repeatability of the work and the regeneration of a system. Clearly the demands on institutions to make these sorts of events or spectacles accessible to the public reflects the process and motivation behind the gesture of re-performance. Despite Pistoletto's earlier stipulations, he has responded to invitations to re-make latterly. A precedent was set with Tate's replicated version and, perhaps not surprisingly, more recently a new ball was created and rolled around Philadelphia as part of *Michelangelo Pistoletto: From One to Many, 1956-1974* at the Philadelphia Museum of Art, 2010-2011.³⁰⁹ A restaging of Pistoletto's *Scultura da Passeggio* took place on 30 October 2010 and the material ball was referred to by the museum as a 'contemporary replica'.³¹⁰ And again in 2013, on the 18 May, a newspaper sphere was rolled through the streets of Paris, from the Louvre Museum to the Monnaie de Paris [Figure 40]. The gesture of encasing has arguably been reversed as it is the performative nature of the work that seems to be what the work *is* for artist, viewer and museum today. It is the walk, the active element of *Sfera di giornali*, that has become the catalyst for the recent remakes, Nespolo's *Buongiorno Michelangelo*,

having been for many the work in documentation form. Pistoletto has acknowledged the, 'unrepeatable quality of each instant of time, each place and thus each "present" action' but the gesture of recreating or reincarnating *Sfera di giornali* signals the repeatability of time, place, action and object, albeit in different guises.³¹¹ It marks a shift in Pistoletto's original intention for the work; artist transforming artist and work and institution allowing, inviting even, artist to do so.

I now want to consider the status of the recent objects created and rolled through different circuits. Can they only be seen as part of 1960s Italy or are they objects (and performances) in their own right?³¹² In December 1967 Pistoletto published 'The Image and its Double' with a character, a man, divided in two, with two lives - one abstract, one concrete. In the moment of narcissistic recognition, 'Man has always attempted to double himself as a means of attempting to know himself.'³¹³ If, as is being proposed, the work involves a distortion of the original, *Newspaper Sphere* allows for a double but also a way of understanding the work. For Pistoletto, the mirror enabled him to get as close to reality as possible so arguably the newly rerolled balls and their re-performances have also created a reality that is as close as possible to that of 1966 albeit in 2009, 2010 or 2013.³¹⁴ A re-performance and re-experience allows for a primary version of a work, a new reality, for some the only reality, for others a repeated reality. And it is the newly made newspaper spheres that permit this and will continue to do so in the future if remade again. This case explicitly demonstrates how replicas can become self-authenticating. The re-performances then have also created new documentation informing our understanding of the work whilst additionally destabilising the idea of its historical narrative as a specific physical presence.

Robert Morris: *Object New Situation New Object*

The two examples discussed in this chapter so far have highlighted the very close yet precarious relationship the new physical entity may have with its initial incarnation either in material or reproduction form. It has also established the destabilising effect a remake can have to our understanding of *the* work, destabilising in terms of artist intentionality as well as institutional conservation practice and documentation. It will now move on to another category of performative remake, a performance initiated by the artist but actually carried out by the viewer; a do-it-yourself work.³¹⁵ Jon Hendricks, curator of the Gilbert and Lila Silverman Fluxus Collection, has recently commented that ‘a replica of an interactive work’ which allows people to ‘have the experience of using it’, and which is clearly labelled as a replica, ‘is really not all that different from a photograph’.³¹⁶ In these instances visual documentation is not an appropriate substitute for work, artist or participant and, as Hendricks notes, the work itself has become similar to a document.

In 2009, rather than exhibiting surviving imagery, Morris was asked to repeat his infamous 1971 Tate Gallery participatory work where objects had been made explicitly to be used and experienced: pulled, pushed, climbed upon, dragged and crawled through. For Jon Bird, Morris’ ‘arena for performative play’ asked the spectator, as active participant, to complete the work.³¹⁷ This is an interesting proposition in relation to the works discussed in the last chapter in terms of finish and being in a state of finishedness.³¹⁸ Bird also emphasises the crucial importance of Duchamp for Morris’ work, the connection of visual and verbal which is also noteworthy in relation to the historical case of *Large Glass* discussed in the opening

chapter. Constructed mainly from plywood and blockboard, all with a natural finish, the objects themselves were clearly precarious.³¹⁹ Morris even quipped in a letter to Michael Compton, the organiser of the show, ‘We’ll have to put signs up telling everyone to “watch your step” (or “Mind the Step” as they say over there)’.³²⁰ No arm was broken falling off a platform but the show closed after only five days due to visitor injuries and damages to the objects.³²¹ So then the material objects and the concept of the work were precarious and have remained as such since. It is interesting then that Morris was approached about a remake.

The idea of a Morris exhibition was first proposed to the Tate Gallery by the critic and Tate Trustee, David Sylvester, in October 1968 and reflects its relevance within the fabric of the 1960s moment and the thesis as a whole. Morris’ work was not well known in Britain and Sylvester envisaged a conventional retrospective focusing on his Minimalist works from the 1960s. Morris himself recognised the necessity for showing past works but also intended to include a large-scale installation.³²² In creating such an environment in 1971, Morris was staging his most ambitious investigation of spectator participation. Structures included bars, beams, weights, platforms, rollers, tightropes, tunnels and ramps built from materials such as plywood, stone, steel plate and rope [Figure 41]. Visitors were meant to engage actively with the work, to experience things whilst also being aware they were experiencing them. Objects were to act as props or ‘prompts’ to actions.³²³ Instructions, in the form of black and white images, 10 x 14 inches, were commissioned by Morris and produced prior to the opening, using museum staff. They showed men and women elegantly balancing on wooden beams and platforms, walking the tightrope, hauling themselves up a slanted board with the aid of ropes and manipulating a huge rolling drum by

standing inside it [Figure 42]. These images were posted on walls next to the pieces indicating the various ways in which the spectator could interact with the structures. A black and white film, *Neo-Classic* [Figure 43], depicting a naked female model (Jill Purse) ‘performing’ with the various props was also made by Morris just two days before the exhibition opened and was introduced into the installation adjacent to the actual objects.

Keith Sonnier’s *Object Situation Object 1969-70*, made two years before Morris’ Tate Gallery installation at Galerie Ricke, Cologne had also recorded a performance through images. The publication includes reproductions of actions using props and various materials and makes a nice comparison to Morris’ work. Unpaginated and with no text, it is collection of photographs by Richard Landry of a performance piece created by Sonnier. As such, it was published as documentation of performances held at Galerie Ricke during 1969 and 1970. Performers included Tina Girouard, Mike Kern, as well as friends of the artist. Rephrasing Sonnier’s title *Object Situation Object* to *Object New Situation New Object* allows us to reflect upon the shift or series of displacements that occurred from 1971 to 2009 in Morris’ installation. It is the new situation that is of interest here, the gesture of the prefix *re-*, the combination of past and present in relation to the institutional historical narrative and the visual documentation used at the time by the artist and the do-it-yourself-ers. If the condition of the work and the danger it posed to the public were a concern then, what had changed? Why was this participatory work revisited?

Morris’ exhibition, and its abrupt closure in 1971, has become a landmark in Tate’s history and was acknowledged explicitly in 2009. But, as Bird notes, little critical

attention has been paid to the retrospective other than by Maurice Berger in 1989. This is possibly the case for the restaged work also. As noted, Morris' installation was the first participatory work that the institution had realised. The expectations nearly forty years on for artist, institution and viewer had obviously changed, with the re-staging revealing the 'moment of intersection between Tate's evolution and the evolution of art practice' as the museum claimed.³²⁴ In 1971, the museum decided to close the exhibition rather than alter or remake works. In some ways therefore this example is quite similar to Morris' *Untitled 1967/8*, which was destroyed and has recently been brought back to life. When first made, Morris' participatory work was not intended as a work that would be recreated. Materials were to be locally sourced and recycled after the exhibition closed. Its historical status and significance then has shifted with the introduction of a 2009 version. Its resurrection marks the work's new status as a repeatable event, an event that, in contrast to the original, was extended and remained open for several weeks.³²⁵

The restaging of Morris' participatory show in 2009 also marks an important point in the history of the institution, a response to and reflection upon its former self. Much like *Sfera di giornali*, for the institution, this was a 'contemporary interpretation' of a 1971 exhibition and, for the artist, it was not to be considered a re-enactment of an historical event.³²⁶ Tate curators felt the work was ground-breaking for its time but also the gesture of revisiting reflected the institution's involvement in recreating performance and interactive events. The curators noted: 'For contemporary audiences to be able to participate in Morris's installation constitutes an important, experiential kind of lesson that illuminates, simultaneously, a key moment in the evolution of Morris's work, in the history of participatory art practice, and in the development of

Tate as a museum (from the Tate Gallery to the very different character of Tate Modern). The work remains compelling now, in reconstructed form, because of its challenge to the habitual movements and behaviors of our daily lives'.³²⁷ In contrast, for Phyllis Tuchman, 'once the materials were upgraded and safety features added, the historicity of the project was negated'.³²⁸ Although a corrective then, the attempt to turn the original failed experiment into a successful live event, was for this critic, still fraught with problems.

In 2009, *Bodyspacemotionthings* [Figures 44a, 44b and 44c] occupied the east end of the Turbine Hall and included replicas of many of the original works. The 1971 plan formed the basis for the exhibition and false walls were made to replicate the space of the Duveen Galleries where the works were first shown.³²⁹ Some works were absent or altered, perhaps in response to the events that led to the early closure in 1971. Contemporary methods and materials, including higher grade plywood, were employed and current health and safety standards were evident with the number of barriers, extra protective mats and netting, signage, instructions and gallery assistants invigilating.³³⁰ As with the original, the 1971 black and white images were positioned next to each work indicating how people were meant to interact with the objects and materials. *Neo-Classic* was also included at the entrance to the whole installation. As has been argued, with any remake, the work being remade is always present, albeit inevitably transformed. Comparisons are drawn, the new work interpreted in terms of the original. However, in this instance, the inclusion of the images and *Neo-Classic* created a complex set of references and distortions; past and present were blurred by the act of re-staging and re-performing.

Anna Dezeuze acknowledges that most do-it-yourself artworks tend to be displayed either in the form of originals or replicas, usually accompanied by documentary photographs or films, and explanatory texts.³³¹ For her, documentation is an ‘entirely inadequate substitute’ for the actual experience of do-it-yourself artworks, ‘Even displayed alongside replicas, documentation can play an inhibiting role, participants often feel compelled to copy what they see in the photographs or films, rather than engage with the objects in themselves’.³³² It is to the visual documentation of this work, the supplementary images, that I now want to turn, both in terms of the images employed and the images created by the participants themselves. Morris’ 1971 retrospective marked a development from his mirrored cubes as well as his associations with theatre and dance; the spectator now participated physically. It is interesting however that no mirrors were included as a means of allowing the public to grasp instantaneously and visually that experience, either in 1971 or 2009. Writing about the original piece, Catherine Wood, the Tate curator who approached Morris regarding the remake, also focuses on the mediation of the public’s encounter in relation to the photographs employed and the inclusion of *Neo-Classic*. As she notes, whilst the objects were dismantled and recycled, according to the artist’s wishes, back into the material economy, ‘*Neo-Classic* survives as an indigestible remnant of the exhibition that has been mis-read as a document or statement of intent’.³³³ Similar to *Scultura da passeggio*, it is the document that exists as mediator or translator *to* and *of* the original three-dimensional prop. For me, this is also the case for the demonstration photographs which were inserted into the 2009 version. Wood notes that the documentary photographs, originally produced as ‘demonstrations’ for viewers, ‘had taken on the outmoded patina of being ‘art’.³³⁴ The photographs and *Neo-Classic* arguably present an idealised form of participation and their inclusion could be read

as a nostalgic gesture rather than a practical aid. And, as Wood acknowledged, the images have also played an important part in the life of the work, how it has been read and understood since.

In 1978 Morris had noted that, even if opposed to photography, sculpture cannot escape it; temporary and situational, 'made for a time and place and later dismantled. Its future existence in the culture will be strictly photographic'.³³⁵ So how were these images understood or used at the time and since? In her argument, Wood employs Philip Auslander's two categories of performance photography: the documentary and the theatrical.³³⁶ She believes that Morris' demonstration photographs were problematic in 1971 as they tried to fake the latter category for the former, theatre was posed as documentary and the actual performers themselves were excluded from participating in their creation. 'Rather than acting as mirrors - the facility that a dance studio would have in order that the dancers could check their posture and form - the photographs were propositions about behaviour that lacked reciprocity with the actions of the viewer. Had the photographs somehow shifted and openly reflected the actual images that were being created of people engaged in actual activities, including the dangerous ones, would the outcome have been different?'³³⁷ Unlike Sonnier's *Object Situation Object 1969-70*, the real performers were not documented *in the act of* a live performance. On Wood's terms the use of real time films or mirrors would have been appropriate for the 2009 version so as the do-it-yourself-ers could view themselves *in the process of*. Actions could have been reflected allowing the participants to become more aware of their actions outside of themselves.³³⁸ It is curious, then, that the original photographs were employed. Substituting the images and film with mirrors might perhaps have reflected better the new context and site

whilst also allowing visitors to be more aware of their role, the work setting the stage for their performance. This is significant when we realise that Morris felt he was no longer choreographing his viewer in 2009.³³⁹

For Wood, the role of the images was complicated by the fact they were pre-staged and pre-determined. I think this argument could equally be applied to the 2009 exhibition as a whole.³⁴⁰ Although a re-performance, a re-staging, the decision to re-visit the work had a pre-determined and pre-staged element with the selection of objects and the expectation for artist, institution and participator. The original images referenced the authenticity of the performative remake but also insisted on a relationship to those images which was arguably neither adequate in time nor material. Their inclusion in *Bodyspacemotionthings* blurred present and past distorting the narrative of the work and its impact and place in the institution's history. The displacements for work, artist and participator were evident. But it is surely also the case that how the work's history will be written in the future will have to take account of its re-stagings.

To Re-Activate

The performative gesture of remaking a work in itself opens up the possibility for more remakes, more performances, what Weiss called its eternal return. Morris himself from the outset has found remaking felt works, even ones that no longer exist, unproblematic and uncontroversial. On the other hand, Pistoletto's ball of newspaper has appeared in many guises and situations and shows that the artist has responded to the shift in institutional demands differently over the years. While Morris seems to

have had no qualms about a remake, equally ambiguities may become more apparent in the future if the remake or the new photographs start to deteriorate. Inevitably questions about who has the right to remake and what documentation is the appropriate reference point will emerge. Remakes also reflect the status of the artist and the work at any given moment. Morris' felt pieces have been requested for exhibitions regularly since their initial appearance in the 1960s and Morris has obliged by remaking them when necessary. Because they are the authors, Morris and Pistoletto revisiting participatory works can be considered authentic re-performances but their relationship to the original is still both precarious and complicated. Like the felt and newspaper employed, originals, remakes re-performances and photographic documentation highlight the complexities of remakes in general. The processes of action, duration and documentation could be ongoing especially if artists and institutions are happy to sanction remakes.

The case studies used have each highlighted the distortions that can occur based on time, material and space or place of display as well as original or new documentation. Morris' felt piece today acknowledges only the original date but the performance pieces re-acted in 2009 by Pistoletto and Morris were assigned new dates and titles, a strategy possibly decided by institution rather than artist. With the destroyed Morris, a double date (*Untitled*, 1967/8, remade 2008) would be more accurate but, for now, the artist's wishes have overridden this. For Morris the act of remaking is not relevant and therefore for the viewer it is not evident either and juxtaposing the Castelli archival image with the remake would only alter the perception of both works that are, in fact, *the* work of 1967/8.

In 1971, Sir Norman Reid questioned whether the idea of the museum in a traditional sense was compatible with new artistic activities, ‘which left no record other than film/photographic images’.³⁴¹ Reid sensed that the museum had to change to allow such works to be integrated into an institutional programme. In their performance-based works Morris and Pistoletto originally rejected the traditional idea of a museum as a place and space but the re-performances in 2009, 2010 and 2013 mark a shift, with time re-action and object, new situation, new object. Given that permanent collections continue to acquire site-specific, process, ephemeral and performance-based works there is a strong argument for a more permissive attitude towards remakes when appropriate. Control and authorisation of re-performances are still a concern for artist and institution but the specific aim is to achieve a solution in order for the work to be re-activated.

The works discussed clearly indicate that a rephrasing of Sonnier’s *Object Situation* *Object* title to *Object, New Situation, New Object* is appropriate. But so too *con temp l’azione*, with time action, could be rephrased as with time re-action. These performative works have each been remade in order to continue *being*: preservation through re-action or re-activation. If, as in the cases presented, experience, process and the subject are important then refabrication seems to make sense. However, resurrecting works marks an ambitious and brave move on the part of the artist and the institution. The re-performances are generative of documents and reproductions in their own right, albeit a slightly different kind of reproduction to a photographic image. Berger has discussed Morris’ works in terms of a ‘field of choreographic gestures’ and this idea of choreographed gestures is relevant, especially for repeated performances and creations.³⁴²

It has been argued here that performative remakes can and should be seen in terms of a translation or mirrored reflection, inverting the relationship of new and old. The original work often becomes the reflection, the re-action the reality, the concrete entity when displayed, even if only a representation, a repeated gesture. The process of re-activation also creates new knowledge much like Pistoletto's man who doubled himself as a way of attaining self-knowledge.³⁴³ Like narcissus and the reflection of the self, complexities are ever present. A mirrored reflection is simultaneous with the real image but what has been addressed here are the delays and distortion that occur in the process of re-making works. Documentation created when making a remake and documentation in the form of the replica are important but also problematic in that they can also play a destabilising role for *the* work; they are connected and influence each other. Today, museums are the primary impetus behind refabrication, the agent as it were, rather than the material or artist, as was the case for Hapgood in 1990.³⁴⁴ But what has shifted is the notion of documentation as authenticator, the document as the work, that may stand in for the work. In the future, these performative remakes too will be seen as part of the documentation of a work both in material form and to mark historical moments for the artist and institution.

In the 1960s the expanding possibilities of material process and processes were key considerations for artists, curators and writers alike both in America and Europe. Catalogues for group shows began to focus on the artist as maker, the process and the activity of art, rather than the objects themselves. For the catalogue of *Anti-Illusion: Procedures/Materials* held at the Whitney Museum of American in 1969, Fiore was commissioned to capture each exhibiting artist at work in his or her studio.³⁴⁵ Fiore's images form part of the narrative of the works they captured and have become part of

the landscape of that time as it was, as it is and as it can be. As with Smithson's *Glue Pour*, he documented artists in the process of *making* emphasising the performative nature of the material works.

If we think of the term 'carius' as decayed, then precarious is in the state of becoming carious. Smithson's explorations of entropy are relevant here.³⁴⁶ He used a 'jejune' experiment for proving entropy, a sand box divided in half with black sand on one side and white side on the other. 'We can take a child and have him run hundreds of times clockwise in the box until the sand gets mixed and begins to turn grey; after that we have him run anti-clockwise, but the result will not be the restoration of the original division but a greater degree of greyness and an increase of entropy'.³⁴⁷

Decay and disintegration all proceed the precarious both materially and metaphorically. Smithson's entropy, like Humpty Dumpty, suggests falling apart, the point of no return.³⁴⁸ What I am suggesting here is that by inserting new material objects or props into the system or shifting the situation, the process can start again, *with time re-action*. For Smithson the pour pieces made entropy visible. *Rundown* documents images of Smithson's 1969 site-specific pours (*Asphalt Rundown* Rome, *Concrete Pour* Chicago, and *Glue Pour*, Vancouver), through the use of 'stills' and filmed footage. This thirteen minute, colour film, with a voiceover by Nancy Holt, was completed in 1993, that is twenty-four years after the event. Stills and photographs, as has been argued, record a specific moment in time, a single view, two-dimensionally. They have a distorting role both in capturing and presenting the original action and preserving that moment as a material object. Smithson noted in 1967 that even if an event could be filmed and prove the irreversibility of entropy by

being played backwards, inevitably the film would get lost or degrade.³⁴⁹ He was aware that documents are also ephemeral not permanent.

With time action has proved a useful metaphor in thinking through the performative role of materials in the 1960s and how their performative nature has been repeated, *with time re-action*. The materials in question are in fact very diverse indeed. For example, images as documentation have included footage of a performed land-art piece, a photograph of a destroyed work, footage of a sculpture becoming mobile, and images and a film that were used as part of a do-it-yourself installation. Joy Sleeman acknowledges that the verb gerundive form of works and their titles in the 1960s, for example Serra splashing and Richard Long walking, suggests that works could be remade, they are in the *process of*.³⁵⁰ And so too with the acts and actions discussed here: Smithson's pouring, Morris' hanging, Pistoletto's walking and Morris doing, they have the potential to be activated and re-activated, to remain in the 'continuous present'.³⁵¹

Nature and Second Nature: Barry Flanagan and Rafael Ferrer

‘Materials such as cloth, rope, plastics and an array of industrial materials, asserted their particular natural properties and provided an element of resistance, a counter pressure to the artist’s gesture, that opened the way for new options’.
Stephen S. Prokopoff, 1971.³⁵²

‘Art as a process in time, action that involves, a work that becomes transformed into destruction or regeneration, dies as soon as it is brought into a museum unless it arrives there already anaesthetised. (Aesthetics is anaesthetics, says Mario Merz)’.
Tommaso Trini, 1969.³⁵³

Robert Smithson’s *Floating Island to Travel around Manhattan Island*, as seen in his 1970 drawing [Figure 45], was to be a temporary, temporal and mobile structure which was to transport a segment of nature, that is, to carry a small terrain of woodland. Realised posthumously in 2005 [Figure 46], a tugboat did pull a barge filled with rocks, trees and pathways around the perimeter of Manhattan.³⁵⁴

Smithson’s artworks and writings testify to his interest in natural processes and the natural condition of a work. In 1972 he claimed, ‘Parks are idealizations of nature, but nature in fact is not a condition of the ideal. Nature does not proceed in a straight line, it is rather a sprawling development. Nature is never finished’.³⁵⁵ With *Floating Island to Travel around Manhattan Island*, Smithson carried out a significant reversal of the relationship of city to park; nature now encircled Manhattan. It presented and re-presented nature but also simultaneously questioned what it is to be ‘of nature’, a term included in Serra’s *Verb List* of 1967-8.

Many artists were drawn to natural materials in the 1960s and, although it is not the dominant strand within art historical commentaries and nor do many of the works even survive, this chapter aims to readdress the balance and account for this.³⁵⁶ It has been argued that Gerry Schum coined the term ‘land art’ after he directed, produced

and filmed a 1969 film of the same name [Figure 47].³⁵⁷ The film showed work from eight American and European artists: Marinus Boezem, Jan Dibbets, Barry Flanagan, Michael Heizer, Richard Long, Walter de Maria, Dennis Oppenheim and Robert Smithson. In order to displace the studio-gallery-collector relationship, Schum introduced the concept of a Fernsehgalerie (television gallery) which can be considered part of the context for artists working with the idea of 'nature' at this time. As such, a number of artists wanting to eschew the commercial and spatial confines of galleries and museums, developed monumental landscape projects known as earthworks, earth art and land art; Smithson's *Glue Pour*, mentioned in the last chapter, is an example of such a project. Landscape became the artist's studio, material and technique and the idea of nature as material and technique, as process, is something which will be developed here. This chapter, then, will look at whether or not nature can ever simply be seen or understood as raw or unmediated, by focusing not on land art per se, or as it has come to be defined, but on specific works by Barry Flanagan and Rafael Ferrer.

Matthew Gandy has considered the different ways in which the raw materials of nature have been reworked and transformed by a combination of political, economic and cultural developments.³⁵⁸ His geographical approach gives an account of the urbanisation of nature in New York City, Manhattan Island specifically, in terms of a 'metropolitan nature' as distinct from the forms of nature experienced by early settlers. His conception of nature includes Central Park as a significant example of American nineteenth-century landscape design which saw a new kind of mediation between nature and culture, a synthesis between technology and urban design, a 'metropolitan nature aesthetic', a second nature as it were.³⁵⁹ Smithson's artificial

landscape, placed on a 30-by-30-foot barge, representing a mediated and transformed Central Park, and its later reiteration, provides a frame for the discussion. But Smithson's works also developed alongside a broader set of interests in the degradation of natural materials.

A year before Smithson created his sketch for *Floating Island to Travel around Manhattan Island*, Harald Szeemann's *Live in Your Head: When Attitudes Become Form*, had demonstrated the dramatic and diverse possibilities for the art object at this time, reinforced by the sub heading for the exhibition: Works - Concepts - Processes - Situations - Information.³⁶⁰ Two artists who had works in Bern, the British artist Barry Flanagan and the Puerto Rican artist Rafael Ferrer, will be the focus of this chapter. Although the exhibition has been widely discussed, and mentioned in an earlier chapter of this thesis, relatively little has been written about these artists and certainly not together. Flanagan exhibited *two space rope sculpture (gr 2 sp 60)* 1967, made from one piece of rope, 60 inches long, and Ferrer exhibited *Chain Link* 1968, made from chain-link fencing.³⁶¹ The format for the exhibition catalogue employed an alphabetised side tab index which positioned the two artists together. And, for the 'London Location' showing at the Institute of Contemporary Arts in London, Charles Harrison placed Ferrer and Flanagan's works from Bern adjacent to each other [Figure 48].³⁶² Harrison was instrumental in bringing the British artists to the fore and his revised version included Victor Burgin and extra works by Bruce McLean and notably here, Barry Flanagan.³⁶³ By exhibiting a substantial contribution from British artists, Harrison's reconfiguration created new relationships as did the text he wrote for the London catalogue which was also published in *Studio International* in September 1969 firmly cementing his take on the original show.³⁶⁴ Harrison's *When*

Attitudes Become Form and his curatorial decision to place *two space rope sculpture (gr 2 sp 60)* and *Chain Link* next to one another will be the starting point for an exploration of Flanagan and Ferrer's works in this period, whether the two artists met or were aware of each other's pieces, or not.

Both Ferrer and Flanagan were using materials that were characterised by flexibility and movability, but which also, it should be noted, exerted their own behaviours; that is Ferrer could bend a piece of wire fencing but only to a certain point; likewise Flanagan's rope could be manipulated but only so far. There was no set fixed shape or 'form' to each and the material itself became part of the 'process' of making; works made themselves arguably 'naturally' or 'organically'. Ferrer and Flanagan's sculptures will be deployed here to generate a discussion surrounding nature and what it is for an artwork to be of nature or behave naturally, their 'as if' in nature quality. As with the action-processes and re-active works discussed in chapters two and three, works will be seen in terms of active objects with continual lives or systems in place, ecologies even.³⁶⁵ I am here referring to ecology as life processes, interactions and adaptations; the movement of materials and energy through living communities. The effects of inertia or gravity and chemical or biological changes to the materials employed, as well as the impact of culture, will also be considered.³⁶⁶ As such, it will be seen that artists were not in complete control of their material or materials, especially when natural processes were performed in real time, be they natural or non-natural materials. Prokopoff emphasised that this tendency created new options and it is these options that will be considered. In 1968, Smithson looked at the relationship of rust to steel. He believed that by excluding technological processes from the methods and materials of artworks, oxidation, hydration, carbonisation and solution,

the major processes of rock and mineral disintegration, could be considered as methods for making art.³⁶⁷ Here, it will be seen that if nature can act on industrial materials, industrial materials can also act as if naturally or organically. So too natural materials may re-present, perform and transform conventional notions of what constitutes the natural.

Replication, normally associated with mechanical processes of reproduction, will be seen to be as much a problem attached to works that are made from natural materials or works that behave naturally.³⁶⁸ In some ways it is exacerbated by a romanticised notion of nature and decay on the one side and a very real anthropomorphism on the other. In this chapter, then, I will attempt to tread a precarious path between the two developing themes set out by Max Kozloff in 1967 and Smithson in 1966 to think through literal decay which is inherent and often dramatically apparent in some of Ferrer and Flanagan's works when displayed.³⁶⁹ This entails thinking through the nature of a work as well as the nurture of a work, disintegration and decay, the life of a work, its natural state, or states; and the role of the artist, the materials and the museum.

For a fairly brief period, in the late 1960s, Ferrer and Flanagan were interested in the natural condition of materials and both moved on to make very different works relatively soon after this, Flanagan creating hare sculptures in bronze and Ferrer painting vivid figurative representations of the Caribbean. This moment of using 'natural materials' is itself, then, ephemeral and the possible repeatability of that moment will be addressed by putting forward the idea of a 'second nature' where the distinction between nature and culture is blurred.³⁷⁰ By considering selected case

studies by Ferrer and Flanagan in the light of mediated nature, I suggest their work not only questions the authenticity of a work but also the authenticity of nature. Given some of the materials deployed have literally perished, I will ask whether these works can remain active and what it means for them to do so. Again, the emphasis will be at the characteristics of the materials employed and the possible strategies for conserving or replicating them.

In 2010, when organising an exhibition of his work at Museo del Barrio, New York, Ferrer disliked the notion of a 'Retrospective', preferring 'Retroactive'.³⁷¹ Retroactive as a phrase is relevant here in terms of replication and nature, nature then and now, nature as active then and now. It is not about a passive looking back but rather an active re-engagement. Perhaps one could liken this to Smithson's 2005 floating garden, which was retro and active simultaneously, it was nature re-presented, what Matthew Gandy has described as 'reworked' nature even.³⁷² As a concept, the retroactive is helpful in contextualising the material, ephemeral and ephe-material aspects of the works discussed to consider the problem of 'nature' and 'the natural' in terms of artworks and their replicas. Both Flanagan and Ferrer repeated or replicated their works to some extent but with very different motivations and according to different logics. This chapter will question how these 'natural' works have been represented at the time and more recently.

Natural Flexibility: When Attitudes to Industrial Rope and Chain Link

Become Form

In chapter two, it was seen that in the 1960s Flanagan began to explore soft and malleable materials that would change their configuration with each installation. Founded on an interest in ‘pataphysics, Alfred Jarry’s ‘science of imaginary solutions’, Flanagan had adopted an almost playful approach to his work allowing materials to find their own sculptural form.³⁷³ *ring n* 1966 was constructed by pouring 275 kilograms of sand from bags directly onto the floor. This formed a cone which then had four scoops taken, by hand, from the centre. The word ‘ringn’ suggests that the work, as a ring, can be understood in two dimensions or extended into three, and that this ring is a noun due to the inclusion of the ‘n’ which defines a thing as much as an action or process. Charles Harrison’s and Flanagan’s fascination with the procedural aspect of the work resulted in a film, *The Lesson*, a conversation between the two men which documented the durational condition of the work. Given the work was conceived by Flanagan to be re-constructed, the process of reconstruction was meant to be a physical experience but it was the materials that generated what Jo Melvin has described as ‘its own’ or ‘natural’ solution.³⁷⁴

Similarly, *two space rope sculpture (gr 2 sp 60)* exhibited at *When Attitudes Become Form* was very much about process and materiality. It was made with industrial rope which Flanagan dyed green, section by section, in his bath. The sisal rope was purchased from British Ropes and was coloured using Dylon hot dyes in a mixture of several colours, working in sections due to the length of the rope. The bracketed part of the work’s title can be broken down to indicate green, two spaces, sixty foot. This

abbreviation, simple and direct, describes the piece and reveals how the work is meant to be displayed. It is interesting that originally the rope crossed from one space to another but it has also been exhibited in a single space reflecting a shift even in this directive. Rope is a group of plies, yarns or strands which are twisted together in order to create a larger and stronger form. As such, rope is strong enough to be used for dragging and lifting yet flexible enough to be coiled, wrapped and knotted. Not so much malleable as arrangeable, it will take varied forms depending on the way it is slung or pulled.³⁷⁵ Made from sisal, a natural material, rope is also a tool, it is very much part of, or in, trade. And, recently, Flan Flanagan has reflected upon how her father felt he was, similarly, in trade, part of the world of everyday making and workmanship.³⁷⁶ Industrial rope is a good example of nature mediated by culture, it is not simply raw nature, it is worked and works. In short, it is mediated in the process. However with *two space rope sculpture (gr 2 sp 60)* the manipulated sisal determines the shape of the work as if ‘naturally’ without intervention. The rope’s flexibility allows the work’s shape and appearance to also remain arrangeable and adaptable.

In 1966 Ferrer was working with flexible steel sheets, draping them to find ‘linear, sensual curves’.³⁷⁷ As Ferrer noted, the sheets would sag and create undetermined shapes, not directly under his control but determined by the material itself.³⁷⁸ Similar to Flanagan’s sand or rope, Ferrer was working with readymade materials and by 1968 he had further developed this by working with rolls of cyclone fencing. In Puerto Rico, his home country, he found in chain-link fencing an important material to push the idea of flexibility since it could literally support itself.³⁷⁹ And for *When Attitudes Become Form* Ferrer sent a roll of chain-link, 3 foot high by 50 foot long, noting, ‘the configuration of the chain link is not static, and it’s not dogmatic’. He

insisted he was not ‘proposing a particular sculpture or shape, only a material and its possibilities’.³⁸⁰ In Bern it was placed outdoors on grass, its length twisted into a kind of spiral. In London, by contrast, it was indoors forming relationships with nearby works including Flanagan’s *two space rope sculpture (gr 2 sp 60)*. Sagging, leaning and rolled, it linked to the works of not only Flanagan but also Morris’ felt pieces and Serra’s propped lead sheets and rolls discussed so far in this thesis. Ferrer used cyclone fencing to create forms dictated by the material and the pull of gravity. Like Flanagan’s rope, this material defined the shape of the work and was also flexible enough to be rearranged or altered. Flanagan and Ferrer’s works found their own shape naturally even if the materials of this moment were, as Ferrer has recently acknowledged, demonstrating a ‘fetish with hardware’.³⁸¹

At *When Attitudes Become Form* in Bern, Flanagan’s ‘sinuous length of hemp hawser’ snaked from one gallery to another, starting at Richard Long’s poster *A Walking Tour in the Berner Oberland* and finishing at Robert Morris’ *Felt 1967* encompassing Alighiero Boetti’s *Me Sunbathing in Turin, January 19 1969* and Bruce Nauman’s *Collection of Various Flexible Materials Separated by Layers of Grease with Holes the Size of My Waist and Wrists 1966*.³⁸² At this time, the labels of process, dematerialisation, anti-form, arte povera and land art (represented in the works the rope passed) all signalled a move away from permanent, hard or solid sculpture. For many artists and critics the emphasis shifted instead to natural materials and processes. For Stephen S. Prokopoff, writing in the catalogue for the exhibition *Six Sculptors: Extended Structures*, held at the Museum of Contemporary Art in Chicago in 1971, ‘Soon the hard geometry of Minimalist forms was reproduced by artists in the countryside using natural materials (bales of hay, tree stumps, blocks of

wood, dirt furrows). These materials, being themselves organic, not only demonstrated but embodied the changes of environmental pressure and focused attention on the creative potential inherent in natural processes'.³⁸³ In this context, natural or organic materials were able to demonstrate a creative potential whilst natural processes could also transform a work; artists could, and did, harness both these strands. Prokopoff also acknowledged that industrial materials could themselves assert natural properties and Flanagan's rope and Ferrer's chain-link demonstrate his theory that natural and non-natural materials were employed for their inherent characteristics which may perform an alternative process to that of the artist.

The idea of materials asserting particular natural properties, or performing naturalness, is implicit in the 'as if' quality of *Chain Link* and *two space rope sculpture (gr 2 sp 60)*. At the ICA in London, Flanagan's rope again snaked the gallery floor, this time passing Ferrer's fence demonstrating quite clearly the sense that these two works were organic with Ferrer's chain-link having the potential to fall on Flanagan's sisal rope at any moment. The metaphors of nature saturate this scenario even though the materials themselves are not natural per se but come from the world of trade, industry, tools and hardware. This begs the question of what then of nature and naturalness when 'raw, ephemeral natural materials' are employed?³⁸⁴ Can nature ever be presented unmediated, and in its raw, ephemeral natural form?

Of Nature: Branches, Leaves, Ice and Water

In 1966 Gene Baro had already encapsulated Barry Flanagan's work with the phrase 'animal, vegetable and mineral'.³⁸⁵ For Baro, Flanagan's works had happened almost

involuntarily as well as having been made. And, for Harrison, Flanagan's sculptures exhibited in April 1968 at the Rowan Gallery, 'appear disturbingly organic', their life dependent on the behaviour of organic substances used in their construction.³⁸⁶ This characteristic contrasted with much of the contemporary New Generation sculpture allowing it to signify organicism as such. Harrison believed that many of Flanagan's sculptures, 'express human vulnerability', 'by exhibiting vulnerability as a factor of their sculptural existence'.³⁸⁷ This is Harrison contextualising Flanagan, in decidedly anthropomorphic terms, much like the way he positioned the works of Flanagan and Ferrer at the ICA. It also reflects a more romanticised view of the pathos of the materials than the performative and bodily nature of material substances, as argued by Kozloff in 1967.

The materials Flanagan used were highly distinctive. His *June 2 '69* 1969 [Figure 49] consists of a rectangular sheet of flax canvas and three hazel branches and was exhibited at *When Attitudes Become Form* in London. As noted, Harrison organised this iteration of the exhibition and would have been instrumental in its inclusion. *June 2 '69* is one of a large number of works made in 1969 where branches lean against the wall whilst supporting sheets of flax in various ways.³⁸⁸ Flanagan had begun using felt and then flax, often propped or pinned to long poles which were usually left in their natural state or burnt.³⁸⁹ He experimented with canvas; whether wall-mounted, stretched, hanging or leant against a wall or balanced with sticks fixed to the floor, as reflected in the other works exhibited at the ICA: *June 4 '69*, *canvas 2 '67/9*, and *number 2 '66/9* comprising flax, wood, bamboo and Hessian. These had not been exhibited in Bern so represent the shift of emphasis initiated by Harrison at the 'London Location'.

With *june 2 '69*, the traditional supports for painting, canvas and wood, have been transformed to create a windbreak-like structure which is propped against the museum wall. Natural materials have been employed and there is a vulnerability of shape as well as a sense of fatigue, which is created by the folds in the canvas drapery. These have formed due to the natural or inherent quality of the material and could appear different and evolve over time with each new display. Natural and organic, exhibited at *When Attitudes Become Form*, it is the attitude of the material that creates the shape or form as well as the appearance of the work much like *two space rope sculpture (gr 2 sp 60)*. There is a material precariousness or ephemerality to this piece that lies between the romanticism of nature on the one side and anthropomorphism on the other. To use Baro's argument but change tense, the piece has not simply happened; whilst on display it is *happening* and is always potentially on the brink of collapsing (or *unhappening*) much like Serra's *Shovel Plate Prop* discussed in chapter two. In this case however, the possibility of collapse and the reality of a vulnerable work made from natural materials reflects that the piece is both *in* and *of* nature.

In 1968 Ferrer continued to experiment with rolls of chain-link to create various self-supporting structures much like Flanagan's branch and canvas propped piece. Whilst teaching in a park the wind blew autumn leaves into his chain-link and presented him with a new natural material to work with. Fascinated by the abundance of leaves at this time of year and their effect on the pavements and streets, Ferrer collected them in huge bags.³⁹⁰ He met with Robert Morris in New York and showed him photographs of these recent works. Morris was interested in the chain-link pieces but was unable to include Ferrer in his *9 at Leo Castelli* show to inaugurate the uptown Castelli Warehouse. Excited and disappointed, Ferrer set about planning a three-part

leaf installation piece which would be deposited at pre-determined and significant locations in New York. Consisting of Philadelphia leaves it was to be carried out by himself and four of his students much like a 'military operation, completely unnoticed, leaving the leaves in those places as if by magic'.³⁹¹ If confronted, the men were to move fast repeating 'Philadelphia Leaves'.³⁹² Ferrer adds, 'The die was cast'.³⁹³ The leaves would be transported and left; there was no going back. Like Flanagan's canvas and branches, they were both *of* nature and an intervention upon it. The gesture of moving the fallen leaves and placing them in predecided locations was itself an act of mediation and representation.

On December 4, 1968, Ferrer emptied eighty-four bushels of leaves in three locations in the New York art world: in the lift of the Dwan, Fischbach and Tibor de Nagy Galleries at 29 West 57th Street; in the front room of the Castelli Gallery at 4 East 77th Street; and on three landings in the stairway at Castelli Warehouse on West 108th Street in Manhattan. Ron Miyashiro, an artist friend, photographed the actions as they happened. Starting with the building at 29 West 57th Street, seven bags of autumn leaves were ripped open so as to cover Ferrer as he travelled in the public lift from the top to the ground floor. In fact, the lift stopped on one floor for two people but when the doors opened and the leaves spilled out, they simply stared in disbelief as they were unable to comprehend what was happening. When Ferrer arrived at the ground floor Miyashiro took a photograph of the artist and the leaves. Ferrer then drove to 4 East 77th Street where two of his students ripped open their leaf bags making a mound which was surrounded by a show of Cy Twombly paintings [Figure 50a]. Finally they arrived at the Castelli warehouse and proceeded to fill the staircase landing with the remaining leaves [Figure 50b]

For the art critic Carter Ratcliff, Ferrer's medium was 'part sculpture, part theater, part guerrilla action' and was effective through 'shocking displacement'.³⁹⁴ The contrast between the 'assertive biological' presence of the leaves and the 'severely functional gallery space' meant that the autumn leaves were now capable of connoting themes they had traditionally symbolised in earlier periods; 'transience and frailty, the poignant rush of the seasons, and the inevitability of death'.³⁹⁵ This transience also links to their materiality and Ferrer would have known that this three-part work would not last as a sculpture in the traditional sense, its life was transient and frail also. The galleries Ferrer 'invaded' were dedicated to supporting abstract art, choices which have been seen as a political gesture.³⁹⁶ Ferrer, as Ratcliff went on, was an 'insurgent operating in hostile territory' even.³⁹⁷ Nature was framed by culture, and cast into the midst of New York abstraction to be more specific. Leaves turned out to be a volatile and subversive intervention.

What is interesting is that the leaf works went unseen in the context of art criticism of New York abstraction in 1968. In the *New York Times* Philip Leider, reviewing Robert Morris' anti-form show at the Castelli Warehouse, did not comment.³⁹⁸ Similarly, Max Kozloff made no mention of Ferrer's leaves in his review of the same show even though he writes of the attack on the status of the art object albeit in relation to the works and artists invited to exhibit.³⁹⁹ The leaves could not have been invisible; both critics would have had to step over them to enter the warehouse. For Ratcliff this reflects Ferrer's status as an 'outlaw' and, with hindsight, in spite of the wide exposure Ferrer's art received in New York and elsewhere since 1968, 'it still belongs to the invisible world'.⁴⁰⁰

Obviously Miyashiro's images are now very well known and, as such, the leaf works have entered the history of 1960's art. However, the leaves themselves were not completely silent or invisible at the time.⁴⁰¹ They spoke to and were seen by curators Harald Szeemann, Marcia Tucker and Jim Monte who were all interested in working with Ferrer in upcoming exhibitions they were organising: *Live in Your Head: When Attitudes Become Form* and *Anti-Illusion: Procedures/Materials*.⁴⁰² For *Anti-Illusion: Procedures/Materials*, held at the Whitney Museum of American Art, Ferrer exhibited *Philadelphia Leaves*, which suggests he was not unwilling to remake the work at the time. He then ordered 300 pounds of ice blocks to be placed by icemen on top of the leaves. In contrast to his earlier gesture, this work was visible to art critics who, in turn, made the work visible through their writings. For Cindy Nemser, 'Last year, on entering a well-known museum, I encountered large chunks of melting ice which blocked my passage, and to get around them I had to wade through a sea of rotting leaves'.⁴⁰³ Nemser's observations are based on her encounter of Ferrer's *Ice* comprising fifteen cakes of ice placed over twenty-eight scattered bushels of leaves, on the pedestrian bridge to the museum's entrance [Figure 51]. The ice company's bill for \$90 was framed and presented inside where Ferrer's *Hay, Grease, Steel* 1969 was also exhibited, a work consisting of a pile of hay, a grease-smearred wall to which more hay was stuck, and steel weights. This is an interesting shift in that 'nature' has been modified abruptly, it has a price tag and is now part of a culturally contingent market.

Ferrer's incorporation of ice is also a noteworthy material choice because it transforms physically if placed in an atmosphere above freezing. Ice naturally melts, that is, it changes state, disintegrates and disappears. This is a reversal of the usual

sculptural procedure, where the final form is achieved before a work is exhibited.⁴⁰⁴ Where ice and leaves are placed together there is an obvious association with the changing seasons, cyclical regeneration, and even life and death. Ferrer has recently noted of the original Philadelphia Leaves that they were freshly fallen and dry, and the decomposing only began with the dampness of rain or snow.⁴⁰⁵ Combining leaves and ice resulted in a work that was made and unmade, happening and unhappening whilst exhibited. Unlike Flanagan's preference for making visible that potential to collapse, the ice melted and the leaves decomposed literally making the work disappear. The leaves and ice presented two different temporalities working in parallel over the same period of time, in real time. The movement and energy within these two materials created interactions and adaptations in the context of the exhibition, expanding the connections between cycles and processes to create Ferrer's own art-ecology.

For Ferrer, 'My use of leaves emerged from seeing the fall colors in the northeastern United States, specifically the suburbs of Philadelphia. The leaves anticipate the coming of the winter. They are driven by the wind, covering corners, obstructing and transforming the streets and sidewalks. Mounds of leaves create transitional forms. This annual process is beautiful. Then, in December, snow and ice invade the landscape. As a child, this seemed magical. Having been born on a tropical island, where the weather hardly ever changes, allowed me to appreciate in more northern countries the fall and the winter'.⁴⁰⁶ A Puerto Rican artist working in New York and Philadelphia, this cultural habituation was both natural and unnatural.⁴⁰⁷ Like his leaves that invaded spaces as if by magic, so too ice had romantic, lyrical and magical associations. 'Natural, inexpensive and magical' leaves and ice, as transformative

materials, connect Ferrer to Joseph Beuys, another artist looking at natural materials, processes and the more symbolic role of materials at this time.⁴⁰⁸ Many of Ferrer's projects related to his Caribbean heritage which was often picked up on by those writing about him.⁴⁰⁹ Roberta Smith's 'After Process: A Return to the Tropics' makes a significant and useful connection between process and Ferrer's own background. There is also Ferrer's anecdotal memory of when several tonnes of snow were brought to San Juan in the 1960s by Mayor Felisa Rincón de Gautier to give the city's children a taste of a Northern American winter.⁴¹⁰ So, for Ferrer, ice and leaves were not as natural as they would first appear: mediated by his cultural experience, nature is always in this respect also 'second nature'.

Ice is also peculiar in that it is water but water refrigerated, it is nature culturally displaced. Or perhaps, like Margaret Douglas' invoking of 'dirt as matter out of place' in 1966, it is nature out of place.⁴¹¹ The ice Ferrer used was pre-ordered and then positioned, it was manmade frozen water as opposed to naturally occurring ice in winter. The fact that the ice company's bill was used as a stand in, material proof of *Ice* once the work had disappeared from outside the museum, is testament to this. It was not a natural process that allowed the water to turn from liquid to solid and yet the melting process, the transformation of solid back to liquid water, depended upon environmental conditions, its rate contingent upon the weather. Ferrer's *Ice* also presented 'nature' in an artificial context, as an intervention, much like Smithson's off kilter Central Park. Already then there is a complex relationship between nature and ice for the artist, the viewer and the work itself.

Another artist who used ice to create sculptures in the late 1960s is Allan Kaprow. Realised in 1967, *Fluids* was one of his most ambitious Happenings. Originally commissioned by the Pasadena Art Museum in October 1967, Kaprow recruited teams of volunteers via billboards to build rectangular ice structures at various locations in Pasadena and Los Angeles [Figures 52a, 52b and 53]. The ice, delivered by the Union Ice Company, melted over the ensuing days so that it was photographs, film, the billboard score, the artist's notes and drawings, letters and press clippings that documented the ephemeral event. In time, Kaprow allowed these to be - to use his preferred term - 'reinvented'.⁴¹² In 2004 he noted, 'While there was an initial version of *Fluids*, there isn't an original or permanent work. Rather, there is an idea to do something and a physical trace of that idea. By inventing a version of *Fluids* ... [one] is not copying my concept but is participating in a practice of reinvention central to my work. *Fluids* continues, and its reinventions further multiply its meanings. [Its history and artifacts are catalysts], an invitation to do something.'⁴¹³

And *Fluids* has been reinvented in 2005 and 2008. *Fluids* 2005 [Figure 54] was made for *Art Unlimited, Art/36/Basel*. This was the work's first reappearance since its initial manifestation in 1967. On 13 June an international workshop, in co-operation with the Department of Art and Design at Basel's University of Applied Sciences and the University Basel, remade the work to mark the opening of *Art Unlimited*. Ice structures were built at three different sites across Basel. At the artist's request, students spent two days in a workshop devising strategies to realise the work including co-ordinating delivery of the ice blocks, securing the necessary equipment and designing the structures. This approach resulted in a Basel-specific, contemporary variant of the Happening. In 2008, after the artist's death, *Fluids* was reinvented on 29

March in London outside Tate Modern for *Saturday Live Happening Again* [Figure 55]. And, on 25, 26, and 27 April, in conjunction with the exhibition *Allan Kaprow - Art As Life* presented at the Museum of Contemporary Art, the Los Angeles County Museum of Art coordinated another reinvention by the artist collective LA Art Girls with teams of volunteers at a wide range of sites across Los Angeles [Figure 56].

For Kaprow, process and participation were key to the performativity of a new version, or reinvention, of the initial work. In 1971, when Prokopoff asked Ferrer about art and performance in an attempt to find out if materials were inconsequential and without expressive potential Ferrer responded, ‘I would rather eliminate my performing as much as I can’; the ice and leaves, ‘tend to have a life of their own,’ and, ‘continue to react after you have done something to them. This takes away the interest in performance’.⁴¹⁴ This is revealing and makes a striking contrast to Kaprow. Although the images documenting Ferrer’s leaves and ice works often include him, his students or iceman, they suggest that the installer played their part in the works performance much like Flanagan’s works of this time. Nonetheless it is primarily the ways the materials perform that interest me here. Natural elements are materials with physical, chemical and biological characteristics that have the potential to change. Ferrer’s installations themselves had lives with materials that perform; the ice melted or the leaves decomposed or got blown away. We expect this of ice and leaves as they are natural materials and these are natural processes. Neither commissioned nor invited, the leaves of *Three Leaf Piece* were an artistic intervention. And yet the leaves that formed these piles were, of course, already removed from their natural environment.⁴¹⁵ Decomposing and active, actively decomposing, when transported and relocated, their meaning was also changed in the process. Similarly, Ferrer’s ice

blocks on the ramp leading up to the entrance of the Whitney Museum during the opening of *Anti-Illusion: Procedures/Materials* melted after seventy-three hours, active yet disappearing, material yet immaterial, natural yet manmade.

The leaves and water performed or acted out their own life cycle. Does this make them any different from the chain-link? Well of course there is the literal decay at work and visible as process. Prokopoff's idea of creative potential and natural transformation is dramatised especially *because* organic materials have been selected. In this instance, disintegration is both metaphoric and literal. The fact that the artist does not wish to replicate the work suggests his understanding of their historical dependence on the moment they were made - the cultural embeddedness of natural materials like leaves. They now only exist through the mediation of reproductions. They happened and have been archived as events in the past which, in theory, could be restaged in a new context at a later date. But at present, Ferrer and Kaprow's artworks have very different narratives; Kaprow allowed reinventions of his *Fluids* whereas Ferrer believes his ice and leaves works were of the time and should remain so. They have not been replicated.

In 'Notes on Sculpture Part 4: Beyond Object', published in *Artforum* in April 1969, Morris included a reproduction of Ferrer's *Ice Piece #3* 1969 but does not refer to it specifically in the text. For Morris, works are made from 'stuff, substances in many states - from chunks, to particles, to slime, to whatever' and in his 'Anti Form' text from the year before, chance and indeterminacy were positive attributes to be exploited.⁴¹⁶ These arguments seem to apply both to the Flanagan and the Ferrer works discussed so far, performed but not pre-formed, materials behaving naturally or

performing natural processes yet always mediated. Kozloff's terms of volatility, liquidity, malleability and softness are again relevant to the works and the materials employed as well as to nature and the natural, naturalness, natural processes and natural transformation.

Returning to *When Attitudes Become Form*, a photograph still from Flanagan's *a hole in the sea* 1969 was included in the show [Figure 57]. The original film, now in the Stedelijk Museum collection, was first broadcast in the studio of SFB Berlin on 28 March 1969.⁴¹⁷ This piece existed only as a concept on paper until Gerry Schum asked Flanagan to realise it on film for the television exhibition *Land Art*. Created in February in the North Sea off the coast of Scheveningen in Holland, it shows the tide coming in to fill a Plexiglas cylinder that stands vertically in the sand. It gives the impression, or illusion, of a hole in the sea being filled. To create *a hole in the sea* Flanagan had buried a hollow plastic cylinder in the sand during a rising tide and then filmed the mysterious hole that appeared before the waves finally engulfed the cylinder by eventually filling and obscuring it. The film was shot in ten sequences with views of the cylinder side-on at ground level as well as a bird's-eye view. Just before the end of the film, Flanagan enters the frame to remove the cylinder from the sea revealing the construction of the piece as an artificial staged event. Flanagan, as artist creator, exposes *the* scenario blurring nature and culture, the natural and the artificial. As noted earlier, *a hole in the sea* formed part of *Land Art TV* a television exhibition which presented Earth or Land Art and consisted of eight, carefully constructed films in collaboration with Schum. Lasting 3 minutes 44 seconds, each take is led by a time shown on screen, 13:15 to 16:38, marking the first and final shot. As Joy Sleeman has noted, these indicate the time of the incoming tide (a moon-

influenced ‘natural’ time) in relation to abstract time (in hours and minutes) relative to the actual time of the film experienced by the viewer. She has acknowledged that, ‘These riffs on actual, relative and event-related time and the use of digitized time are conventions caught at a moment when they were still novel: signifiers of a ‘present’ that now reads emphatically as time past’.⁴¹⁸ With *a hole in the sea* there is the original film as well as a triptych, a set of three photo-etchings, signed and numbered, in an edition of thirty-five. The television screen frame removes and mediates the images once more from the nature the film and images capture. The cycle of nature is presented but it has been represented through the lens of a cultural construction.

Back to Nature: Second Nature

I have argued so far that Flanagan and Ferrer were bringing natural materials into the museum, or just outside it. They both worked through ideas of ‘nature’ demonstrating through process not how accessible nature is but how mediated and distant it had become, especially in the context of the 1960s art world. Natural materials and natural processes became a performative aspect of the work both metaphorically and literally. Disintegration was often a reality and so remaking did, and has, become a very real possibility for the artists themselves, as well as for galleries and the collecting institutions. Works with real time systems came to a natural end and had to be remade to exist materially, a historical installation restaged. Indeed, the role of the museum has had to shift to allow for such works to be displayed.

Art institutions cannot display fifty-year old autumn leaves, melted ice, and rope, chain link, propped canvases and branches are flexible and can shift, and a strategy

needs to be in place to deal with such pieces both materially and conceptually.⁴¹⁹

Ferrer's phrase 'retroactive' is useful in terms of replication and nature, then and now, as well as nature as active, then and now. In relation to replication, I want to consider if and how Flanagan and Ferrer's works have remained active, or retroactive, since their initial creation and what it means for them to do so. Flanagan's rope has been repositioned with each new display. Its remakeability is a permanent state and essential to its regeneration. In fact, Ferrer's gesture of allowing leaves and ice to perform was repeated for various shows in the late 1960s and early 1970s though never thereafter. Tommaso Trini, as cited in the opening of this chapter, wrote about the processes and actions of destruction and regeneration in relation to the museum in the context of the exhibition *Op Losse Shroeven* at the Stedelijk Museum in Amsterdam in 1969 where works by Ferrer and Flanagan were exhibited.⁴²⁰ He notes how important it is to think about 'natural' materials and the life of a work as displayed in a museum. He foresaw how much this work depended on the museum, pointing forwards to the problems of nature and nurture, life and nature, the nature of life, the nature and nurture of an artwork that have been considered in this thesis and which have now become urgent. So how can the cases introduced be cared for and kept alive? If acquired by museums, what is the life of a work that is *in, of or displaced* nature?

Tate have three versions of *two space rope sculpture (gr 2 sp 60)*, one with this title made in 1967 and two entitled *rope (gr 2sp 60) 6 '67*; one made originally in 1967 and one made as an exhibition copy in 1985 as discussed in chapter two. *rope (gr 2sp 60) 6 '67*, like *two space rope sculpture (gr 2 sp 60)*, is a 60 foot length of thick sisal rope that the artist dyed an uneven shade of green: rope green two spaces sixty feet

number six. It was first photographed by Charles Harrison in 1967 in Flanagan's studio individually and as an ensemble on a *one space* sand sculpture. Since then, it has remained part of a composite installation with *4 casb 2 '67* and *ringl 1'67*. Like *two space rope sculpture (gr 2 sp 60)*, it was selected to run between two spaces but the artist later realised that it worked well contained within a single space, which is how it was exhibited in Milan in 1976. It was also photographed in 1967 contained within a hessian bag [Figures 58a and 58b].⁴²¹ The image was reproduced under the following text:

‘the same two space rope sculpture in its bag takes on another form; as much a sculpture but changed, possibly better than anything i could have made or ‘invented’. the sculpture seems to have a life of its own, precocious, like the child we realise has a way its own-precocious’.⁴²²

The rope and its presentation had become an ‘involuntary sculpture’ in a sense.⁴²³

When *rope (gr 2sp 60)6'67* 1967 was placed inside a hessian bag and retitled *rope/bag (gr 2sp 60)6'67* its qualities were distinctly different, even though it was the same rope. This shift in the work revealed a new ‘natural state’. The bag, as a packed cultural intervention, provided a container for the rope, a cultural container as it were, bringing to the fore the relationship of culture and nature. Bags have a large number of practical uses derived from their two major functions; keeping things in and keeping things out, concealment and containment. The choice of materials and their relation to another, rope inside a bag, therefore highlighted the relationship of nature to culture. At the time, Flanagan made other rope pieces out of single lengths of rope including *3 space rope piece '69* of 1969 which was intended to run between three spaces and *Line* 1968 which was exhibited at *Op Losse Shroeven* where a piece of felt

hung from a rope. And recently, *two space rope sculpture (gr 2 sp 60)*, was exhibited in Venice in the 2013 restaging of *When Attitudes Become Form* curated by Germano Celant, Thomas Demand and Rem Koolhaas.

As I have mentioned, in Bern, Ferrer's *Chain Link* had been placed outdoors on the grass, its length twisted into a kind of spiral. In London, it was indoors forming relationships with nearby works including Flanagan's rope piece. And then, after forty-four years, in 2013 Ferrer travelled to Venice to remake *Chain Link*. A different location (Venice, Fondazione Prada), inside (Ca' Corner della Regina) and on the third floor, the work also took on a new shape but as Ferrer has recently conceded he was not represented in the show by a 'strictly recreated work'.⁴²⁴ In Venice there was little outdoor space so Ferrer was offered one end of the long room on the top floor of the Venetian palazzo. For Ferrer, it was very important that the piece be 'dynamic' to allow it to take its own shape.⁴²⁵ He worked with his wife Bunny trying various configurations, much like he had with his students in 1968. When they folded the chain link in half and made the top like a spine it allowed the bottom to splay out creating an inverted V shape. Curving the spine to fit the narrowness of the room created a snake-like shape so Ferrer called the piece *Culebra*, which is snake in Spanish.⁴²⁶ Ferrer did not feel he was simply making a new piece with the same material of the 1960s: 'It's not about repetition' rather, 'the challenge of the moment'.⁴²⁷ A new nature for the work, a new natural state and a new life, a second nature.

This challenge of the moment 'now' is also apparent with each installation of Flanagan's *june 2'69*. Inscribed by the artist on the reverse of the flax are instructions

for assembly indicating not only the process of displaying the piece but also its re-presentation or repeatability, the repeatability of that initial 1969 moment. Flanagan's work happens, a process occurs naturally, and could re-occur naturally again and again. The piece, as a remade work, is second nature for artist, work and museum. And, after Flanagan's death in 2009, it was exhibited at *Barry Flanagan: Early Works 1965-1982* at Tate Britain in 2011 and 2012.⁴²⁸ Harrison's argument regarding the disturbingly organic or vulnerable aspects of Flanagan's work remains as there is a logic of repeatability or remakeability within its own material makeup both in 1969 and today. Like *two space rope sculpture (gr 2 sp 60)* and *Chain Link*, continual re-presentation is part of what it is as an artwork. *june 2'69* is an experience in the present tense, in real time, for the museum (the installer), the viewer and the work itself. Perhaps then Flanagan's titles, which include not only the description of the work but also dates and version numbers, could also be linked to the idea of a continuous present or Morris' 'The Present Tense of Space'. However there is a contradiction here. It is not June 2 1969 for *june 2'69*, for the materials, for the artist or the viewer suggesting that it might be appropriate to have the display date after the original title, *june 2'69'15*, for example. The reactivation date *in* and *as* the title, although perhaps intrusive or even contentious, would reflect the history of the work as a history of this process rather than referring solely to the initial manifestation in 1969.

Ferrer noted in 2008 that he participated in all the important shows in Europe in the late 1960s and early 1970s, 'showing essentially impermanent work'.⁴²⁹ Ferrer knew his works were not going to last as material objects. At the time, Ferrer's works in *Anti-Illusion: Procedures/Materials* were singled out by Peter Schjeldahl and Hilton

Kramer, Schjeldahl finding them the ‘most outrageous’ in the show which for Julie H. Reiss in 2010 simply indicates how they violated their sense of what an art object should be.⁴³⁰ This is very much in the vein of Kozloff’s review of the Castelli Warehouse show where Ferrer had initially deposited his leaves in December 1968. And, as has been discussed in this thesis so far, in his review Kozloff frames his argument using the terms volatility, liquidity, malleability and softness which are all relevant to nature and natural processes.⁴³¹ Nature behaving naturally, nature as volatile, liquid, malleable and soft and natural processes as volatile, liquid, malleable and soft. The terms clearly dramatise process, processes, states of change, deformation and ephemerality. At the Whitney Museum of American Art, the ice itself, which took several days to thaw, had melted to a small piece when Kozloff delivered a lecture inside the museum a few nights after the opening. Ferrer took this last sliver and placed it next to the podium where the critic was speaking.⁴³²

The leaves for *Anti-Illusion: Procedures/Materials* were obviously not the same as those for *Three Leaf Piece*. In both instances the material remnant was not preserved after being exhibited nor could it have been. Philadelphia leaves and ice were used repeatedly and combined with other materials over the next few years. They were the starting materials for replicas of sorts relocated in different institutions and, like Flanagan’s *june 2’69*, they became second nature for the work and the artist, and indeed for the viewer.⁴³³ Ferrer’s piece, *50 Cakes of Ice*, for *Information* at the Museum of Modern Art in June 1970, where Flanagan also exhibited *a hole in the sea*, was based on his *Anti-Illusion: Procedures/Materials* ice installation.⁴³⁴ Ferrer positioned large blocks of ice on the bridge over the sculpture garden’s pool and along its north side and, as the blocks began to melt, they tumbled into the pool.

Photographs were taken of the work from the start of its life, as the ice was installed, to its end, as the ice floated in the pool and melted on the pavement [Figure 59].

These images were displayed in the exhibition much as the receipt for the ice had represented *Ice* in 1969. Behind the blocks of ice was Donald Judd's *Untitled* 1968, a five-part green sculptural work. 'The blocks of ice appeared to be rapidly reproducing offspring of Judd's perfect metal progressions, flawed and fragile organic derivations that ultimately failed to endure.'⁴³⁵

Ferrer suggests that because in the 1960s artists were not so dependent on the art market, they were able to use 'disposable materials in improvised spaces'.⁴³⁶ The dominance of galleries and museums, he proposes, was not so total. Ferrer also acknowledged, 'I have always avoided spectacles ... the work would stand alone, silently'.⁴³⁷ And silent they have remained. Ferrer has not considered remaking the leaves and ice works and insists that, 'as the song says: "the Thrill is Gone"'.⁴³⁸ Similar to melted ice or blown away leaves, these works from the 1960s and early 1970s have remained invisible, they have disappeared as material things unable to be acquired by museums or private collections. Today, they are only seen through photographic images. Ferrer chose not to recreate the leaves and ice works for his 2010 exhibition.⁴³⁹ They were not 'retro-activated', as the title of the show suggested. *Retro/Active* displayed no recreations.

In his discussion of the exhibition, Barry Schwabsky is critical of the fact that these very photographic images were 'banished' to a side room. He recognises how much effort it would have been to re-create Ferrer's ephemeral installation works from the late 1960s but insists it would have been worth it.⁴⁴⁰ The curator of the show, Deborah

Cullen, believes that presenting reconstructions would have been inappropriate as artists make works for specific circumstances, spaces, and politics, and are usually uninterested in simply reproducing them for exhibition. She acknowledges that limited space was a contributory factor. Ferrer felt that documentation of those very well-known works was just fine.⁴⁴¹ Ephemeral and temporary, their status as physical, material objects remains precarious in the 1960s and today, their initial status as ephemeral and absent works is perpetuated. They demonstrate a different logic to that of Flanagan's works or, in fact, *Chain Link*. Evidently, they do not follow the same logic as other fabrications or replicas discussed in this thesis. Ferrer, unlike Kaprow, is clear cut on his view of these pieces: no replicas.⁴⁴² The leaf and ice works were recreated in the 1960s for different contexts but since have only ever been represented through the mediation of reproductions which demonstrates even more insistently that nature is mediated through culture.⁴⁴³

Similarly, Flanagan's *hole in the sea* has not been replicated. The original film and photo stills reproduced and editioned remain our way into Flanagan's representation of nature. In contrast, Jan Dibbets made a new version of his film *12 Hours Tide Object with Correction of Perspective* which was originally realised in February 1969 and formed part of Schum's Ferhsehgalerie. Newly titled *6 Hours Tide Object with Correction of Perspective* 1969/2009 this version was made on the Maasvlakte beach of the port of Rotterdam. This 'second attempt' was shot in February 2009. In the film we see a bulldozer tracing out a shape in the sand. Proposing an optical illusion through photographic perception to 'correct' the perspective distortion of the eye in a large-scale drawing on the sand, the form is perceived as a square on the television screen. Subsequently the incoming tide washes away the shape. The new version

makes a nice comparison to Flanagan's *The Lesson* introduced at the beginning of this chapter. Dibbets and Flanagan created a durational work with sand to show nature as process and representation. Dibbets used a bulldozer on a beach and Flanagan his hand in his studio: Nature in real time yet mediated.

Transformative Materiality: New Options

Ferrer and Flanagan, like Smithson, have challenged our expectations about materials, temporality, location and permanence.⁴⁴⁴ Both artists were concerned with the forms things take and the processes which condition shape and in this chapter I have looked at six key works made using rope, chain-link, leaves, branches, canvas, ice and the sea.⁴⁴⁵ These works all demonstrate the different ways in which nature is mediated articulating the different manifestations, whether as a tool (rope) through industry (chain-link), a performing material (canvas propped by branches) a process of change documented (leaves and ice) or a staged or cinematic event (a film). Works have been seen to be *in* or *of* nature but always mediated. The natural flexibility of a material behaving 'as if' naturally or in nature, nature displaced through cultural conventions be it refrigeration or museum display, nature as a temporal presence or an active process have all been considered. I have argued for different ecologies within the works of Flanagan and Ferrer. And of course, like the works themselves, the replicas also challenge our expectations about temporality, location and materiality.

Ferrer and Flanagan's transformative materials perform, they are not preformed as such, they also established new options, new natures, new second natures. Jo Melvin acutely observed, in Flanagan's practice there is a preoccupation with 'presence,

absence, the solid and the fragile, the material and immaterial' and these terms become more poignant in relation to natural materials and works that behave naturally in that they need to be regenerated or left to die.⁴⁴⁶ The original works are, as Kaprow noted, invitations. As catalysts they signal natural transformation and the replica enables multiple meanings or, as I have argued, in some instances, multiple materials. This idea of a catalytic approach again relates back to Kozloff's terms of volatility, liquidity, malleability and softness. Works happen in real time and have a life of their own but it is the artist, materials and museum that remain the life support to that life, its intensive care of sorts, enabling the works to be resuscitated when, and if, required.⁴⁴⁷

When Attitudes Become All About Attitudes Towards Form: Recasting the Latex Works of Keith Sonnier and Eva Hesse

‘Random piling, loose stacking, hanging, give passing form to the material. Chance is accepted and indeterminacy is implied since placing will result in another configuration. Disengagement with preconceived enduring forms and orders for things is a positive assertion’
Robert Morris, 1968.⁴⁴⁸

‘Whether it was a shared interest in time or process, or new materials or materials that would disintegrate, there seemed to be a new common understanding that matter itself was imposing its own form on form’.
Richard Serra, 2009.⁴⁴⁹

In March 1968 Keith Sonnier and Eva Hesse exchanged studio visits.⁴⁵⁰ They had met through *Eccentric Abstraction* organised by Lucy Lippard and held in 1966 at Marilyn Fischbach’s gallery in New York.⁴⁵¹ Lippard later commented on the similarities of their works, their shared sensitivity to the ‘ephemeral’ and the ‘emotive’, their ‘comparable forms’.⁴⁵² As already mentioned in chapter two, what these two artists also shared was their choice in material. Both Sonnier and Hesse were drawn to latex which is a natural rubber collected from the sap of the rubber tree. They used commercial equivalents that were created as a mould-making material. But what was it about latex that appealed to these two American artists? A material traditionally associated with cast sculpture, it is elastic, flexible and can change state. Both artists were able to utilise these characteristics to allow the material to become a more prominent part in the process of making a work, matter itself imposing its ‘own form on form’, as Serra would later put it.⁴⁵³

This chapter sets out to explore the characteristics of latex as a sculptural material in the late 1960s. As has been seen, this was a period which marked an important moment for the status of the art object, as categories and criteria for making and

thinking about sculpture especially were being challenged. Robert Morris' ideas, as put forward in his seminal 'Anti-Form' text, set up chance, indeterminacy, randomness and temporary form captured in the physical material as characteristics to be positively acknowledged.⁴⁵⁴ For Lippard, 'flexible or scattered materials' were used not only to 'dilapidate' but to 'disintegrate' form, adding that anti-form was not so much opposed to form as 'committed to introducing another area of non-formalist form', a negation of Greenbergian formalism.⁴⁵⁵ As has been highlighted throughout this thesis, sculpture was not *a priori* like built things, its state, states or indeed status had, and could, shift. Serra's observations of 2009 show him thinking back to that moment in the late 1960s and will be deployed in relation to the ageing, ephemeral materiality or complete collapse of the latex objects which are in museum collections today; matter itself still imposing 'its form on form'. Sonnier and Hesse were using a material that deteriorates and this tendency has remained a concern since their initial creation as their state, states and status continues to shift. The idea of latex's materiality becoming part of the process of unmaking or deformation will also be addressed within the broader context of how these works can be exhibited today. The issues and problems surrounding how to keep flexible or non-rigid latex works permanent will be considered: latex as it was first handled by these two artists and how these manipulations are able to remain in tact today.⁴⁵⁶ 'Form' will be thought through both in its performative and sculptural aspects; form as it was understood then, by artists and critics such as Morris and Lippard, how it has been used since, by artists such as Serra, and how it can stand up today.

As has already been discussed, in December 1968 Morris organised a group show at the Castelli Warehouse in New York, *9 at Leo Castelli*, to demonstrate his newly

coined term 'anti-form'. It was here that Ferrer deposited his Philadelphia Leaves on three landings in the stairway and Serra and Zorio exhibited their process-based works. Sonnier and Hesse were also included and exhibited works made from latex; Sonnier created *Mustee* [Figure 60] and Hesse *Aught* and *Augment* [Figure 61].⁴⁵⁷ Harald Szeemann visited the warehouse on the 11 December and wanted the two artists to be part of his upcoming show, '*Live in Your Head' When Attitudes Become Form (Works - Concepts - Processes - Situations - Information)* to be held at the Kunsthalle in Bern.⁴⁵⁸ Here Sonnier and Hesse were again represented by works made using latex: *Mustee* and *Flocked Wall* by Sonnier and *Augment*, *Sans III* and *Vinculum II* by Hesse [Figure 62].⁴⁵⁹

In 2013 *When Attitudes Become Form* was revisited and restaged at the Ca' Corner della Regina in Venice, curated now by Celant. It included Sonnier's *Mustee*, re-enacted by the artist, from the Barbara Bertozzi Castelli Collection, Hesse's original *Augment*, lent from the Helga and Walther Lauffs Collection and an exhibition copy of *Sans III*, lent from the Estate of Eva Hesse [Figure 63].⁴⁶⁰ As with the rest of the show, pieces from the 1960s were displayed as originals, replicas or replacements to the works, actions and experiences seen and witnessed in Bern in 1969. Other works exhibited included some of the case studies already referred to in this thesis: Serra's *Prop Pieces*, Flanagan's *two space rope sculpture (gr 2 sp 60)* and Ferrer's *Chain Link*, as well as works by artists discussed including Morris and Zorio. In the context of the thesis then, this reiteration as a whole quite dramatically takes up many of the problems that have been addressed so far but in the light of an entire exhibition.⁴⁶¹ That is, not only a group of objects but a whole strategic enterprise. This approach

reflects a current trend for replicating and will enable the more general difficulties of replication to be teased out.

Sonnier's *Mustee* and *Flocked Wall* and Hesse's *Augment* and *Sans III*, which were exhibited in 1969 and reconsidered in 2013, will allow an investigation into the characteristics of latex, then and now, exploring ideas of process, materiality and form; form as in the passing form in a material, as laid out in the 1960s and how attitudes become all about contemporary ideas of form when replicas, remakes or replacements are a viable option. As pieces from the 1960s resurface and interest in them being seen generates discussions surrounding their condition, this chapter will consider what is an adequate representation of an attitude and/or object from the 1960s today. The processes of layering and layers, casts and moulds, coatings and skins, and by-products as resurfacing objects will be used to unravel the visual, material and conceptual dilemmas involved in presenting, or re-presenting, such works from the 1960s.

Layering Latex

In 1969 Sonnier was captured on film using his hands to apply a dry, dusty material onto a surface. A close up in a slightly later frame reveals he is positioning and pinning this surface, which has partly been pulled away from the wall, using strings at either side. The camera then pans out and we see that he is working on *Mustee* for the Kunsthalle showing of *When Attitudes Become Form*. He talks to Marlène Belilos as he works on this and *Flocked Wall* [Figures 64a and 64b]. It forms part of a short film, *Quand les attitudes deviennent formes*, made by this journalist and broadcaster

and directed by André Gazut, for the Franco-Swiss Télévision Suisse Romande, Geneva, and broadcast on the 6 April 1969. Christian Rattenmayer has recently emphasised that this footage of Sonnier working was, ‘maybe the most directly visible example of an artistic creative process shaping the immediate outcome and form of a work - gesture literally materializing in front of our eyes’.⁴⁶² Similar images of Sonnier creating another flocked wall piece were taken by Robert Fiore and reproduced for the catalogue of *Anti-Illusion: Procedures/Materials* held at the Whitney Museum of American Art in New York in 1969 [Figures 65a, 65b and 65c]. The cover had a single reproduction of Sonnier pulling a soft and elastic material again, part of which is no longer attached to the wall. The publication’s inside covers, much like a contact or film strip, documented the process of making *Flocking* which was exhibited in the show.⁴⁶³ Both film and catalogue are obviously stagings and they stage a specific moment, the process of making the work, the temporal and temporary nature of a material gesture rather than a fixed end product. And here it is worth pausing to acknowledge and differentiate this idea of staging a specific moment from the more performative contexts of staged artist’s bodies as put forward by Amelia Jones in relation to artworks produced at this time.⁴⁶⁴ What the Sonnier stagings highlight is that making and installing had become equivalents to one another as, in both instances, the making happened where the work would be seen, not in the artist’s studio and then transported to the museum. Belilos and Fiore’s images set up the context for the works, their documentation and how they were to be understood as physical, historical, material and ideological objects. Much like the photographs and films of Morris and Pistoletto’s actions already discussed, the film footage and catalogue images have become a key part of the historical archive of the artworks.

In the late 1960s Sonnier worked on a series of flocked wall pieces consisting of layers of liquid mould-making latex.⁴⁶⁵ Flock, and in some instances sawdust, was added to the final layer of latex to give a matt, textured and coloured finish. Flock is a regenerated cellulose, a grey powdered rayon, which is formed of short fibres, 1-2mm in length. It is often used to achieve a furry effect on toys, postcards and wallpaper.⁴⁶⁶ The latex was painted directly onto a wall, with a brush in several layers, allowing each layer to dry before applying the next. In the last layer the dry earth pigment and flock, or sawdust, was pressed into the wet latex and this is what was caught on camera in the Belilos footage. Once dry the textured latex was cut from the wall with a razor and pulled away at its edges and then pinned to the floor, wall or surrounding space. There are examples from the series in different dimensions, with different qualities and in different colours and so on but, in all, the liquidity, softness and elasticity of the latex was manipulated.

Latex dries quickly due to its ammonia content evaporating which means it has to be cast or painted. With his flocked latex pieces Sonnier sought to paint and cast; paint onto the wall and cast it simultaneously. In 2000 Sonnier noted, 'The latex pieces were really about casting the wall. They were about painting on a wall surface ... building up a surface ... removing that surface or partially removing and pulling it out into space and changing the floor to wall relationship'.⁴⁶⁷ By peeling the latex membrane away from the wall other issues also became important; the pull of gravity and the surface finish of the flocked-coated latex, the naked latex underside, the wall and even the remaining smudged edges of the original latex cast. Sonnier travelled to Bern in 1969 to make *Mustee* and *Flocked Wall*. Both were inherently about the wall to floor relationship there, *Mustee* having string to pull and tack the latex surface

down and a little away from the wall and *Flocked Wall*, a large surface commanding the space from floor to ceiling, was cut and pinned to the floor direct. Sonnier found in latex a flexible material that allowed him to cast a wall and pull that casting partially off and, in so doing, the process of making and installation became *the* piece.

Likened by Emily Wasserman in 1969 to a 'lumpy rubber rug', Hesse's *Augment* was exhibited close to Sonnier's work in Bern.⁴⁶⁸ It was originally made from eighteen sheets of latex-impregnated canvas, all 78 by 40 inches. They were displayed on the floor in an overlapping pattern with the top sheet folded over on itself. To achieve the desired thickness of each sheet, Hesse built up her surfaces in layers, letting one coat dry before applying the next in much the same way Sonnier had built up his latex works. Hesse used a brush to cover the thin pieces of canvas with latex which often dissipated towards the edges, and her brushstrokes often remained visible in the final work. Whereas Sonnier worked vertically on the wall, Hesse painted horizontally on the floor, layering her material and allowing it to solidify then layering the resulting sheets. It is interesting that all her latex pieces of this time were made in this way even if they were to be shown vertically as with *Aught*, a piece made concurrently and displayed with *Augment* at the Castelli Warehouse show in 1968. Lippard recalls, 'She worked on *Augment* for some time, vacillating about the amount of order or chaos to impose on the sheets. I remember one or more lying on the floor of her studio covered by a much thinner and paler layer of delicate, powdery, very soft and skinlike rubber (the powder was a preservative); the top layer was somewhat tumbled, and the image, though "strange," as she wanted it, too closely resembled an unmade bed, and was finally discarded in favor of laying the modules over each other so only the crinkled borders showed, and then turning back the last one to reveal that the

surfaces were not, after all, like the visible borders, but smooth and slightly different in color'.⁴⁶⁹ Like Sonnier, this piece was about layering and flexibility, both revealing and concealing surface texture. It was latex that facilitated such an approach.

Natural latex is a milky white suspension of a hydrocarbon polymer that derives from the rubber tree. Hesse's prevulcanized L-200 casting latex, bought from a supplier on Canal Street, was a commercial product used in the production of moulds for casting.⁴⁷⁰ Containing sixty-one per cent solids, it could be used alone or mixed with filler. As a naturally derived material it relates to some of the materials discussed in the last chapter, but unlike them, of course, latex had a close relationship to sculpture. Traditionally it would have been poured into a plaster mould and part of the water would have been drawn off in the curing process. Hesse began experimenting with latex in August 1967 using it in sixteen full-scale works. In her interview with Cindy Nemser in 1970, Hesse stressed how she was still keen to work with rubber. She likens the building up of her latex layers to the handling of paint, highlighting the importance of working with the material more directly.⁴⁷¹ In its liquid form, latex could be used like paint and solidify to create 'malleable, mouldable shapes'.⁴⁷² But Hesse further explored the qualities of latex: pouring it, casting it and painting it on in layers over various supports.⁴⁷³ To create *Sans I* and *Sans III*, Hesse used latex and a rectangular box as a repeated module, varying the size, number and arrangement in each. These solid yet flexible units were grouped and glued together using the same latex to create an L-shaped form.⁴⁷⁴ In *Sans III* [Figure 66], also exhibited in Bern, Hesse glued forty-nine modules into a thirteen-foot long chain that hung vertically and extended onto the floor. Latex then had progressed from its sole use as a casting material to become a direct painting, coating and cementing medium.

Sonnier painted latex onto a specific wall in layers and the results have been likened to ‘skinned interiors and unstretched paintings’.⁴⁷⁵ Hesse also approached latex as a liquid material to be built up in layers. So then both artists were exploring the painterliness of this material, a characteristic picked up by Max Kozloff and Robert Pincus-Witten at the time.⁴⁷⁶ But Sonnier and Hesse also pushed the boundaries of painting and sculpture with their manipulations of latex. Sonnier used a casting material to take a cast of the architectural element traditionally used to mount or hang paintings and then pulled it away calling attention to that relationship whilst also questioning it. This rupture and his gesture, comparable to Lucio Fontana’s in his *Spatial Concepts* of 1958-68 [Figure 67], is arguably as dramatic, if not more subtle. Likewise, Hesse also invoked and manipulated traditional materials and techniques. Hesse’s *Augment* was made up of casting latex painted onto canvas sheets, the traditional support for painting, but they rest on the floor arranged in a stack-like formation. If Sonnier was more interested in sculptural processes, the cast, it seems that Hesse focused on layering and painting latex.

In 1996 the art historian Donald Kuspit noted that *Flocked Wall* and *Mustee* are about ‘texture and extension into space’, ‘surface for its own sake’.⁴⁷⁷ And this idea of surface is interesting for both Sonnier and Hesse’s latex surfaces and their respective supports, the wall in the case of Sonnier and canvas in the case of Hesse. Both artists seem to have been preoccupied with the relationship between surface and support which makes latex such an appropriate choice of material. The layering also resulted in works that very much allude to ideas of the domestic, that is, a flocked latex wall (flocked wallpaper) and sheets of a bed, allusions that were resisted by the artists themselves.⁴⁷⁸ Lippard’s observations of *Augment* in Hesse’s studio indicate the

obvious characteristics of ageing latex, crinkled corners as opposed to smooth surfaces.⁴⁷⁹

Degradation and Replication

As Kozloff had made clear, there was a significant move in the 1960s to favour soft and malleable over rigid materials and fixed forms, process over finished product, ephemerality and repeatability over the unique artwork.⁴⁸⁰ In 1969 Scott Burton noted the ‘flimsiness’ of Sonnier’s ‘hanging fabrics’ adding that, ‘much of the new work looks vulnerable, not only spatially insubstantial, but dominated also by the effects of time’.⁴⁸¹ Sonnier and Hesse both created their latex pieces by painting a liquid material that would harden into a solid mass. The material has also aged since; time has effected these works as material and exhibitable objects. The layering of Sonnier and Hesse has played its part in the material manifestations of the works then and today. Subject to continuous but unpredictable degradation, changes to latex can be initiated by temperature, light, oxygen and physical stress. The optimum temperature for latex to remain stable is 10 degrees without any daylight.⁴⁸² If the molecular bonds which make up the polymer chain are broken apart or link together, deteriorated latex, like an elastic band, can become powdery, brittle, resinous, sticky, or even liquid.⁴⁸³ And it is worth noting here that *Eva Hesse: Chain Polymers*, held at the Fischbach Gallery in New York in November 1968, refers to the properties of latex and fibreglass, materials Hesse was using at the time, but also properties that can cause deterioration.⁴⁸⁴ So then, in time, latex can become discoloured and brittle, it degrades in several steps and in its final state often turns very rigid due to cross-linking making it vulnerable to deformation or complete collapse.

Echoing Robert Morris, for Sonnier, in 1976, ‘I exist in the present tense, and I make work that has a present tense place’.⁴⁸⁵ By 2008 he emphasised, ‘the material dictates what the work will be’.⁴⁸⁶ However the material also dictates what the work has and will become. Two of Sonnier’s original flocked latex works held in the permanent collections of the Moderna Museet and Tate clearly demonstrate the degradation of latex. *Flocked* 1969 [Figure 68] was rolled up and stored after being exhibited at *Anti-Illusion: Procedures/Materials* in 1969 and again after being displayed at the Moderna Museet in 1973. When unrolled by Thea Winther, a conservator at the Moderna Museet, the work was still flexible in the middle, but at the top and along the edges the latex had severely oxidised, orange to dark orange with disintegration of the material and large cracks as well as a buckled surface.⁴⁸⁷ By 2007 the whole piece had darkened, the edges having had the greatest exposure to oxygen when rolled. The top part had been exposed to pressure from being glued to a new wall at the Moderna Museet in 1973 and had then stiffened in the shape of the roll. The cracks and the rigidity at the top made it difficult to consider rehangng the piece again. Similarly Tate’s original *Red Flocked Wall* 1969 [Figure 69] had aged considerably upon acquisition from Galerie Bonnier.⁴⁸⁸ Sculpture conservators Derek Pullen and Melanie Rolfe noted, ‘The work now hangs limply like a bedsheet’ rather than stretched and demonstrating its rubbery nature.⁴⁸⁹ So the wallpaper had become a bedsheet, brittle and darkened needing support on its top edge, neither functioning nor appearing as the original 1969 piece.

Similarly, there are examples of Hesse’s latex works in various states of degradation, the properties of the material becoming quite literally the downfall of the works. Bill Barrette, Hesse’s studio assistant who helped her make the latex work, noted that, by

omitting the steps of drawing off water and heating, she increased the chances of the latex not curing properly.⁴⁹⁰ The thin layers she used also allowed the material to oxidise more rapidly, changing colour and becoming brittle. ‘Hesse was aware that latex as she was using it was a fugitive material’ even telling another of her assistants who worked on her fibreglass pieces, Doug Johns, that this instability was an attribute.⁴⁹¹ In 1970 Hesse acknowledged that latex only lasts a short while. ‘At this point I feel a little guilty when people want to buy it. I think they know but I want to write them a letter and say it’s not going to last. I am not sure what my stand on lasting really is. Part of me feels that it is superfluous and if I need to use rubber that is more important’ adding the much quoted, ‘Life doesn’t last; art doesn’t last. It doesn’t matter’.⁴⁹² Hesse incorporated the instability of latex into her work but to what extent she was aware of how the material would degrade is not clear. And, since her death, there has been much debate about the beauty of Hesse’s degraded objects and the physical reality of brittle or oozing latex.⁴⁹³

Hesse’s original *Augment* was stored for many years with the latex sheets stacked on top of each other resulting in them adhering to each other but also considerable deterioration around the edges, much like *Flocked* and *Red Flocked Wall*. The original work was recorded as damaged by 1969 and the piece was documented as being unexhibitable in 1989, 2001 and 2006 [Figure 70].⁴⁹⁴ In fact, when the piece was recently treated by the conservator Martin Langer, it was apparent that only the top sheet had discoloured and darkened but underneath, the latex that had not been exposed to daylight, was still ‘soft and flexible’ much like the latex Lippard had described.⁴⁹⁵ In 1976 Lippard had also noted that *Sans I* and *Sans III* had disintegrated. ‘Other latex pieces, unless they have been kept away from light and

heat, have lost the original syrupy surface and color modulations and have darkened to a deep brown; eventually they too will dry up, crack, and collapse into dust, unless some sort of fixative substance is discovered quickly'.⁴⁹⁶ The latex had deteriorated to such an extent that she believed the artworks had, 'lost their physical integrity'.⁴⁹⁷ *Sans III* remained in storage from 1971 until 1997 when the chain was discovered broken and the boxes crumpled. Darkened and brittle, the work was beyond repair [Figures 71a and 71b]. Not only did the material look considerably altered it could no longer hold its own weight when hung from the wall.

There are other examples of Hesse's latex works having succumbed to what Johns has referred to as the fourth dimension of her works, 'time'.⁴⁹⁸ The four units of *Aught*, made of double sheets of rubberised canvas stuffed with polyethylene drop cloths, were retired from view in 1986. When the piece had been last exhibited, as Elisabeth Sussman acknowledges, 'it started to weep, that is, the latex began to drip. It literally started oozing, and as it oozed, gravity dragged it down'.⁴⁹⁹ The curators at the University of California Museum in Berkeley could see it was sinking and were afraid that the weight of the piece would tear it off its mounting grommets. Similarly, the very degraded *Expanded Expansion*, made of fibreglass, polyester resin, latex and cheesecloth in thirteen sections in early 1969, is now stored in crates in the collection of the Solomon R. Guggenheim Museum. It was last installed at the museum in 1988 having become darkened and embrittled. Carol Stringari, Chief Conservator at the Guggenheim, noted that many of those who saw it then 'were moved and excited', they 'felt the piece was absolutely gorgeous. We all knew that it didn't look the way it looked when it was executed but it wasn't questioned, it wasn't questioned in anyway in the files or the curatorial files or any writing about the piece'.⁵⁰⁰ For her this is

interesting because although it is now very, very brittle, it had a very sharp curve of ageing and deterioration, but reached a certain point and plateaued. Although it is now difficult to stand the piece up and there will be continued deterioration, *Expanded Expansion* looks similar to how it did in 1988. The work, however, remains in storage awaiting a decision about its fate as an exhibitable object as experts still grapple with what is the right thing to do. As Jill Sterrett, Director of Collections and Conservation at the San Francisco Museum of Modern Art, recently acknowledged, ‘Caring for Hesse’s work leads us to look very critically at the way we make our decisions for example, what is the difference between doing something? Doing nothing? And not deciding at all?’⁵⁰¹

Volatile, liquid, malleable and soft, latex is relatively difficult to exhibit and keep stable. So what can museums, artists, conservators and artist historians do to protect and display these latex works from the 1960s especially if their surfaces have changed and their physical integrity has been lost? In his *Artforum* review of the Castelli Warehouse show, Kozloff had already noted, ‘It is not that we are irritated by a disdain for permanence, but we are touched by the knowledge that these works cannot even be moved without suffering a basic and perhaps irremediable shift in the way they look ... The life and salience they have as objects, rather than the intactness of their medium, is, therefore, of a pathetic transience’.⁵⁰² Kozloff considers how the works would be de-installed as way into understanding them, Sonnier’s pieces being scraped and scrubbed from the wall.⁵⁰³ In the Belilos footage, the fact that the liquid latex is applied directly to the wall of the Kunsthalle to create *Mustee* and *Flocked Wall* demonstrates the inherent site-specificity of the pieces. The material itself is what keeps the work on display as the latex is applied directly to the wall; material

and support are bound together and the artwork cannot be moved without damaging the physical material or the integrity of the wall to floor relationship. To remove the work is to damage it materially and theoretically. What then when the exhibition closed? Could the materialised gesture that Rattenmayer referred to be sustained and maintained?

For Sonnier, the original work is a 'by-product'.⁵⁰⁴ If we take this term to mean something produced in the process of making something else the fact that this by-product is made from a material traditionally used for making casts is rather interesting. It is also noteworthy in terms of replication, the original by-product can give way to a new something else, a product. For Sonnier the flocked wall no longer exists as a work of art because the original floor to wall relationship is no longer 'in effect'.⁵⁰⁵ It is possibly unsurprising then that Sonnier is not very worried about the degradation of his latex surfaces more the cast wall to floor relationship being negated. And, for Sonnier more recently, these works were, and are, ephemeral. In 2008 he likened them to Sol LeWitt's *Wall Drawings*. In 2009 he stressed they could not be shown permanently and could only be part of a permanent museum collection on the proviso they be remade each time they are exhibited, insisting it is the nature of ephemeral works to be remade.⁵⁰⁶ Much like the mould-making material, the latex works are to be destroyed after each display.

Sonnier's studio see the process of recreating originals as part of the process of the work. In 2009 they stipulated that Sonnier should curate and approve the remakes issuing a Certificate of Authenticity, bearing the name of the owner/collection, with a photograph of the new installation. The original, if it still existed, had to be destroyed

afterwards.⁵⁰⁷ When Sonnier first made these pieces certificates were becoming an integral part of the production and exchange of artworks. Some artists used certificates as an authenticating tool, a way of controlling the reproduction or editioning of their works as with the replicas of Duchamp's readymades as discussed in the first chapter. Artists producing objects which employed industrial techniques used certificates to establish the contractual means to sell that work but also to reintroduce notions of authenticity and authorship. Conceptual artists also made use of the certificate and, in some cases, it was the sole enduring trace of a piece. In the case of Sonnier, he is happy to make or sanction replicas of his latex flocked pieces having started doing so in the 1980s. The certificate to authenticate this process, however, is a more recent phenomenon.

In 1969, Sonnier's *When Attitudes Become Form* latex pieces in Bern travelled and were re-adhered to new walls at the two further exhibition venues: the Museum Haus Lange in Krefeld and the ICA in London [Figure 72]. Thomas Crow has recently noted that *Flocked Wall* 'existing as much in the act of making as in the evanescent final product - could only be transferred with great difficulty'.⁵⁰⁸ And Charles Harrison, who organised the third original incarnation of the show in London, revealed, 'It didn't make a great deal of sense in the ICA. The only thing to do was to hang it up and peg it out, but the sense of process was largely lost'.⁵⁰⁹ Some of the series were also sold in their material form, that is, the latex having been peeled off the original wall and stored before being exhibited again as the original object. As I have mentioned, Tate and the Moderna Museet have recently looked at two such works in their collections, *Red Flocked Wall* and *Flocked*.⁵¹⁰ In each instance the original has been kept and a new version has been made by Sonnier's assistant, Jason

Reppert, documented and certified.⁵¹¹ *Flocked* had been purchased in New York in 1973 from the Leo Castelli Gallery and then shipped together with extra flock and an adhesive for gluing the latex to another wall as well as the artist's installation instructions on how to mount it. However, in response to the work's condition and the artist's emphasis on site-specificity and process, the curatorial department at the Moderna Museet decided to ask Sonnier if he could perform a new *Flocked*. He agreed and, once it had been carried out, an institutional precedent had been set.

Similar to the Moderna Museet, Tate had the dilemma of what to do with their original relic of 1969. Having purchased the piece from a private gallery, they also approached the artist about a possible remake. After considerable research on the materials employed and the museum space, in 2009 Reppert painted latex onto a gallery wall at Tate Modern in four coats with sawdust and dry toxic red ochre pigment applied to the final layer. The latex was then cut with a blade and peeled from *the* wall, pulled and pinned to the floor. The work's process of making was evidenced by the physical piece. If Tate had decided to display the original, a new hanging system would have been required and it would have been obvious that the latex cast was not of *that* wall when exhibited. The remake reflected the elasticity of the latex in 2009 not the brittle latex of 1969 and also provided a new piece of documentation in the work's history so that, in the future, it will be possible to remake *Red Flocked Wall* again. Presented by the American Fund for the Tate Gallery in 2010, the pre-acquisition report for the piece states, 'Tate's acquisition includes the original 1969 work, and the provision to re-make the work'.⁵¹² This is a revealing inclusion as it makes clear that the institution owns the 1969 work as well as the authority to create endless remakes.⁵¹³ There is a practical, economical and even

ethical investment. And, as noted, Tate, like the Moderna Museet, has kept their original latex piece as well as having the work remade. Neither originals can function as they originally did, nor could they ever, and arguably keeping Sonnier's material relics is a rather nostalgic gesture and suggests insecurity and uncertainty.

But Sonnier has recently stated that it would be acceptable for a recast and an original to be exhibited together.⁵¹⁴ There is clearly a contradiction here as Sonnier has asked that the originals be destroyed. If the original and the remake co-exist, this is further complicated by his claim for ephemerality and begs the question of the relationship between old and new.⁵¹⁵ And why was *Flocked* shipped to Europe with installation instructions if it was meant to be destroyed and remade? Why was *Red Flocked Wall* sold by Galerie Bonnier to Tate as a material object? These inconsistencies ask us to question what it means to remake the flocked pieces for artist, museum, viewer and the work itself. The 2007 remake of *Flocked* was altered to take into account a ventilation grid on the wall of the museum. The 2009 remake of *Red Flocked Wall* was also very much about the gallery space at Tate Modern. Both mark the first time the respective works have been remade. These were new walls and arguably new works. Or are they? *Flocked* is still *Flocked* of 1969, dated and authenticated by the artist, much like Tate's *Red Flocked Wall* of 1969. In 'Understanding *Flocked* - a case study of a latex wall piece by Keith Sonnier from 1969' Thea Winther discussed the installation instructions that were sent with *Flocked* in 1973 after the work was acquired.⁵¹⁶ These state that a wall as close to 12 feet high should be used if possible whilst also specifying how to glue the top part and position it so that the bottom part touches the floor. They suggest that in 1973 reinstalling the original latex rather than remaking the work was appropriate. It would appear then that the artist has changed

his mind somewhat and site-specificity and process have been retrospectively assigned significance, much like the idea of certification.

Sonnier's studio have recently stressed how things tend to 'resurface' and the current interest in Sonnier's early works has meant that Sonnier and his studio, together with the museums wanting to exhibit his works, are having to work through issues surrounding his original 1960s works in existence as well as the growing tendency for them to be remade; what the works *were* and what they *are now*.⁵¹⁷ It is understandable that museums with Sonnier's 'ephemeral', 'site-specific' works are reluctant to give up on their material originals from the 1960s. They have the by-product, the original surface but also a new product, a re-surface and it would be a big gesture to destroy either material object. Sonnier himself stated in 1977 that 'Museums are mausoleums' where 'one goes to view beautiful cadavers' but his flocked pieces in museum collections have become buried cadavers, testament to their disputed status as exhibitable objects and artworks.⁵¹⁸ His altered perception and directive regarding these pieces since their initial creation, and then in 2007 with the Moderna Museet remake, does not help. More cadavers will accumulate as remakes are possibly not destroyed, instead kept as material reference, as historical certified documents.⁵¹⁹ They mark the life of the work and its display history even if they will not, or cannot, be hung again. The attitudes or opinions of Sonnier, or indeed in the future his studio or estate, could change, so the by-product as resource marks a moment in the work's history as material and idea.

Hesse is obviously not available to consult about her current attitudes regarding the condition of her original works. Often the views of other experts are called upon,

namely that of her studio assistants Bill Barrette and Doug Johns. Their opinions however are also not consistent and it has been the responsibility of the Eva Hesse Estate, in collaboration with museums and galleries, to consider when to treat, retire or remake works. Johns feels very strongly that Hesse's pieces should be seen even in their deteriorated condition. In 2006 he sought to produce a set of directions for conservators, students, historians, and curators to follow in order to make her latex works using identical materials, techniques and dimensions.⁵²⁰ The results were to be shown alongside the originals, 'even if they are a pile of dust on the floor. Conveying this feeling of non-permanence is central to understanding how Eva Hesse thought and who she was'.⁵²¹ He argued for a 'modern interactive experience' which would be temporal and ephemeral as these new pieces would be destroyed afterwards.⁵²² Hesse, like Sonnier, was adapting a casting material. In her studio she reused materials and repeated forms as a way of making, enabling the label of non-rigid art to become poignant for her process and her material even today. She was unable to watch her latex surfaces change too dramatically and was never faced with the situation where the layers of latex could no longer support their intended structure. Would she have revisited and remade works? Her early death means we will never know. But perhaps Hesse's practice is also somewhat indicative of her possible views; Hesse was making by repeating and recycling materials and forms. And, as her sentiments in 1970 reveal, it was more important to her to be working with rubber than thinking about the longevity of her pieces. It is also worth noting that in June 1968, *Accession II*, consisting of galvanised steel with plastic tubing, was exhibited at the Milwaukee Art Museum in Wisconsin. The museum was unable to prevent visitors from climbing into the work so Hesse made a later reconstruction suggesting she was open to such an approach.⁵²³

Conservator Martin Langer has recently made an exhibition copy of *Sans III*. Originally given the work as a research project to look into the deterioration of latex, this led to him recreating a whole new piece.⁵²⁴ Similarly *Expanded Expansion*, as already noted, has changed dramatically aesthetically and structurally since its original creation. It was in too poor a condition to be included in the Hesse Retrospective at the San Francisco Museum of Modern Art in 2002. However, it was agreed that a group of experts would convene to discuss the issues regarding some of Hesse's late works. A round table discussion, moderated by Ann Temkin, was held in New York on 14 November 2000 where, as noted in the thesis introduction, curators, conservators, people who had known Hesse and people who were writing about Hesse, discussed the implications for treating or remaking these works. There was a first-hand examination of *Expanded Expansion* and reactions ranged from 'a sad dismissal of any potential for further display' to 'a deep appreciation of an enduring beauty'.⁵²⁵ Sol LeWitt, an artist and friend of Hesse, argued very much for remaking the work.⁵²⁶ It was also noted that whilst the original collaborators are still available to advise, Hesse sculptures can and should be remade because time is running out to do this in a 'legitimate way'.⁵²⁷

But remakes should not necessarily have to mark the end of the life of the original material. Stored or retired works can be resurrected as several of the case studies in this thesis testify. Museums and estates should not have to decide between one or the other. In December 2007, Carol Stringari and Michelle Barger, Deputy Head of Conservation at the San Francisco Museum of Modern Art, together with Doug Johns, examined *Expanded Expansion* to test its flexibility and have a careful look at the appearance of the rubber. Stringari, Barger and Johns decided to try and recreate a

part of this piece, ‘not as a replica but for us to really understand how this piece was made’, and how it might potentially be treated.⁵²⁸ Cementex in New York City was still making the latex that Hesse had employed and so they were able to use it for the mock-up. In 2008, two of the original three sections of *Expanded Expansion* were on display for the duration of *The Object in Transition: A Cross-Disciplinary Conference on the Preservation and Study of Modern and Contemporary Art*, held at the Getty Center on 25 and 26 January. Also on display was the mock-up made by Johns so the either or approach had shifted to both possibilities within this context. The 2008 and 1969 *Expanded Expansions* saw mock-up (emphatically not a replica) and original together.⁵²⁹ The mock-up, like Langer’s *Sans III*, has not been discarded, but remains to date without further plans for exhibition, though of course it has now entered the realm of exhibit-ability.

Layered Histories

It is far from clear-cut when a work should be exhibited, retired or remade. Sonnier and Hesse’s latex works dramatically demonstrate how there can be no right or wrong, no either or. They highlight that perhaps it is appropriate to have multiple approaches, or indeed various approaches in different institutions, to avoid simply storing degraded latex and waiting. Objects being remade are insightful historically and will continue to be so in the future. The layered histories of Sonnier and Hesse’s latex works between Bern 1969 and Venice 2013 will now be used to reveal the issues and problems that have arisen for these works. The layers of art history and conservation will be unravelled to think through these works as material, as concept and, in some instances, as remake.

Mustee was exhibited at Morris' Castelli Warehouse show and was remade by Sonnier for Szeemann's enterprise in Bern. In 1990 *The New Sculpture 1965-75: Between Geometry and Gesture* was held at the Whitney Museum of American Art and *Mustee*, then belonging to the Leo Castelli Gallery, was exhibited as a 1990 reconstruction. Pincus-Witten had already noted the destruction of the original in his text in *Artforum* in October 1969.⁵³⁰ Once peeled away from the wall of the ICA, the third venue of *When Attitudes Become Form*, *Flocked Wall* remained in the collection of the artist. In 2013 *Mustee* and *Flocked Wall* were by-products not material objects. Whereas Sonnier had sent his assistant to remake *Red Flocked Wall* for Tate and *Flocked* for the Moderna Museet, the artist himself travelled to Venice to re-enact his original process and create new products. With no interviews and no film footage, it could be argued that Sonnier working with his material was still what mattered in 2013, that nothing had changed; that the artist still insists on the present tense and makes work for a present tense place. The properties of the latex, its elasticity and softness are still what are essential to the form of each, Sonnier's attitudes have remained unchanged.

But things have changed. Sonnier moved on from his latex works of the 1960s to use neon in more architectural-based works. No longer preoccupied with the labels of process and anti-form, he noted of his actions in 1969,

'In Bern, the exhibition had no defined or fixed parameters. I was simply making work in a truly open and free environment. I didn't think about context or appearance or theory. I wasn't even thinking about producing objects for sale. It was more about art and its place in society, about getting work to exist in a site-specific environment, and allowing the process to

unfold naturally. It was the perimeter of the architecture that defined presentation and placement.⁵³¹

Similar to Flanagan's works discussed in the last chapter, for Sonnier, the process of the work unfolded naturally and this needs to happen each time a piece is displayed so there is a logic to them being remade each time they are exhibited. The presentation and placement still needs to be contained within the actual architectural setting where the work will be seen, the parameter and perimeter. The work therefore remains site-specific even if it looks very different.⁵³²

Unlike *Mustee*, *Flocked Wall* was not made or exhibited in Venice. Sonnier felt the Ca' Corner della Regina did not have enough room to accommodate the piece as the many architectural details would have intruded too much with the work. '*Flocked Wall* works better installed on a smooth surface and on a wall that reaches the floor, preferably without interruption'.⁵³³ So *Flocked Wall* was absent from the recent restaged exhibition, the artist having total veto on its inclusion much like Serra and his *Shovel Plate Prop* for *Richard Serra Sculpture: Forty Years* as discussed in the second chapter. Similarly, this reflects a precariousness for *Flocked Wall* as a material object but also theoretically as part of Sonnier's oeuvre

Due to her health, Hesse was unable to travel to Bern in 1969 for the opening of *When Attitudes Become Form* but exhibited were *Sans III*, *Augment* and *Vinculum II*.⁵³⁴

Twenty years later in his 1989 *Eva Hesse Catalogue Raisonné* Barrette documented *Augment* as being comprised of nineteen units and this misconception has been repeatedly quoted.⁵³⁵ Barrette's calculation was based on the reproduction of *Augment* from the Castelli Warehouse Show and is possibly due to him not taking into account

the top sheet being flipped back on itself and counting two edges for one sheet. So in fact, as Martin Langer has established, the piece originally consisted of eighteen latex-coated sheets of canvas.⁵³⁶ These were exhibited at Galerie Ricke in Cologne in the spring of 1968 and at the Castelli Warehouse in New York in December 1968 for Morris' exhibition. *Augment* then travelled to Switzerland, Germany and Britain in 1969 for *When Attitudes Become Form*. Langer, who has looked in detail at the original piece, believes that Hesse removed one sheet after the Castelli show and before the piece was transported from America to Europe.⁵³⁷ The latex may have been tacky and she may not have had the time to repair it; whatever the reason, seventeen rubberised canvas sheets then were installed in Bern in 1969.⁵³⁸ Hesse gifted the eighteenth sheet to her friend Gioia Timpanelli where it hangs in her staircase today. Timpanelli recalls that this sheet was lying in a corner of the studio when she and Helen Hesse Charash went there after Eva's death.⁵³⁹ *No Title*, Gioia Timpanelli, Bearsville, NY as published in the 2006 *Catalogue Raisonné* lists dimensions of 71 x 33 inches which do not correspond to the dimensions of the sheets in *Augment*, recorded as slightly larger at 78 x 40 inches.⁵⁴⁰ The discrepancy is due to the fact that Timpanelli's piece has no surrounding edges of plain canvas-free latex, they have crumbled off over time, unlike the remaining seventeen sheets of *Augment*.⁵⁴¹

In May 1970 *Augment* was bought by Helga and Walther Lauffs from Galerie Ricke and was exhibited at Kaiser Wilhelm, Krefeld, in 1983. The original work, on extended loan to the Kaiser Wilhelm Museum Krefeld, was recorded as unexhibitable as early as 1989. In 2000 it was agreed by the Hesse roundtable discussion participants that *Augment* could be remade but Langer firmly believed that this was not the point and no action was taken.⁵⁴² *Augment* was treated and exhibited as the

original in Venice in 2013. Langer's first task was to separate the latex sheets and restore the edges that were broken and crumbling before working on the 'form' of each.⁵⁴³ When installing the work in Venice, Langer positioned the treated sheets based on the edges he felt should best be exposed. So Venice witnessed the display of a rejuvenated *Augment*, the work having shifted its status from unexhibitable to exhibitable, a shift highlighted by the fact it rests next to a Hesse remake [Figure 75]. *Sans III*, the final version of the *Sans* series, was made specifically for *When Attitudes Become Form*. Completed in January 1969, it was the last latex sculpture Hesse made. It was exhibited at all three venues of the exhibition and then in 1971 at the Visual Arts Gallery, School of Visual Arts, New York. Barrette had noted in 1989 that *Sans III* was in poor condition, unexhibitable, and by 1997 its appearance and structure had radically changed, even when kept in storage.⁵⁴⁴ It is not surprising then that in 2013 an exhibition copy made by Langer was exhibited and labelled as such.

Other works were absent from Venice: the original *Mustee* and *Sans III*, and an original or remade *Flocked Wall*.⁵⁴⁵ The curatorial strategy for dealing with missing works was to indicate them by dotted lines on floors and walls, much like the chalk outlines of corpses removed from a crime scene, with a photograph of the original absent work placed nearby.⁵⁴⁶ There was, however, no such dotted line for Sonnier's missing *Flocked Wall*. For art critic Adrian Searle the lines indicated 'not just lost objects, but lost time'.⁵⁴⁷ 2013 not 1969, the vicissitude of objects, as material forms, as original relics or remakes, was evident. Michael Duncan used the terms ruins and replicas to frame his discussion of Robert Overby's latex room casts.⁵⁴⁸ These terms are useful in thinking about Sonnier and Hesse's degraded and ephemerally material latex works within the context of the restaged show. Hesse's *Augment* is clearly no longer

considered a ruin after its treatment but Sonnier's *Mustee* was replicated permitting the original to enter the realms of the ruin perhaps. There is also the notion of a replica as a ruin and it is interesting that Sonnier himself chose not to re-enact *Flocked Wall*. The original *Mustee* and *Sans III* were also absent in favour of remakes again signalling the status of the originals as ruins of sorts superseded by newer remakes and better left unseen. These instances reflect the contested statuses of the works, the malleability and volatility of their histories and their materiality and this will remain the case in the future when the original, treated and remade works also degrade or are destroyed. As has been argued, the either or approach is perhaps not the way forward. If resources permit, original, old new and new should be treated with equal value and presented if and when is appropriate. In Venice the experience of material forms had already been distorted with a hybrid, or plurality, of approaches to material forms from the 1960s being displayed in 2013 which dramatically demonstrated the dilemmas regarding authorship, dating and historical narratives for the replica today.⁵⁴⁹

Towards an Ethics of Recuration: When Attitudes Become Form Bern

1969/Venice 2013⁵⁵⁰

Szeemann's original '*Live in Your Head' When Attitudes Become Form (Works - Concepts - Processes - Situations - Information)* opened at the Kunsthalle in Bern in 1969. During that year, then, there were three versions of this exhibition in three different locations - Bern, Krefeld and London. It was Sonnier who suggested the title 'live in your head' to Szeemann and Thomas Crow has recently argued that this phrase had a 'manifest correlation to the Timothy Leary-style psychedelic exhortations of the period'.⁵⁵¹ For him, it should not have been dropped or forgotten. However, as discussed earlier in the thesis, for Charles Harrison's iteration this phrase was superseded by 'London Location'. On 1 June 2013, a fourth incarnation opened, this time curated by Germano Celant in dialogue with the 'masters of reflexivity and reconstruction', Thomas Demand and Rem Koolhaas, and displayed at Fondazione Prada in the Ca' Corner della Regina in Venice.⁵⁵² For Crow the restaging of the legendary exhibition was 'endowed with a second life' by Celant.⁵⁵³ The new version certainly marks a moment in the life, or afterlife, of the original exhibition and of replication as a curatorial tool or museum strategy to represent artworks, and the experiences of them, as well as a whole exhibition enterprise. It also demonstrates a restaging where the works and, in some cases, the artists, have become actors, part of the performance. Nostalgic? Absurd? Fetishistic?⁵⁵⁴ Or simply further historicisation for a show with a now mythical status? Rather 'grandly rechristened' *When Attitudes Become Form Bern 1969/Venice 2013*, Szeemann's entire original installation 'reappeared' as a replica of a past exhibition and as a case demonstrates cause and

symptom, cause and effect, and, as such, raises important issues about replication today.⁵⁵⁵

Celant acknowledged ‘the curatorial, artistic and architectural choice was to plug the whole of “When Attitudes Become Form” into the container ... The intention was not to go back and adapt history to our space, but to bring back the past exactly as it was’.⁵⁵⁶ Celant’s claim that it would be ‘exactly as it was’ is an interesting one in the sense that the moment, the ‘attitudes’, the context and the condition of the works, their tense, have all shifted. It is no longer the artistic and political climate of 1969; that *was* and no longer *is*. A lot of consideration went into transforming an eighteenth-century Venetian palazzo into a 1918 Swiss building. Replication and reconstruction was not limited to the material works exhibited: the original internal spaces and rooms of the Kunsthalle and Schulwarte were purposely and self-consciously recreated on the different floors of the Ca’ Corner della Regina on a 1:1 scale; a replica. White walls were erected, parquet and tile effect floors were laid, and non-functioning radiators and free-standing window frames were installed so as to replicate the look and feel of the original setting but also to present and position the works as they *had been*. For Searle, reporting on the reconstruction and reconfigured walls, floors, fittings and fixtures of a late 1960s Swiss kunsthalle inside a Venetian palace: ‘The resemblances achieve a strange yet magical dislocated double-take. There is a weird feeling of time-slip and dislocation.’⁵⁵⁷ As far as possible, the same works were brought together as they were forty-four years ago. The range of physical entities displayed: originals, substitutes and replicas as well as absent or missing works highlight the problematic nature of attempting to recreate an entire exhibition from 1969. It was a ‘hybrid’ of ‘absences and experiences’.⁵⁵⁸ Works have been sold,

entered museums, they have aged or been destroyed, lost or are too fragile to travel. What is clear then is that there is a slippage in meaning for the impetus and display of the show but also the artworks within that show. It was not 1969 and some works were conserved, some were made afresh, some were not included and some were replaced by equivalents. The attitudes towards the objects, as forms, and the attitudes of the artists and viewers had changed.

In 1994 Bruce Altshuler felt that both the *When Attitudes Become Form* exhibition and catalogue emphasised the ‘demotion of the object’.⁵⁵⁹ However, it is clear that objects *were* needed for the 2013 exhibition. Charles Esche goes as far to argue, ‘This new old exhibition in Venice cannot help but reify the objects it displays by emphasizing the materiality of the things themselves and their value as inanimate “things” rather than tools or gestures in the hands of artists’.⁵⁶⁰ This marks an interesting shift of emphasis from process to object. Celant as self-professed ‘curator-restorer-reconstructor’ spent time and resources bringing ‘back’ as many of the works from 1969 as he could.⁵⁶¹ He stressed, ‘The gathering of these parts, often ephemeral and dispersed, along with the remnants that had found their way into museums and collections, was aimed at re-creating a jigsaw puzzle or constellation that can only be identified as a totality, regarded at the same time as a new way of practicing, showing and thinking about art’.⁵⁶² The show’s multiplicity of approaches included replacements, already existing reconstructions, aged works and conserved works; as such each work has had a different life since 1969.

If we consider the idea of Hesse and Sonnier’s works as skins, not the analogy of latex and skin but the work itself as a skin membrane, then equally the skin of the

Kunsthalle transported to the Ca' Corner della Regina created a shift in attitude or meaning toward the exhibition, the works and the context of the show.⁵⁶³ The tightly cropped, fragmentary, images taken by Demand and reproduced inside the catalogue and on its dust jacket [Figure 76] focus on the details of the existing, temporary and replicated architecture rather than any of the exhibited artworks. The content might simply reflect a time issue whereby the catalogue was printed before or while the show was being installed. Nonetheless, the line where the contemporary false wall touches the existing Venetian palazzo represents a rupture line, a slippage, a dislocation. The metaphorical skin membrane of Bern has been broken, parts have been replaced, treated or substituted in for the whole 'form' of *When Attitudes Become Form* to be seen. Sonnier's *Mustee* was peeled away from the palazzo wall, one flocked wall was absent, Hesse's *Augment* had one of its sheets flipped over to reveal a freshly made bed and her *Sans III* remade anew. Surface, re-surface, by-product and product are all useful terms, metaphors even, for the individual pieces and the exhibition enterprise.

Celant's achievement blurs the past and present, the Kunsthalle and the Ca' Corner della Regina, original and replica. But perhaps this blurring is indicative of the original show when we realise not all works were made or exhibited at each of the three venues and that Szeemann himself wanted to replicate the studio environment, that is, artist's replicating their working methods in the Kunsthalle.⁵⁶⁴ *9 at Leo Castelli* and *Anti-Illusion: Procedures/Materials* demonstrate an existing repeatability present at the original Bern show but by the 1990s it was *When Attitudes Become Form* that was considered the seminal show of the 1960s moment. Szeemann had invited artists to come to the museum to make works; it became an event of actions

and a display of objects simultaneously. This event-display, in time, has become a resource to restage, a new production.⁵⁶⁵ As with skin and its underlying form, the replica exhibition in 2013 was also all about form; a changed form and a composite of changed forms. If we also use a mould to cast analogy the Palazzo as a mould created a new cast of the show.

For Szeemann, and Altshuler in contextualising this moment in the 1960s, the exhibition existed in pure form only in Bern and it is interesting that the curators chose to have Bern in the title.⁵⁶⁶ As Crow notes, alongside Harry Shunk, six other photographers collectively and systematically created a, ‘portrait of *Attitudes* in formation and in its first reception, for which parallels would be difficult to find’.⁵⁶⁷ He adds that for some this show received ‘disproportionate attention at the expense of prior and parallel undertakings’ involving the same broad grouping of artists.⁵⁶⁸ This was due partly because of Szeemann's ‘exceptional regard for the place of his ephemeral project in historical memory’.⁵⁶⁹ The funding from Philip Morris ensured that the documentary record surrounding the show would endure more than the rest. And, as Crow emphasises, ‘It is a testament to his success in this regard that the Venice remounting was even conceivable’.⁵⁷⁰ It is also worth noting that although this documentation made the replica exhibition that much more possible, in considering the process of replicating the whole show, more information about the works as physical objects was also documented. The works and show were, and are, permanent and ephemeral simultaneously, Alex Potts’ ‘enduringly ephemeral’.⁵⁷¹ As has been asked throughout the thesis, what does it mean for an artist to replicate his or her working methods? What does it mean for a museum or curator to do so? What does it mean forty-four years on and on such a large scale? It would have been interesting to

have filmed and interviewed the artists and experts who came to Venice to reinstall or remake works in much the same way Belilos had with the original. Recording how the artists, conservators and curators felt about this process as opposed to the original gesture would have made an insightful comparison.

Marcia E. Vetrocq has recently eloquently written about the re-staging of entire exhibitions. She believes that our understanding of recent art is bound up with the ways we use and respond to replicas and re-enactments, including re-fabricated objects that were regarded as ephemeral at the time of their exhibition and site-specific installations re-created in new contexts.

‘The phenomenon has been accompanied by a conversation that probes and weighs the precision of the reproduction, the fastidiousness of labeling and the protocols of disclaimers, the extent of participation by the artist (or his foundation or estate), and what might be signified - beyond market appetite and museum programming pressures - by the urge to fabricate an extended present and an (inevitably altered) presence for the objects and actions we once surrendered to the passage of time.’⁵⁷²

For Vetrocq, the Venice exhibition was more about the process of re-staging a show, ‘By hijacking the viewer’s imagination, the re-staging renders the exhibition inert: *all* the works seem to be replicas, even though most are not’.⁵⁷³ And for Buskirk, Jones and Jones, the original ‘relics’ threatened the original impetus of the show.⁵⁷⁴ They note, ‘Here, Szeemann’s 1969 tropism toward artists exploring materiality, gravity, process, ephemerality, and contingency (not to mention site-specificity) seemed threatened by these newly presented relics’.⁵⁷⁵

This chapter and thesis as a whole has probed the value of replicas as material objects, as documents, as three-dimensional experiences, as theoretical ideals but also as markers of a series of historical moments. It is our attitudes towards the artwork today that influences decisions regarding what should be shown and in what form. And so we might want to consider whether this show reflects our contemporary impoverishment or sense of nostalgia. Sonnier goes as far to state that the Venice show is a ‘perversion’ of the original premise.⁵⁷⁶ Yet Crow feels, ‘However easily it might be dismissed as an exercise in embalmed, theme-park nostalgia, Celant’s recreation serves to immerse visitors in circumstances actual enough to unsettle preconceived ideas’.⁵⁷⁷ He ends by asking whether the Venice show does, ‘truly represent the “lasting legacy” of Szeemann and his artists?’ adding, ‘It would be a shame if it did’.⁵⁷⁸ Clearly, it is rarely clear-cut but the value of visiting an exhibition, much like a single work, lies in the opportunity to reflect upon a specific moment in history and the significance of that moment critically. Information and documentation is both used and generated, experts in the field discuss and debate, albeit to demonstrate a shift in attitude or a plurality of approaches, but the overriding intention is to preserve works for as long as is possible, materially and theoretically.

Returning to Serra’s observation of matter imposing its own form on form, matter itself continues to impose its own form on form whether total destruction after a display or progressive degradation or deformation. Time has passed and the materials have aged, transformed, degraded, collapsed or been replaced. This cycle of decay and remake can be accommodated by the idea of an endless mould casting new forms. The Prada Foundation itself became that mould and the curators attempted to recast the 1969 Bern exhibition. The 2013 Venice show is now part of the historicisation of

When Attitudes Become Form with an emphasis on the original first venue and the placement of the works in a specific architectural setting.⁵⁷⁹ But Venice also marks a new venue, a new context and new relations: a new mould has been cast reflecting a plurality of approaches *to* and *of* form. The omissions, substitutes, replicas and originals in various states of preservation and decay demonstrated this. The new show also reflects the attitudes of an Italian art historian and curator, a Dutch architect and a German sculptor and photographer not those of a Swiss curator working *in the* 1960s with international aspirations.

More recently Reesa Greenberg has asked how we remember exhibitions and how exhibitions remember themselves. For her, these questions are key to understanding postmodernist exhibition practices and the emergence of what she coins the ‘remembering exhibition’ (exhibitions that remember past exhibitions).⁵⁸⁰ Her phrase self-consciously uses the gerundive form and discusses three different types of remembering exhibitions: the replica, the riff, and the reprise. The most common remembering exhibition is the replica which re-assembles as much of the art work displayed as possible, much like *When Attitudes Become Form Bern 1969/Venice 2013*.⁵⁸¹ It is a materialised memory, a catalyst for changing perceptions and practices.⁵⁸² Replicas as catalysts allow a reaction, a re-action and reactivation, marking attitudes towards the material object and conceptual idea of a work and its contextualisation as a document. The idea of replication allows for a moment of reconsideration, a re-formation, enabling the life and afterlife of a work or exhibition to remain in the present tense, becoming made and unmade, happening and unhappening, unfixed and unfinished, today and for future generations; inherently volatile, liquid and malleable.

Conclusion

An image of the *Large Glass*, superimposed over a view of the Venetian lagoon, was used as the cover of the catalogue and promotional posters for *Marcel Duchamp* held at Palazzo Grassi in 1993 [Figure 77].⁵⁸³ The retrospective exhibition displayed originals, editions, copies and reconstructions including Ulf Linde's 1991-2 *Large Glass* [Figure 78].⁵⁸⁴ For Francis Naumann this image was in keeping with Marcel Duchamp's desire that 'something from nature be viewed through the intricate details of his complex construction'.⁵⁸⁵ In my account the relationships of culture to nature, of man-made to natural, of the physicality of materials and how they behave and our perception of them, have been seen to be more blurred than we might have originally thought. Very few works in the history of art have been untampered with; most have been attended to by conservators. So perhaps the replica, understood here as intimately connected to the question of conservation treatments, is little different.

The replica as a form of reconstruction has been seen to be in dialogue with, and placed within the context of, conservation ethics. The selected case studies have highlighted the insecure nature of the idea of a finished work in a finite state reflecting a temporal and ephemerality condition. Process and processes have been seen to perform on and within a material. As such, a work's inherent vice is a process that may be metaphorically performed as well as one that can result in the literal collapse or failure of the material and work. Performativity and acting out have proved useful in relation to works and their ability to be exhibited today. In the 1960s, for some, the performative nature of a work and its materials signalled a precariousness, one that mounted an assault on the status of the art object. Max Kozloff went as far as to use the idea of an attack to frame his review of the Castelli

Warehouse show. Similarly, many of the works discussed in this thesis arguably present a continued attack on the status as the work, and the ongoing performance of the materials, will go on disallowing a traditional sense of permanence or fixedness. As has been demonstrated, perhaps works can never quite be in a state of finishedness or completion. In looking at the idea of replication the thesis has also questioned the shifting historical claims for the replica, the original, the author, the document or nature. It has been seen that all these terms are precarious in themselves and in relation to one another, materially and conceptually. They all perform, change, distort and act out. But it has also been suggested that in certain circumstances a replica enables an alternative option for display purposes.

Attitudes towards works and replication have changed significantly over the period discussed. In the 1980s and 1990s, as has been seen, there was a more liberal approach to the act of replication. Museums are more cautious now with roundtable discussions and experts coming together to generate informed decisions rather than allowing works to just disappear. Today replication, as a conservation strategy, allows in certain cases, and where the technical knowledge is available, ephemeral, fragile, degraded, lost, site-specific or performance-based works to be exhibited in museums and safeguarded for the future. As such, it has been demonstrated that the information gleaned from creating a replica should be part of the narrative of a work as it marks a documentation of sorts for the object and its legacy. To avoid any uncertainties or controversies, instances of replication need to be made transparent as part of the biography of a work. Accessing what has been done, when, why and by whom should be made apparent, even if just a multiple date given to indicate a repetition or a note that the work is an exhibition copy. Rather than simply shoring up a hierarchy of

objects, this would allow the status of the original and the replica, or replicas, to be clearly and frankly stated. So rather than arguing against replicas per se, it has been seen that, when appropriate, reconstructions are valuable within fairly clear parameters.

The complex and shifting nature of conservation, museum and art-historical discourse, as well as the materials employed, has been emphasised. Taking as my starting point Susan Hapgood's 1990 claim that the act of replication was also a remaking of art and art history this thesis has simultaneously traced and tested the parameters of museum conservation practice today. Understanding the layers of Keith Sonnier and Eva Hesse's latex were seen as key to how the works were made in the 1960s but they have also contributed to how they have been understood as material objects since. The layers of materiality as well as art history and conservation are symptomatic of the approach to replication here. Curator Hilkka Hiiopp believes that more recently conservation judgements favour theoretical over technical issues. She uses the conceptual phenomenon of patina to think through how conservation as a discipline may need to change.⁵⁸⁶ Here, the disciplines of conservation and art history have been deployed as a methodology to provide detailed material information relevant to the narrative of an artwork, its exhibition life and museum afterlife. The relationship of support to surface has also been discussed and its significance analysed in relation to the history of twentieth-century replication, be it broken glass, deformed lead or embrittled latex. Layers and surfaces, surface finish, layers of material, layers of understanding and layers of history have all been explored to focus on the interconnectedness of materials, meanings and attitudes. Linking the ideas of precariousness and finish allows for surfaces to resurface, attitudes to change,

materials to degrade and, as with a latex cast, the by-product can be superseded by a newer product, a new patina, an historically contingent object.

This thesis has spanned a wide range of work, from Marcel Duchamp and Richard Hamilton to Eva Hesse and Barry Flanagan. Duchamp used industrial, non-art materials to create his *Large Glass* while Sonnier and Hesse manipulated a naturally derived material very much connected to the history of sculpture. Latex and glass have tended to be regarded as being of a different order but in the context of this consideration of materiality and replication both materials have been seen to be just as volatile and precarious as each other and, therefore, not so far apart.⁵⁸⁷ My approach has allowed us to see the proximity of such materials both materially and conceptually. Neither mechanical nor natural materials are exempt from issues of replication. Soft materials, such as latex, do not have the monopoly on precarity or temporal matters. Apparently resilient industrial materials can also transform and degrade. And it is clear that materials such as latex and glass occupy an interesting and fairly ambivalent space between nature and culture which destabilise temporal processes in particularly vivid ways. Metals can become fatigued and form a patina themselves alluding to what I have discussed in terms of an ephemerality. So then metaphorical and literal decay are not just a symptom of natural materials and the vulnerability apparent in Flanagan's *June 2 '69* makes a useful comparison to Richard Serra's lead *Shovel Plate Prop* 1969 which also rests against the wall and has a precariousness to it that is both literal and conceptual.

Kozloff's views set out in 1969, as well as his terms of volatility, liquidity, malleability and softness, have been used as a starting point to dramatically

demonstrate what was at stake for the work, material and artist in the 1960s and the possible strategies available to display such works today. In this context, the ideal replica can be regarded as another ‘configuration’ of a work rather than its replacement as the very act of replication engages with the idea of making forms that endure materially and can be exhibited.⁵⁸⁸ The purpose and status of the replica has been addressed using carefully selected historical case studies in order to examine the challenging decisions that are now inevitably faced by conservators and art historians today. Specific artworks have been seen as test cases to draw attention to the acute problems of an artist reconstruction and conservation remake, works activated in the present and the different approaches to form and material for a replica exhibition. In this context, patina and the notion of finish or finishedness, performed and performing works, process and second nature as well as a specific remembering exhibition have been explored.

The 1960s marked a moment when replicas were becoming part of the commercial art economy, a tendency originating in galleries and private collections, but also part of museum practice, as demonstrated with Hamilton’s *Large Glass*. I began with Duchamp to show how temporal instability can be seen to be part of an artwork and to set the scene for subsequent case studies. Hamilton’s reconstruction of the *Large Glass* represents a turning point in understanding the Duchampian model as well as the wider repercussions of replication at that moment and these remain pertinent today. The extraordinary story of this work dramatically opened up the different ways the problems of replication were articulated in the 1960s and have been since. The Duchamp effect became embedded over and above specific influences and the case of Hamilton’s *Large Glass* can be seen to far outweigh his legacy to have a really far-

reaching and wide-ranging effect. The main issue here, of course, was authorship. Duchamp agreed to Hamilton making a full reconstruction of his work and this decision raises interesting concerns regarding the author of an original and an author of a replica. For technical art historian Rebecca Gordon, a ‘misplacement of authority’ allows ‘critical mass’, the ‘immaterial value that governs and activates the authenticity of an artwork’, to become key.⁵⁸⁹ And, here, I have addressed displacement of authority, materiality and temporality. This thesis has looked at who contributes to the decisions regarding whether to replicate, what to replicate, when to replicate and what the status of the replica means for all involved materially and conceptually.

Duchamp was also involved in the conservation and proliferation of his own work through replicas and editions and, within this narrative, a precedent was set for other artists such as Sonnier and Robert Morris to become more involved in the conservation and replication of their earlier works. The emergence of remade works relies on changing philosophical attitudes of art production, preservation, reproduction and display. It has been demonstrated that the 1980s was still a more permissive moment in the history of twentieth-century replication and, as such, was reconsidered in the 1990s. In 1990, as Hapgood’s article testifies, remaking art from the 1960s was already a contested issue. She acknowledges that site, spontaneity, process and ephemerality were all important to artists. These terms, which incidentally link all the case studies discussed here, set up a complex set of relationships when considering the idea of replication, especially when retrospectively assigned. In the period of study there have been broad changes in practices and this has been crucial to my decision to examine them: the malleable materials, the elision

between making and performing (or not), the openness to remaking (or not). The family resemblances (and differences) between the case studies are especially rich but they are not necessarily transferable backwards or forwards in time. They have highlighted that the dilemmas for the museum and artist remain; to display a replica or display a work that compromises the current assumed intentionality of the work. The danger is that replicas can become, instead of temporary surrogates, no different from the works they replace conceptually and materially, as idea and material presence.

There are no clear-cut answers and the case studies have demonstrated that each case is just that; its own case. They have also shown that attitudes continue to shift, especially in relation to the material relic and the new object, and their respective histories for artist, institution and viewer. One may be appropriate at one point, another sometime else. As this research has demonstrated, there needs to be a flexibility, a malleability even, so that decisions can be made in the future based on as much information as possible. Sonnier's by-products, for example, have recently led to superseded remakes, displayable products, but the by-products themselves in this instance were kept. This is surely right. Destroying originals and replicas seems a dramatic gesture and if resources permit, I believe they are a significant part of a work's life and essential for it to exist in the twenty-first century and beyond.

Deteriorated or superseded material objects are valid if acknowledged as such and provide a useful resource for conservators and art historians. So then, I have argued for the need for a plurality of approaches which allow for possible future changes in attitudes. Rather than attempting a consensus, treating original relics, remaking failed or destroyed works, re-performing past performances or restaging entire exhibitions

are museum strategies. They reflect a decision on the part of an institution at a specific time and usually to fulfil a specific purpose.

It has been seen that replicas are sometimes duplicates rather than replacements and, as I have argued, one does not necessarily have to exclude the other. Replicas should not tarnish our understanding of a work in its original or repeated form; one does not have to be at the expense of the other. In 'Some Notes on the Phenomenology of Making: The Search for the Motivated' Morris noted, 'As ends and means are more unified, as process becomes part of the work instead of prior to it, one is enabled to engage more directly with the world in art making because forming is moved further into presentation'.⁵⁹⁰ Replicas too are about presenting and re-presenting. As noted earlier in the introduction, both Yve-Alain Bois and Pip Laurenson have recently argued that replicas enable opportunities and possibilities, historically as part of a work, artist's or museum's narrative, and should be positively stated as such.⁵⁹¹ As more replicas are made to address the exhibitability of works from the twentieth century, these too can be accessioned as specifically reference material with the potential to change status in the future.

To conclude, I would like to mention briefly the work of a contemporary British artist, Roger Hiorns, which shows how the problems addressed in this thesis continue to inform the work of practicing artists. In 2008 Hiorns, commissioned by Artangel and the Jerwood Charitable Foundation, transformed an empty council flat in Southwark into an immersive space of blue copper sulphate crystals [Figures 79a and 79b].⁵⁹² *Seizure*, exhibited in London from 2008 to 2010, was created using 75,000 litres of liquid copper sulphate, its crystalline form growing and covering the walls,

floor, ceiling and bath of an abandoned residence. In early 2011, faced with the demolition of the social housing block, the piece was acquired by the Arts Council Collection.⁵⁹³ The work, weighing over 31 tonnes, was then removed from the property in February 2011, first one wall and then the whole structure was pulled out of the building using hydraulic jacks and were craned onto the back of a lorry. *Seizure* was then transported to Yorkshire Sculpture Park and is now part of a ten-year loan agreement between the Arts Council Collection and Yorkshire Sculpture Park [Figure 80]. As Hiorns noted about the original piece, ‘The object is made by the reaction that happens over time, these materials are introduced to each other, that was interesting to me, instead of processes like welding, sawing and, importantly, hammering ... I like the idea of sculpture as slow object-making.’⁵⁹⁴ *Seizure* links to the natural process-action, the chemical reaction, of the copper sulphate of Zorio. It has been removed from its original context and transported to a new site and presents a transformative material which continues to live albeit not in its original location or context.

As has been seen, Robert Fiore documented artists at work, that is the processes involved in the making of certain pieces in the 1960s. His images and films have, in many cases, been a way of accessing the materialising objects depicted. More recently, the catalogue for *When Attitudes Become Form Bern 1969/Venice 2013*, by its own admission, documents the process of reconstructing the 1969 original exhibition as well as its remake in 2013.⁵⁹⁵ Curator Germano Celant used the terms re-create, reinvention, reconstructing, restaging, revive, and reworking in relation to the project.⁵⁹⁶ For him, the original exhibition represents the ‘paradigm of the process’ of putting on an exhibition post 1969.⁵⁹⁷ And, as has been argued here,

replicas are part of that paradigm or logic. In Venice, present, past and future folded in on one another.⁵⁹⁸

In this thesis, the issues and problems surrounding the making and documenting of replicas has been argued as a condition of these very works. Hiorns' immersive space reflects how artists still work with the idea of material reactions, change becoming part of the duration of a work, its natural process over time. Inherent vice, then, is not only a matter for conservators but for artists and becomes embedded in practice in the 1960s made vivid by Hiorns more recently in relation to ephemerality and materiality. The concepts and ideas behind the discourse of replication now infuse production as well as conservation. And, perhaps this tendency will create a new phase in the history of replication for museums collecting and displaying such works, now and in the future. Replicating as making as conserving as documenting as historicising. Originals and replicas are volatile and malleable, precarious and provisional each with their own inherent vices, material histories and possible future narratives. Most importantly, they are a resource to be cared for, accessed and analysed, if and when required.

¹ Kozloff, M. '9 in a Warehouse: An "attack on the status of the object"' in *Artforum*, February 1969, p.39.

² Statement made by Yve-Alain Bois at *Inherent Vice: The Replica and its Implications in Modern Sculpture*, a closed workshop held at Tate Modern, 18-19 October 2007.

³ Here a material approach will refer to the emphatic role of materials, their behaviour and their physicality.

⁴ In 2006 an International Steering Committee was formed to discuss issues of replication in museums and attempt some sort of consensus for guidelines to best practice. Meetings culminated in *Inherent Vice: The Replica and its Implications in Modern Sculpture*, a closed workshop held at Tate Modern on 18-19 October 2007 and supported by The Andrew W. Mellon Foundation. Papers from this workshop were published, edited with the assistance of the author, in the 2007 autumn issue of *Tate Papers*, Tate's online research journal: <http://www.tate.org.uk/research/publications/tate-papers/issue-08>. On 29 March 2011 Tate also organised a scholars morning to consider the 'Naum Gabo: Prototypes for Sculpture' display at Tate Britain and many of the steering committee members were invited. *The Object in Transition: A Cross-Disciplinary Conference on the Preservation and Study of Modern and Contemporary Art* which was held at the Getty Center, 25-26 January 2008. See:

www.getty.edu/conservation/publications/videos/object_in_transition.html.

⁵ See 'Remaking Art History' published in *Art in America* in July 1990.

⁶ For example, in relation to conceptual art, there was the exhibition *1965-1975: Reconsidering the Object of Art* at the Museum of Contemporary Art, Los Angeles, 15 October 1995 - 4 February 1996. Published thoughts included the catalogue from the show, Newman, M. and Bird, J. (eds.) *Rewriting Conceptual Art*, London, 1999, Benjamin Buchloh's 'Conceptual Art, 1962-1969: From the Aesthetic of Administration to the Critique of Institutions' in *October* 55 Winter 1990, Michael Archer's 'Reconsidering Conceptual Art' in *Art Monthly* 193, February 1996 and Jack Burnham's 'Alice's Head: Reflections on Conceptual Art' in *Artforum* February 1970.

⁷ Hapgood, S. 'Remaking Art History' published in *Art in America*, July 1990, p.115. Hapgood cites three main examples: works made without the artist's permission or carefully copied from a set of artist's plans (fakes), an artist re-creating a twenty-year old sculpture and selling it as an original (fraudulent), and a museum allowing an artist to refabricate a deteriorating work and destroy the original (irresponsible conservation policy).

⁸ Hapgood, S. 'Remaking Art History' in *Art in America*, July 1990, p.115.

⁹ The exhibition ran from 20 February to 3 June 1990.

¹⁰ Several of Benglis' pieces from 1969 were cast in 1974 or 1975. All four of Le Va's exhibited works were reconstructed in 1990. Nauman's *Neon Templates of the left Half of my Body Taken at Ten Inch Intervals* 1966 and *Green Light Corridor* 1970-71 were both reconstructed for the show. Saret's *Sulfur Falls* 1968 and *Mesh Makes Mountain* 1969 were reconstructed in 1990. Serra's *Prop* 1968 is listed in the show's catalogue as lead antimony so was probably remade by the artist himself whereas *Splash Piece: Casting* 1969-70 is listed as a reconstruction. Schapiro's wood and bronze *Untitled* 1972 was reconstructed in 1990 in addition to his cast iron *Untitled* which had been reconstructed in 1981. Sonnier's *Mustee* 1968 and *Dis-Play*

1970 were reconstructed for the show as were Tuttle's *11th Paper Octagonal* 1970 and *Wire Pieces* 1972. The exhibition catalogue acknowledges these reconstructions openly.

¹¹ Hapgood, S. 'Remaking Art History' in *Art in America*, July 1990, p.119.

¹² Hapgood, S. 'Remaking Art History' in *Art in America*, July 1990, p.115.

¹³ See Lippard, L. and Chandler, J. 'The Dematerialization of Art' published in *Art International*, February 1968, and Lippard, L. (ed.) *Six Years: The dematerialization of the art object from 1966 to 1972; a cross-reference book of information on some esthetic boundaries: consisting of a bibliography into which are inserted a fragmented text, art works, documents, interviews, and symposia, arranged chronologically and focused on so-called conceptual or information or idea art with mentions of such vaguely designated areas as minimal, anti-form, systems, earth, or process art, occurring now in the Americas, Europe, England, Australia, and Asia (with occasional political overtones), edited and annotated by Lucy R. Lippard*, Berkeley, Los Angeles, London, 2001.

¹⁴ See 'A Statement on Standards for Sculptural Reproduction and Preventive Measures to Combat Unethical Casting in Bronze' published in *Art Journal XXXIV/1*, Fall 1974, pp.44-50. These standards were made specifically in relation to casts and prints. Hapgood's acknowledgement was made via email correspondence with the author, 3 February 2015. Hapgood also noted that she had no further thoughts on the topic of replication as her 1990 text was a one-time contemplation.

¹⁵ The idea of newness versus ageing is an issue explored by Alois Riegl in 'The Modern Cult of Monuments' in 1903 and published in *Oppositions* 25, Fall 1982. The 'Sect of the Scrupulous' was a phrase coined by Walter Grasskamp during the *Inherent Vice* workshop, held at Tate Modern, 18-19 October 2007, and highlighted by Matthew Gale in his afterthoughts. See 'Afterthoughts' in the 2007 autumn issue of *Tate Papers*: <http://www.tate.org.uk/research/publications/tate-papers/afterthoughts-introduction>, p.8.

¹⁶ As noted by Walter Grasskamp during the *Inherent Vice* workshop, held at Tate Modern, 18-19 October 2007, and used as his title for his text published in the 2007 autumn issue of *Tate Papers*. See <http://www.tate.org.uk/research/publications/tate-papers/rules-game>.

¹⁷ Margaret Iversen noted Stephen Bann's choice between the museum of authentic fragments or perfect simulacra during the *Inherent Vice* workshop held at Tate Modern, 18-19 October 2007. See Bann, S. *The Clothing of Clio: A study of the Representation of History in Nineteenth-Century Britain and France*, Cambridge University Press, Cambridge, 1984, especially chapter 4, 'Poetics of the museum: Lenoir and Du Sommeraard' pp.77-92. Bann here discusses history experienced by the nineteenth-century visitor to the Musée des Petits Augustins and Musée de Cluny. It is the Musée de Cluny that represented the authentic yet fragmentary tendency.

¹⁸ As noted by Jennifer Mundy at the *Inherent Vice* workshop, held at Tate Modern, 18-19 October 2007.

¹⁹ Cesare Brandi's, *Theory of Restoration* of 1963 is the best reference on this topic.

²⁰ As noted by Mary M. Brooks in her text 'Indisputable authenticity': engaging with the real in the museum' in Gordon, R. Hermens, E. and Lennard, F. (eds.) *Authenticity and Replication: The 'Real Thing' in Art and Conservation* Proceedings of the International Conference held at the University of Glasgow, 6-7 December 2012, p.7. As she notes, it was Cesare Brandi who in his *Theory of Restoration* of 1963 prioritised the physical nature of the work whereas more recently

the 1994 *Nara Document on Authenticity* argues for the importance of the concept. In 'Remaking Artworks: Realized Concept versus Unique Artwork' published in Scholte, T. and Wharton, G. (eds.) *Inside Installations: Theory and Practice in the Care of Complex Artworks*, Amsterdam University Press, 1 April 2012, Kerstin Luber and Barbara Sommermeyer argue that in order for conservation principals not to be contravened, the concept should be regarded as the original in concept-based works, p.245.

²¹ Pullen referred to this tendency in his 'Whose Work is it Really? The Conservation of the *Large Glass* and Duchamp's Sculptures at Tate' at *Duchamp and Sweden: On the Reception of Marcel Duchamp after World War II*, Moderna Museet, Sweden, 28-30 April 2015.

²² Gale, M. 'Afterthoughts' in the 2007 autumn issue of *Tate Papers*: <http://www.tate.org.uk/research/publications/tate-papers/afterthoughts-introduction>, p.8.

²³ See, for example, *The Originality of the Avant-Garde and Other Modernist Myths*, The MIT Press, 1981, and 'Retaining the Original: The State of the Question' in *Retaining the Original: Multiple Originals, Copies and Reproductions* Washington, 1989.

²⁴ Terminology relating to replication has been developed from 'Terminology for Further Expansion' published as part of *Tate Papers* Issue 8, Autumn 2007.

²⁵ 'The Year in "Re-"' published in *Artforum International* December 2013, p.127.

²⁶ The Oxford English Dictionary online: www.oed.com, last accessed 11 December 2014.

²⁷ Gale, M. 'Dov'era, com'era' given at *FAIL BETTER*, a symposium about conservation practice and decision making in modern and contemporary art, held at the Hamburger Kunsthalle, Hamburg, 6-7 December 2013. In 'A Statement on Standards for Sculptural Reproduction and Preventive Measures to Combat Unethical Casting in Bronze' published in *Art Journal XXXIV/1*, Fall 1974, the less honourable connotations of the term replica were also noted. The statement, written by the College Art Association, was amended by a committee that included representatives from the Association of Art Museum Directors, the Art Dealers Association of America and Artists Equity. As Judd Tully notes in 'The Messiest Subject Alive', published in *ARTnews* in December 1995, it prompted an *ARTnews* survey of art historians, museum officials, dealers, and collectors which discovered that controversies were widespread.

²⁸ The term renewal was used by conservator Barbara Sommermeyer at *FAIL BETTER*, held at the Hamburger Kunsthalle, Hamburg, 6-7 December 2013. Renewal was used to describe the new version of Reiner Ruthenbeck's *Plattenboden für eine Wandöffnung 100/3/SNA* 1991. In their chapter 'Remaking Artworks: Realized Concept versus Unique Artwork' published in *Inside Installations: Theory and Practice in the Care of Complex Artworks*, Amsterdam University Press, 1 April 2012, Barbara Sommermeyer and Kerstin Luber use the term remake. Ruthenbeck's *Plattenbogen für eine Wandöffnung 100/3/SNA*, in the collection of the Hamburger Kunsthalle, is discussed here in terms of a remake which replaced the previous 'irreparably damaged artwork' and is now regarded as the original. Luber and Sommermeyer include a definition of a remake for concept-based artworks: 'A remake as a conservation measure aims to preserve the artists concept and

1. an object is remade to replace an existing artwork that no longer fulfils the artist's concept (replacement function),

2. which fulfils all essential criteria of the artist's concept on which the artwork is based (concept fulfilment) and
3. the remake acquires the status of the previous original artwork 'original status.' p.244

They add that the well-known terms of copy, replica, reproduction, reduplication, edition, version, variant, reconstruction or replicate lack at least one of these three mandatory criteria for a remake. They reference Kerstin Budde's 2007 diploma thesis *Die Neuanfertigung von Originalen in der modernen und zeitgenössischen Kunst – Am Beispiel eines Werkes von Reiner Ruthenbeck* Stuttgart State Academy of Art and Design. What is interesting is that whereas in this chapter the new work is classified as a remake, in her paper for *FAIL BETTER* Sommermeyer used the term renewal. The term mock-up was used to describe the sections of Eva Hesse's *Expanded Expansion* of 1969 that her assistant Doug Johns remade and which were exhibited next to the original during *The Object in Transition: A Cross-Disciplinary Conference on the Preservation and Study of Modern and Contemporary Art* which was held at the Getty Center, 25-26 January 2008. The term proto-replica was used to describe the newly made Naum Gabo *Sculpture on a Line* presented at the *Inherent Vice* workshop held at Tate Modern, 18-19 October 2007.

²⁹ Gale, M. 'Dov'era, com'era' given at *FAIL BETTER* held at the Hamburger Kunsthalle, Hamburg, 6-7 December 2013.

³⁰ Alley, R. *Catalogue of the Tate Gallery's Collection of Modern Art other than Works by British Artists*, Tate Gallery and Sotheby Parke-Bernet, London, 1981, pp544-45. One version was recreated for the exhibition *l'art conceptuel, une perspective* at the Musée d'arte Moderne de la ville de Paris, 1989. The catalogue reproduced the original installation view from 1965 but did not mention refabrication.

³¹ 3mm Sandersilver Mirror S.Q. over Aeroweb F-Board cubes.

³² Hapgood, S. 'Remaking Art History' in *Art in America* in July 1990, p.120. In footnote 36 Hapgood notes that a good example of Morris' refabrication practices is his *Mirrored Cubes* first made in 1965.

³³ These cubes were made by a specialist technician, Jim Godfrey, regularly contracted by the gallery and were shown in St Peter's Church from 5 April 2008 - 1 June 2008. Working from drawings, a local glass company then cut and applied the mirror sides to the cubes (Email correspondence with Lizzie Fisher, Curator at Kettle's Yard, 10 March 2015).

³⁴ Email correspondence from Barry Phipps, Fellow, Tutor and Curator of Works of Art, Churchill College, 20 January 2015. Phipps also forwarded on his original correspondence with Robert Morris from November 2007 when he was organising the show. Here Morris specifies dimensions of an inch smaller or bigger than Tate's version adding in parenthesis, 'there was never an original or a definitive size'. Lizzie Fisher destroyed the cubes, with the help of colleagues, using sledgehammers.

³⁵ Whereas the 2008 Morris refabrication was destroyed by staff at Kettles Yard, Ruthenbeck's original *Plattenbogen für eine Wandöffnung 100/3/SNA* 1991 is now used as a reference at the Hamburger Kunsthalle for conservation regarding quality of fabrication. See footnote 3, p.235 in 'Remaking Artworks: Realized Concept versus Unique Artwork' published in *Inside Installations: Theory and Practice in the Care of Complex Artworks*, Amsterdam University Press, 1 April 2012. Other examples of replicas and originals not being destroyed will be discussed within this thesis.

³⁶ See especially *Body Art/Performing the Subject* Minneapolis, Minnesota University Press, 1998.

³⁷ From the discussions during the *Inherent Vice* workshop held at Tate Modern, 18-19 October 2007.

³⁸ For example, in 2007 the Swedish newspaper *Expressen* revealed that 105 Brillo boxes had been fabricated in Malmö, Sweden, in 1990, three years after Warhol's death, and subsequently passed off as 1968 'originals' made for a retrospective at the Moderna Museet in Stockholm. It created an ethical dilemma for dealers, collectors, and scholars including the experts in charge of authenticating the artist's work. At the centre of the debate was the late Pontus Hultén, an art-world pioneer who helped to found and shape the Moderna Museet, the Pompidou Center's Musée National d'Art Moderne and the Museum of Contemporary Art in Los Angeles. Hultén worked closely with Warhol in 1968 on the artist's first retrospective at the Moderna Museet. More than two decades later, whilst organising museum exhibitions for European venues in the early 1990s, Hultén ordered the fabrication of the 105 Brillo boxes but no one knows why or for what purpose. Hultén sold dozens of boxes to dealers and collectors in the 1990s. The letter sent to Brillo-box owners in late 2007 by the authentication board regarding the 1990 boxes stated, 'These works were produced posthumously and without the knowledge of the Andy Warhol Estate or the Andy Warhol Foundation for the Visual Arts. At this time, the Board cannot determine whether or not these boxes were produced in accordance with the terms of a verbal agreement Pontus Hultén made with Warhol in 1968'. See Eileen Kinsella's 'The Brillo-Box Scandal' published in *ARTnews* 1 November 2009:

<http://www.artnews.com/2009/11/01/the-brillo-box-scandal/>, last accessed 1 June 2015, for an overview of the scandal. At the 2015 Venice Biennale, in the Belgian pavilion, the ideas of original and copy were addressed in relation to Warhol's *Brillo Box* by Song Dong, Francis Alÿs and Rinus Van de Velde. Van de Velde's piece, in charcoal on canvas, represented the artist copying Warhol's Brillo boxes but in the background the form of Warhol can also be seen watching him.

³⁹ The need for flexibility was also noted by Matthew Gale, Nancy Troy and Sean Rainbird at the *Inherent Vice* workshop held at Tate Modern, 18-19 October 2007.

⁴⁰ As noted by Pip Laurenson, then Head of Time-Based Media, Tate, at the *Inherent Vice* workshop held at Tate Modern, 18-19 October 2007.

⁴¹ Kozloff, M. '9 in a Warehouse: An "attack on the status of the object"' in *Artforum*, February 1969, p.39.

⁴² The show ran from 19 May to 6 July 1969.

⁴³ News Press Release regarding The Artist Initiative project at the San Francisco Museum of Modern Art, 10 February 2014:

http://www.sfmoma.org/about/press/press_news/releases/983, last accessed 4 December 2014.

⁴⁴ See *Whitney Stories Video: Carol Mancusi-Ungaro*, 4 November, 2013:

<http://whitney.org/WhitneyStories/CarolMancusiUngaro>, last accessed 11 November 2014.

⁴⁵ *From Marble to Chocolate*, 18-20 September 1995; *Modern Art Who Cares?*, 8-10 September 1997; and *Mortality Immortality? The Legacy of 20th-Century Art*, 25-27 March 1998. Each conference led to a publication: See Heuman, J. (ed.) *From Marble to Chocolate: the Conservation of Modern Sculpture*, London 1995; Hummelen, I and Sillé, D (eds.) *Modern Art: Who Cares? An interdisciplinary research project and an international symposium on the conservation of modern and contemporary art*, Archetype Publications, London, 2005 (originally ICN 1999); and Corzo, M.A. (ed.)

Mortality Immortality? The Legacy of 20th-Century Art, The Getty Conservation Institute, Los Angeles, 1999.

⁴⁶ *The Object in Transition: A Cross-Disciplinary Conference on the Preservation and Study of Modern and Contemporary* was held at the Getty Center, 25-26 January 2008; *Contemporary Art Who Cares?* was held in Amsterdam, 9-11 June 2010; *Authenticity and Replication: The 'Real Thing' in Art and Conservation* was held at the University of Glasgow, 6-7 December 2012; *FAIL BETTER*, was organised by the Hamburger Kunsthalle, 6-7 December, 2013; and *Authenticity in Transition: Changing Practices in Contemporary Art Making and Conservation* was held in Glasgow, 1-2 December 2014.

⁴⁷ This exhibition ran 2 February -19 May and then travelled to the Museum Wiesbaden in Germany, 15 June - 13 October 2002, and Tate Modern in London, 13 November 2002 - 9 March 2003.

⁴⁸ The roundtable discussion included Bill Barrette (former assistant to Hesse), Michele Barger (Associate Conservator of Objects San Francisco Museum of Modern Art), Sharon Blank (Objects Conservator), Helen Hesse Charash (Hesse's sister), Robin Clark (Assistant Curator, *Eva Hesse* exhibition), Briony Fer, Werner Kramarksy (Collector), Jay Krueger (Head of Modern and Contemporary Painting Conservation, National Gallery of Art, Washington, D.C.) Martin Langer (Conservator), Sol LeWitt (Artist and friend of Hesse), Carol Mancusi-Ungaro (Director, Center of the Technical Study of Modern Art, Harvard University Art Museums), Barry Rosen (Estate of Eva Hesse), Scott Rothkopf (Contributor, *Eva Hesse* catalogue), Linda Shearer (Director, Williams College Museum of Art), Naomi Spector (New York-based art writer, worked with Hesse whilst at the Fischbach Gallery), Jill Sterrett (Head of Conservation, San Francisco Museum of Modern Art), Carol Stringari (Senior Conservator, Exhibitions, Solomon R. Guggenheim Museum), Elisabeth Sussman (Curator, *Eva Hesse* exhibition), Ann Temkin (The Muriel and Philip Berman Curator of Modern and Contemporary Art, Philadelphia Museum of Art), Gioia Timpanelli (Fiction writer and friend of Hesse) and John S. Weber (The Leanne and George Roberts Curator of Education and Public Programs, San Francisco Museum of Modern Art).

⁴⁹ The exhibition ran at Tate Modern, 26 September 2008 - 1 February 2009, and then travelled to the Kawamura Memorial Museum of Art, Sakura, 21 February - 14 June 2009.

⁵⁰ See Borchardt-Hume, A. (ed.) *Rothko: The Late Series* (exh. cat., Tate Modern), London, 2008, pp.75-87.

⁵¹ The author contributed to meetings and the database as part of Tate's membership during 2001-2005.

⁵² Founded at the Menil in 1990, with support from The Andrew W. Mellon Foundation, the ADP has incorporated interviews from the Whitney Museum of American Art and the Center for the Technical Study of Modern Art/Harvard Art Museums. The Project Directors are Carol Mancusi-Ungaro, and Brad Epley, Chief Conservator, The Menil Collection.

⁵³ See <http://www.guggenheim.org/new-york/collections/about-the-collection/the-panza-collection-initiative>, last accessed 6 July 2015.

⁵⁴ Ted Mann, Assistant Curator, Panza Collection, Ana Torok, Curatorial Assistant, Panza Collection together with Weiss and Esmay make up the Guggenheim Project team. The Advisory Committee consists of a group of curators, conservators, and scholars representing a diverse range of institutions: Martha Buskirk, Professor of Art

History and Criticism, Montserrat College of Art, Briony Fer, Professor of History of Art, University College London, Ann Goldstein, General Artistic Director, Stedelijk Museum, IJsbrand Hummelen, Senior Researcher, Netherlands Institute for Cultural Heritage, Tom Learner, Senior Scientist, The Getty Conservation Institute, Carol Mancusi-Ungaro, and Jill Sterrett.

⁵⁵ See Buskirk, M. *The Contingent Object of Contemporary Art*, Cambridge Massachusetts and London England, 2003, and Molesworth, H. *Part Object Part Sculpture*, Wexner Center for the Arts, 2005.

⁵⁶ More recently Jennifer Mundy's exhibition and publication *Lost Art: Missing Artworks of the Twentieth Century*, Tate Publishing, London, 2013, outlined the various reasons for absence.

⁵⁷ See Schwartz, H. *The Culture of the Copy: Striking likenesses, unreasonable facsimiles*, New York, 1996.

⁵⁸ Dean, R. 'Ruscha's Inherent Vice' was presented at the International Symposium *Ed Ruscha: History*, 11-13 March 2015 at the Centre Pompidou in Paris. Editor of the *Edward Ruscha Catalogue Raisonné of Paintings*, Dean concentrated on Ruscha's paintings, drawings, prints, photographs and artist's books to highlight themes of change, destruction and the representation of the passage of time in relation to inherent vice. Here, the idea of inherent vice will exceed that of the workshop held in 2007 with the same title or its meaning within conservation practices to look at precariousness, volatility, liquidity and malleability both materially and conceptually.

⁵⁹ Temkin, A. 'Strange Fruit' in Corzo, M.A. (ed.) *Mortality Immortality? The Legacy of 20th-Century Art*, The Getty Conservation Institute, Los Angeles, 1999. p.50. The paper focuses on *Strange Fruit (for David)* by Zoe Leonard.

⁶⁰ Hapgood, S. 'Remaking Art History' in *Art in America* in July 1990, p.122.

⁶¹ Hamilton, R. 'The Pasadena retrospective' in *Collected Words: 1953-1982*, Thames and Hudson, London, 1982, p.199, originally published in *Art International*, January 1964, pp.22-28.

⁶² Holden, C. Duchamp's *Large Glass* Study Day, Tate Britain, 24 May 2003.

⁶³ The interview was recorded on 27 September 1961 and aired on 17 June 1962. Although the reproduction of the *Large Glass* is not visible in the surviving BBC footage it is referred to by Hamilton in *The Bride Stripped Bare by Her Bachelors Even Again*, University of Newcastle upon Tyne, Department of Fine Art, Newcastle upon Tyne, 1966, unpaginated and 'Son of the Bride Stripped Bare' in *Art and Artists* I, no.4, July 1966, p.22.

⁶⁴ The glass may have shattered when the piece was in transit from the museum to the Lincoln warehouse in Manhattan, 26 January 1927, or when it was transported from the warehouse to Dreier's home in West Redding, Connecticut in 1931.

⁶⁵ Hamilton, R. 'Towards a typographical rendering of the Green Box' in *Collected Words: 1953-1982*, Thames and Hudson, London, 1982, p.190, footnote 7.

⁶⁶ For an excellent overview of the implications for the Hamilton reconstruction as well as some discussion of Tate's reconstruction of the lower panel of Duchamp's *Large Glass*, refer to Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects": Richard Hamilton's Version of Marcel Duchamp's *Large Glass*' MA Courtauld Institute of Art Thesis, University of London, 1994. Taylor addresses some of the questions raised by Hamilton's version of the *Large Glass*, in particular the complicated issues of authenticity, replication, translation and plagiarism. Taylor is very critical of Tate's procedures and labelling and Hamilton's histrionics, anger, bitterness and inconsistencies. For technical details of the Tate reconstruction see

Holden, C. and Perry, R. 'The Reconstruction of the Lower Glass Panel of Duchamp/Hamilton's 'Large Glass' 1965-6' in *The Conservator* No.11 (UKIC) July 1987, pp3-13 as well as Yule, M. "*The Large Glass*" *Reproduced by Richard Hamilton 1965-6* April 1990, unpublished, Tate Archives.

⁶⁷ See Hamilton, R. *The Bride Stripped Bare by Her Bachelors Even Again*, University of Newcastle upon Tyne, Department of Fine Art, Newcastle upon Tyne, 1966; Hamilton, R. and Amaya, M. 'Son of the Bride Stripped Bare' in *Art and Artists* I, no.4, July 1966 and Forge, A. 'In Duchamp's Footsteps' in *Studio International*, CLXXI, June 1966, as well as 'The reconstruction of Duchamp's Large Glass: Richard Hamilton in conversation with Jonathan Watkins' in *Art Monthly* no.136, May 1990.

⁶⁸ See Holden, C. and Perry, R. 'The Reconstruction of the Lower Glass Panel of Duchamp/Hamilton's 'Large Glass' 1965-6' *The Conservator* No.11, July 1987, pp.3-13.

⁶⁹ The exhibition ran from 18 June to 31 July 1966.

⁷⁰ 'The reconstruction of Duchamp's Large Glass: Richard Hamilton in conversation with Jonathan Watkins' in *Art Monthly* no.136, May 1990, p.3.

⁷¹ Duchamp's widow, Teeny (Alexina 'Teeny' Sattler), authorised the creation of the replica in Tokyo.

⁷² As noted in a letter from Nina Öhman, Curator at the Moderna Museet, Stockholm, to Michael Taylor on 30 June 1994, Appendix A1 in Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects": Richard Hamilton's Version of Marcel Duchamp's *Large Glass*', unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994.

⁷³ Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects": Richard Hamilton's Version of Marcel Duchamp's *Large Glass*', unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994, p.55.

⁷⁴ For Duchamp's defense of replicas see Otto Hahn, 'Passport No. G255300' p.11, Robert Lebel 'Marcel Duchamp maintenant et ici' in *L'Oeil*, No. 149, May 1967, p.77 and Dore Ashton 'An Interview with Marcel Duchamp' in *Studio International* 171, No. 878, June 1966, p.246. These are cited in 'Duchamp's Fountain: Aesthetic Object, Icon or Anti-Art?' by William Camfield in Duve, T. de *The Definitively Unfinished Marcel Duchamp*, The MIT Press, Cambridge, Massachusetts, London, England, 1991, p.162 footnote 47 p.176. For the quote regarding a copy remaining a copy, see Robert Lebel 'Marcel Duchamp maintenant et ici' in *L'Oeil*, No. 149, May 1967, p.77, again cited by Camfield in Duve, T. de *The Definitively Unfinished Marcel Duchamp*, The MIT Press, Cambridge, Massachusetts, London, England, 1991, p.163.

⁷⁵ In *Richard Hamilton dans le reflet de / in the Reflection of Marcel Duchamp* a film by Pascal Goblot, Le Miroir/Vosges Télévision, 2014 (53 minutes) and published in 'Richard Hamilton in the Mirror with Marcel Duchamp' Interview by Pascal Goblot, pp.19-20.

⁷⁶ Naumann, F.N. 'The Bachelor's Quest' in *Art In America* vol 81, no.9 September 1993, footnote 2, p.67 and 69. He does this mainly in relation to Duchamp's readymades.

⁷⁷ Naumann notes that in certain cases, replicas have been made by a person other than the artist, but within the artist's lifetime and with his authorisation and approval, for example Arturo Schwarz's edition of the readymades. Naumann, F.N. 'The Bachelor's Quest' in *Art In America* vol 81, no.9 September 1993, footnote 2, p.67.

⁷⁸ Naumann, F.N. 'The Bachelor's Quest' in *Art In America* vol 81, no.9 September 1993, footnote 2, p.67.

⁷⁹ See 'The Year in "Re-"' published in *Artforum International* December 2013, pp.127-8. They also note that reconstruct increasingly points to an ambiguous territory between material artworks reassembled, repaired, or remade as objects, and ephemeral actions performed by live bodies or machines.

⁸⁰ This gesture was restaged by Yasumasa Morimura in *A Requiem: Theater of Creativity / Self-portrait as Marcel Duchamp*, 2010, with the Tokyo Large Glass, Collection of Art Museum, College of Art and Sciences [Figure 8b].

⁸¹ Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects': Richard Hamilton's Version of Marcel Duchamp's Large Glass", unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994, pp.16-17. In footnote 37 Taylor adds that it is an unnecessary addition to 'the glut of Duchamp copies in the world. Hamilton's reasons for rejecting Linde's replica and reconstructing the work himself have more to do with plagiarism and competitiveness - the desire to be Duchamp's artistic protégé and progeny - than with any concern on his part for the general public'. It is extraordinary, given his role in multiplying Duchamp's Readymades at this time, that in a letter from Arturo Schwarz to Taylor, 17 May 1994 (Appendix A4), Schwarz claims Hamilton was not replicating but plagiarising which he finds obscene. He thought Linde's replica and the replica made by the Museum of Modern Art were very good but, as Taylor notes, this second replica was Hamilton's exhibited in New York in 1968.

⁸² To note two: Andrew Forge's 'In Duchamp's Footsteps' published in *Studio International*, CLXXI, June 1966 and Hamilton and Mario Amaya's 'Son of the Bride Stripped Bare' published in *Art and Artists* I, no.4, July 1966.

⁸³ See Hamilton, R. *The Bride Stripped Bare by Her Bachelors Even Again*, University of Newcastle upon Tyne, Department of Fine Art, Newcastle upon Tyne, 1966, unpaginated.

⁸⁴ It was published with a dedication to William N. Copley and his wife.

⁸⁵ 'The John Tusa Interview with Richard Hamilton' 5 May 2002, on BBC Radio 3: http://www.bbc.co.uk/radio3/johntusainterview/hamilton_transcript.shtml, last accessed 14 July 2009.

⁸⁶ It is interesting that Duchamp noted in 'A Window onto Something Else' that interpretations of the *Large Glass* are only interesting if you consider the person who makes the interpretation. See Cabanne, P. *Dialogues with Marcel Duchamp with an appreciation by Jasper Johns*, translated from the French by Ron Padgett, Da Capo Press New York, 1987, p.42.

⁸⁷ Richard Morphet refers to Hamilton as being instrumental in Duchamp's rehabilitation in 'Richard Hamilton: The Longer View' in Morphet, R. (ed.) *Richard Hamilton* (exh. cat., Tate Gallery), London, 17 June - 6 September 1992, p.12. The great decipherer (*Le Grand Déchiffreur*) is used for the 2009 publication *Le Grand Déchiffreur - Richard Hamilton sur Marcel Duchamp: Une selection d'écrits, d'entretiens et de lettres* JRP/Ringier, 2009, texts translated into English by Jeanne Bouniort and in *Richard Hamilton dans le reflet de / in the Reflection of Marcel Duchamp* a film by Pascal Goblot, Le Miroir/Vosges Télévision, 2014 it is revealed that to Richard Hamilton Marcel Duchamp once wrote that he was his great decoder.

⁸⁸ 'In Duchamp's Footsteps' was the title of Andrew Forge's article published in *Studio International*, CLXXI, June 1966.

⁸⁹ Yule, M. “*The Large Glass*” *Reproduced by Richard Hamilton 1965-6* April 1990, unpublished, Tate Archives, p.4.

⁹⁰ Holden, C. Duchamp's *Large Glass* Study Day, Tate Britain, 24 May 2003.

⁹¹ Molly Nesbit's text for *October* vol 37, Summer 1986 is titled ‘Ready-made Originals: The Duchamp Model’ which also plays on the perceived problematic nature of Duchamp and originals.

⁹² Hamilton, R. *The Bride Stripped Bare by Her Bachelors Even Again*, University of Newcastle upon Tyne, Department of Fine Art, Newcastle upon Tyne, 1966, unpaginated.

⁹³ Thirkell, P. ‘From the *Green Box* to Typo/Topography: Duchamp and Hamilton's Dialogue in Print, *Tate Papers*, Issue 3, 1 April 2005:

<http://www.tate.org.uk/research/publications/tate-papers/green-box-typotopography-duchamp-and-hamiltons-dialogue-print>, last accessed 7 September 2013.

⁹⁴ Hamilton, R. and Amaya, M. ‘Son of the Bride Stripped Bare’ in *Art and Artists* I, no.4, July 1966, p.23.

⁹⁵ These full-scale reconstructions were included in Palazzo Grassi Duchamp show in Venice in April-July 1993 where Linde's *Large Glass* was also exhibited. To me, this marks how Hamilton was already inscribed into the Duchamp's oeuvre outside the Tate Gallery by this time.

⁹⁶ I am not including a comparison of the Japanese or French replicas as they were not authenticated by Duchamp. I am also referring to the second Swedish replica as it is this version which remains unbroken and it is this version that is more commonly used for exhibition purposes.

⁹⁷ Richard Hamilton Interview, 19 April 2005, Tate Britain, Paintings Conservation Studio, transcript by author, May 2005, p.10.

⁹⁸ The exhibition was held at the Museum of Modern Art in New York, March - June 1968, and then travelled to the Los Angeles County Museum, July - September 1968, and the Art Institute of Chicago, October - December 1968.

⁹⁹ *Marcel Duchamp in München 1912*, 31 March - 15 July 2012.

¹⁰⁰ *The Bride and the Bachelors: Duchamp with Cage, Cunningham, Rauschenberg and Johns*, 14 February - 9 June 2013.

¹⁰¹ Linde's *Large Glass* was exhibited at the Palazzo Grassi from April to July 1993. Installed at the Pompidou Centre in 2005, Hamilton discusses in great detail Linde's version as seen in *Richard Hamilton dans le reflet de / in the Reflection of Marcel Duchamp* a film by Pascal Goblot, Le Miroir/Vosges Télévision, 2014 (53 minutes).

¹⁰² Richard Hamilton Interview, 19 April 2005, Tate Britain, Paintings Conservation Studio, transcript by author, May 2005, p.10.

¹⁰³ Richard Hamilton Interview, 19 April 2005, Tate Britain, Paintings Conservation Studio, transcript by author, May 2005, p.10

¹⁰⁴ Hamilton, R. *The Bride Stripped Bare by Her Bachelors Even Again*, University of Newcastle upon Tyne, Department of Fine Art, Newcastle upon Tyne, 1966, unpaginated. In relation to his frame, this is very interesting as toughened Armourplate is similar to that used in jewellery shop windows.

¹⁰⁵ ‘The reconstruction of Duchamp's *Large Glass*: Richard Hamilton in conversation with Jonathan Watkins’ in *Art Monthly* no.136, May 1990, p.5.

¹⁰⁶ See Amédée Ozenfant's *Foundations of Modern Art*, John Rodker, London, 1931, p.118. The reproduction of Duchamp's *Large Glass* has the text ‘Object painted on transparent glass. Through it can be seen pictures by Léger and Mondrian’. This English edition was published two years after the original French version.

¹⁰⁷ Hamilton, R. 'Towards a typographical rendering of the Green Box' in *Collected Words: 1953-1982* Thames and Hudson, London, 1982, p.190.

¹⁰⁸ Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects': Richard Hamilton's Version of Marcel Duchamp's *Large Glass*", unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994, p.41 and footnote 101, p.62. Insightful views and technical information are found in many of the footnotes in this text.

¹⁰⁹ Letter to Richard Hamilton from Ronald Alley, Keeper of the Modern Collection, the Tate Gallery, 27 July 1976, Gallery Records, TG 4/2/442/1.

¹¹⁰ Forge, A. 'In Duchamp's Footsteps' *Studio International*, June 1966, p.249

¹¹¹ Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects': Richard Hamilton's Version of Marcel Duchamp's *Large Glass*", unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994, p.26. Footnote 59.

¹¹² See Alley, R. *Catalogue of the Tate Gallery's Collection of Modern Art other than Works by British Artists*, Tate Gallery and Sotheby Parke-Bernet, London, 1981, pp.185-191.

¹¹³ Appendix A8: Letter from Ronald Alley to Michael Taylor, dated 5 May 1994 and included in Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects': Richard Hamilton's Version of Marcel Duchamp's *Large Glass*", unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994.

¹¹⁴ Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects': Richard Hamilton's Version of Marcel Duchamp's *Large Glass*", unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994, p.26.

¹¹⁵ Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects': Richard Hamilton's Version of Marcel Duchamp's *Large Glass*", unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994, p.26.

¹¹⁶ 'The reconstruction of Duchamp's *Large Glass*: Richard Hamilton in conversation with Jonathan Watkins' in *Art Monthly* no.136, May 1990, p.3.

¹¹⁷ Appendix C: Questionnaire from Richard Hamilton to Taylor and included in Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects': Richard Hamilton's Version of Marcel Duchamp's *Large Glass*", unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994.

¹¹⁸ Appendix A5: Letter from Jennifer Mundy to Michael Taylor, dated 12 July 1994 and included in Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects': Richard Hamilton's Version of Marcel Duchamp's *Large Glass*", unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994.

¹¹⁹ *Richard Hamilton*, 13 February - 26 May 2014.

¹²⁰ Holden, C. Duchamp's *Large Glass* Study Day, Tate Britain, 24 May 2003.

¹²¹ It had been a warm evening on 19 June and the gallery temperature rose to over 30 degrees centigrade the following morning which also added to the urgency.

¹²² Holden, C. and Perry, R. 'The Reconstruction of the Lower Glass Panel of Duchamp/Hamilton's 'Large Glass' 1965-6' *The Conservator* No.11, July 1987, p.6.

¹²³ See 'Letter to Hamilton from Andrew Durham' dated 1 August 1984, Tate Archives.

¹²⁴ Holden, C. Duchamp's *Large Glass* Study Day, Tate Britain, 24 May 2003.

¹²⁵ It is also worth noting here that the comma was also dropped. When Duchamp issued an edition of 320 signed and numbered copies of *the Bride Stripped Bare by Her Bachelors Even* known as the *Green Box* in 1934 the only difference between the title of this Box and the title of the *Large Glass* was the absence of the comma after

the word 'Bachelors'. This is acknowledged by Arturo Schwarz in 'Marcel Duchamp: The Great Inspirer' published in *Tema Celeste* 36, Summer 1992 p.38. For Duchamp, 'At that time I was becoming literary. Words interested me; and the bringing together of words to which I added a comma and "even," an adverb which makes no sense, since it relates to nothing in the picture or title. Thus it was an adverb in the most beautiful demonstration of adverbness. It has no meaning', it's a "'non-sense'". See 'A Window onto Something Else' in Cabanne, P. *Dialogues with Marcel Duchamp with an appreciation by Jasper Johns*, translated from the French by Ron Padgett, Da Capo Press New York, 1987, p.40. Originally published by Thames and Hudson London, 1971 from the French *Entretiens avec Marcel Duchamp* Belfond Paris, 1967.

¹²⁶ This issue was raised in relation to the works label at Duchamp's *Large Glass* Study Day, Tate Britain, 24 May 2003.

¹²⁷ Holden, C. and Perry, R. 'The Reconstruction of the Lower Glass Panel of Duchamp/Hamilton's 'Large Glass' 1965-6' *The Conservator* No.11, July 1987, pp.11-12.

¹²⁸ Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects": Richard Hamilton's Version of Marcel Duchamp's *Large Glass*', unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994, p.46.

¹²⁹ It is interesting that Thierry de Duve used *The Definitively Unfinished Marcel Duchamp* as the title for his publication on Duchamp, The MIT Press, Cambridge, Massachusetts, London, England, 1991.

¹³⁰ A new oval shape of foil was applied to Hamilton's archival relic to replace the transferred piece. This was not obviously apparent when the author went to view the shattered glass section at Tate Stores on 20 June 2012.

¹³¹ Yule, M. "*The Large Glass*" *Reproduced by Richard Hamilton 1965-6* April 1990, unpublished, Tate Archives, p.15.

¹³² Email correspondence with Michael Taylor, 9 June 2015.

¹³³ Holden, C. and Perry, R. 'The Reconstruction of the Lower Glass Panel of Duchamp/Hamilton's 'Large Glass' 1965-6' *The Conservator* No.11, July 1987, p.11.

¹³⁴ Holden, C. and Perry, R. 'The Reconstruction of the Lower Glass Panel of Duchamp/Hamilton's 'Large Glass' 1965-6' *The Conservator* No.11, July 1987, p.11.

¹³⁵ Notes in a memorandum to the Director from Andrew Durham, 1 October 1985, after he and Roy Perry had visited Hamilton, Tate Archives.

¹³⁶ In a memorandum to Richard Hamilton, Director, Alan Bowness, Ronald Alley, Alexander Dunluce and Christopher Holden, 4 October 1985, Roy Perry notes that he and Holden are think it advisable that the work be publically displayed with a label briefly explaining its history. He includes the following as an example: 'The glass of the lower panel failed in 1984 and was reconstructed in 1985 incorporating the original inscription from the 1965 replica', Tate Archives.

¹³⁷ Holden, C. Duchamp's *Large Glass* Study Day, Tate Britain, 24 May 2003.

¹³⁸ See Holden, C. and Perry, R. 'The Reconstruction of the Lower Glass Panel of Duchamp/Hamilton's 'Large Glass' 1965-6' in *The Conservator* No.11 (UKIC) July 1987, pp3-13. In *Richard Hamilton dans le reflet de / in the Reflection of Marcel Duchamp* a film by Pascal Goblot, Le Miroir/Vosges Télévision, 2014, 40 minutes in the narrator notes that in 1984 the lower panel made by Hamilton cracked due to a defect in the composition of the glass. He explains that it took conservators two years to restore it completely and it is also acknowledged that the signatures were kept. More recently Derek Pullen, previous Head of Sculpture Conservation at Tate, spoke of the break in his paper entitled 'Whose Work is it Really? The Conservation of the

Large Glass and Duchamp's Sculptures at Tate' at *Duchamp and Sweden: On the Reception of Marcel Duchamp after World War II*, at the Moderna Museet, Sweden, 28-30 April 2015. Pullen had worked on the original conservation remake when he first started at the Tate Gallery and his final project was treating the remade section before Hamilton passed away in 2011.

¹³⁹ Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects': Richard Hamilton's Version of Marcel Duchamp's *Large Glass*", unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994, p.37.

¹⁴⁰ There is also Linde's text *Marcel Duchamp* of 1986 and Schwarz's 'Marcel Duchamp: the Great Inspirer' in *Tema Celeste* 36, Summer 1992.

¹⁴¹ Information regarding this exhibit is referred to in the conservation record for the *Large Glass*, Tate Archives.

¹⁴² Hamilton, R. 'The Large Glass' in D'Harnoncourt, A. and McShine, K. (eds.) *Marcel Duchamp* (exh. cat., The Museum of Modern Art and Philadelphia Museum of Art), New York, 1973, p.61.

¹⁴³ Duchamp, M. 'A Window onto Something Else' in Cabanne, P. *Dialogues with Marcel Duchamp with an appreciation by Jasper Johns*, translated from the French by Ron Padgett, Da Capo Press New York, 1987, p.41.

¹⁴⁴ Hamilton, R. 'The Large Glass' in D'Harnoncourt, A. and McShine, K. (eds.) *Marcel Duchamp* (exh. cat., The Museum of Modern Art and Philadelphia Museum of Art), New York, 1973, p.61

¹⁴⁵ Hamilton, R. and Amaya, M. 'Son of the Bride Stripped Bare' in *Art and Artists* I, no.4, July 1966, p.24-5.

¹⁴⁶ Richard Hamilton Interview, Lucy Pierce, 1 November 1988, unpaginated, in Tate's conservation record for the *Large Glass*, Tate Archives.

¹⁴⁷ Hamilton, R. and Amaya, M. 'Son of the Bride Stripped Bare' in *Art and Artists* I, no.4, July 1966, p.25.

¹⁴⁸ Hamilton, R. and Amaya, M. 'Son of the Bride Stripped Bare' in *Art and Artists* I, no.4, July 1966, p.25.

¹⁴⁹ In *Richard Hamilton dans le reflet de / in the Reflection of Marcel Duchamp* a film by Pascal Goblot, Le Miroir/Vosges Télévision, 2014. Hamilton here also notes that he recently went to the real caves at Lascaux but acknowledges that the plastic replica is degrading so a third version will be made. He thinks that the same should be done to the *Large Glass* 'several generations' so it can 'go on for eternity'.

¹⁵⁰ Footnote 98 in Taylor, M. "'To Lose the Possibility of Recognising 2 Similar Objects': Richard Hamilton's Version of Marcel Duchamp's *Large Glass*", unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994, p.61.

¹⁵¹ Pohlád, M. B. "'Macaroni repaired is ready for Thursday....'" Marcel Duchamp as Conservator', *tout-fait: The Marcel Duchamp Studies Online Journal*, Volume 1, Issue 3, December 2000:

http://www.toutfait.com/issues/issue_3/Articles/pohlád/pohlád.html, last accessed 9 August 2013.

¹⁵² Pohlád, M. B. "'Macaroni repaired is ready for Thursday....'" Marcel Duchamp as Conservator', *tout-fait: The Marcel Duchamp Studies Online Journal*, Volume 1, Issue 3, December 2000,

http://www.toutfait.com/issues/issue_3/Articles/pohlád/pohlád.html, last accessed 9 August 2013.

¹⁵³ As discussed, the *Large Glass* might not have actually broken in 1931. Arturo Schwarz also notes this when he acknowledges that the caption on the back states

erroneously that it was broken in 1931. See Schwarz, A. *The Complete Works of Marcel Duchamp* with catalogue raisonné, Thames and Hudson, London, 1969, p.148.

¹⁵⁴ Duchamp in conversation with Calvin Tomkins, *The World of Marcel Duchamp*, New York, 1966, p.22. Also quoted in Tomkins, C. *The Bride and the Bachelors: Five Masters of the Avant-Garde*, Viking, Compass Books, New York, 1968, pp.18-19. Duchamp also expresses similar thoughts published in ‘Through the “Large Glass”’ in Cabanne, P. *Dialogues with Marcel Duchamp with an appreciation by Jasper Johns*, translated from the French by Ron Padgett, Da Capo Press New York, 1987, p.67.

¹⁵⁵ In response to a request from Robert Lebel and Robert Donival who were organising a Duchamp exhibition in Paris, 22 December 1963, in Jennifer Gough-Cooper, Jacques Caumont, and Pontus Hulten, (ed.) ‘Ephemerides on or about Marcel Duchamp and Rose Sélavy, 1887-1968’, in Hulten, P. (ed.) *Marcel Duchamp: Work and Life* Cambridge, 1993, unpaginated but organised by date.

¹⁵⁶ As cited in Pohlád, M. B. ““Macaroni repaired is ready for Thursday....” Marcel Duchamp as Conservator’, *tout-fait: The Marcel Duchamp Studies Online Journal*, Volume 1, Issue 3, December 2000, but originally from William Seitz, ‘What Happened to Art?: An Interview with Marcel Duchamp on the Present Consequences of New York's 1913 Armory Show’, *Vogue* 15, 1963, p.129.

¹⁵⁷ In Tate’s conservation record, Tate Archives. This record has images of the *Large Glass* installed at Tate Britain on 6 February 1967 as well as images showing the damage to the lower panel, the reconstruction process in Tate Conservation and the original Duchamp *Large Glass*.

¹⁵⁸ Report on the ageing of the Lead Foil backing on the 1985 reconstructed lower panel, Chris Holden, March 2000, Tate Archives. The manufacturers suggested this could have been due to tinned lead having been used but analysis by Tate Conservation scientists showed it to be pure lead. The reason for the very slow ageing process could have been due to the new lower panel always having been in a relatively ‘clean’ museum environment compared with Hamilton’s reconstruction, which travelled and was exposed to various environments.

¹⁵⁹ Holden, C. Duchamp's *Large Glass* Study Day, Tate Britain, 24 May 2003.

¹⁶⁰ Correspondence from Derek Pullen, then Head of Sculpture Conservation, Tate, on 14 November 2003 after a meeting with Richard Hamilton and Roy Perry, Tate Archives.

¹⁶¹ Meeting with Derek Pullen and Andrew Wilson at Tate Modern, 9 July 2009, author present.

¹⁶² In Tate’s conservation record for the *Large Glass*, Tate Archives.

¹⁶³ Email correspondence, Timothy Green, Andrew Wilson and Matthew Gale, Autumn 2009.

¹⁶⁴ Conservators at Tate had carried out several tests using lead including various sampling materials, materials applied to the lead and methods of application, surface texture and finish, reactions with other materials, levels of exposure and assessment of stability.

¹⁶⁵ Pullen, D. ‘Whose Work is it Really? The Conservation of the *Large Glass* and Duchamp’s Sculptures at Tate’ at *Duchamp and Sweden: On the Reception of Marcel Duchamp after World War II*, Moderna Museet, Sweden, 28-30 April 2015.

- ¹⁶⁶ Taylor, M. “‘To Lose the Possibility of Recognising 2 Similar Objects’”: Richard Hamilton's Version of Marcel Duchamp's *Large Glass*’, unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994, footnote 98, p.61.
- ¹⁶⁷ Taylor, M. “‘To Lose the Possibility of Recognising 2 Similar Objects’”: Richard Hamilton's Version of Marcel Duchamp's *Large Glass*’, unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994, p.39-40.
- ¹⁶⁸ Hamilton, R. and Amaya, M. ‘Son of the Bride Stripped Bare’ in *Art and Artists I*, no.4, July 1966, p.25.
- ¹⁶⁹ Letter from Richard Hamilton to Alan Bowness, 11 July 1984, Tate Archives.
- ¹⁷⁰ Holden, C. and Perry, R. ‘The Reconstruction of the Lower Glass Panel of Duchamp/Hamilton’s ‘Large Glass’ 1965-6’ *The Conservator* No.11, July 1987, p.5.
- ¹⁷¹ Schwarz, A. *The Complete Works of Marcel Duchamp* with catalogue raisonné, Thames and Hudson, London, 1969, p.124.
- ¹⁷² In Schnapp, J.T. ‘Crystalline Bodies: Fragments of a Cultural History of Glass’ in *West 86th* Vol. 20 No. 2, Fall/Winter 2013: www.west86th.bgc.bard.edu/articles/schnapp-crystalline-bodies.html, last accessed 14 March 2015.
- ¹⁷³ A point raised by Holden and Perry in ‘The Reconstruction of the Lower Glass Panel of Duchamp/Hamilton’s ‘Large Glass’ 1965-6’ *The Conservator* No.11, July 1987, p.6.
- ¹⁷⁴ Bracewell, M. ‘This Was the Modern World’ in *Tate Etc* Spring 2014, p.85.
- ¹⁷⁵ For example, problems of accuracy have been identified in Rodchenko reconstructions in the use of anachronistic materials as well as Aleksandr Lavrent’ev imposing a minimalist aesthetic to the works. There is also the larger, commercial, question of proliferation associated with Lavrent’ev’s editions of lost unique works to which Maria Gough refers in her unpublished paper for *Inherent Vice*, ‘Editioning Constructivism’. Holtzman’s interventions might be regarded as decisions to promote Mondrian’s studio tests as works of art. In these examples, it should be noted that both Lavrent’ev and Holtzman, as the artists' heirs, had the moral power of authentication.
- ¹⁷⁶ Holden, C. Duchamp's *Large Glass* Study Day, Tate Britain, 24 May 2003.
- ¹⁷⁷ ‘Interview: Richard Serra and Liza Béar’, 1976, in *Richard Serra: Interviews, Etc. 1970-80*, written and compiled in collaboration with Weyergraf, C., New York, 1980, pp.68-70.
- ¹⁷⁸ Kozloff, M. ‘9 in a Warehouse: An “attack on the status of the object”’ in *Artforum*, February 1969, p.39.
- ¹⁷⁹ As Mario García Torres acknowledges in footnote 4 page 5 in ‘As I Found It: A Preface’ the show has been referred to as *Nine at Castelli*, *9 at Castelli*, *Nine in a Warehouse*, *Warehouse Show*, *The Castelli Warehouse Show*, and *Nine [9] at Leo Castelli*. See Torres, M.G. *9 at Leo Castelli* Instituto de Cultura Puertorriqueña (2da Trienal Poli/Gráfica de San Juan: América Latina y el caribe, 18 April - 28 June) 2009. *9 at Leo Castelli* was the title printed on the original invitation and is used on the Leo Castelli Gallery website today and will therefore be used here.
- ¹⁸⁰ Kozloff, M. ‘9 in a Warehouse: An “attack on the status of the object”’ in *Artforum*, February 1969, p.39.
- ¹⁸¹ Kozloff, M. ‘9 in a Warehouse: An “attack on the status of the object”’ in *Artforum*, February 1969, p.39.

¹⁸² Many of the works discussed in this thesis rely, and relied, on propping, specifically propping materials against a wall or support. This act in itself emphasises the precarious nature of installed material objects from the 1960s.

¹⁸³ In 'The Politics of the Precarious' at *Location: the Museum, the Academy, and the Studio - The 34th Association of Art Historians Annual Conference*, 2-4 April 2008, Anna Dezeuze discussed precariousness in relation to Fischli and Weiss, Martin Creed, Thomas Hirschhorn and Francis Alÿs. Dezeuze used precariousness to refer to processes and actions, not set features.

¹⁸⁴ On the dematerialisation of the art object refer to Lippard, L. and Chandler, J. 'The Dematerialization of Art' published in *Art International*, February 1968 and Lippard, L. (ed.) *Six Years: The dematerialization of the art object from 1966 to 1972; a cross-reference book of information on some esthetic boundaries: consisting of a bibliography into which are inserted a fragmented text, art works, documents, interviews, and symposia, arranged chronologically and focused on so-called conceptual or information or idea art with mentions of such vaguely designated areas as minimal, anti-form, systems, earth, or process art, occurring now in the Americas, Europe, England, Australia, and Asia (with occasional political overtones)*, edited and annotated by Lucy R. Lippard, Berkeley, Los Angeles, London, 2001.

¹⁸⁵ Robert Lumley acknowledges in his text 'Spaces of Arte Povera' that, at the time, Tommaso Trini noted the shifts from picture to object, object to material and finally material to action. See *Zero to Infinity: Arte Povera 1962-1972*, Minneapolis and London, 2001, p.44. Lumley uses these shifts to structure his discussion on the diversity of Arte Povera in Italy from 1966 to 1969.

¹⁸⁶ Tarsia, A. 'Time and the immaterial' in *Live in Your Head: Concept and Experiment in Britain 1965-75* (exh. cat., the Whitechapel Art Gallery), London, 2000, p.18. Tarsia cites this tension specifically in relation to the walk works of Richard Long.

¹⁸⁷ 'The Enduringly Ephemeral' was the title of Potts' text presented at *Inherent Vice Inherent Vice: The Replica and its Implications in Modern Sculpture* and published in *Tate Papers*, Issue 8, Autumn 2007. Potts used this term in relation to performance works during the closed workshop.

¹⁸⁸ Reviewing *Anti-Illusion: Procedures/Materials*, held at the Whitney Museum of American Art in New York from 19 May to 6 July 1969, Emily Wasserman comments, 'What becomes perplexing to me about this evidence of process and exposition is that very sense of *acting out*'. See Wasserman, E. 'New York' in *Artforum*, September 1969, p.59. She continues, 'which is both skeleton and flesh in Serra's work'. Wasserman is here referring to Serra's works *One-Ton Prop*, *Splashing* and *Casting* exhibited in the show.

¹⁸⁹ Tate's conservation record, Tate Archives. The record notes that Serra's *Shovel Plate Prop* has been installed in 1973 when purchased, in 1983, in 1989-90, 1993 and 2009.

¹⁹⁰ From an interview conducted on 27 November 2007 with Tate's then Sculpture Conservation Technician, William Easterling, who couriered the work to New York.

¹⁹¹ The catalogue for *Anti-Illusion: Procedures/Materials* held at the Whitney Museum of American Art in 1969 includes a series of photographs of Serra taken by Robert Fiore in the act of making them. See pages 36 and 37.

¹⁹² See 'Another Hesse' published in Wagner, A. M. *Three Artists (Three Women): Modernism and the Art of Hesse, Krasner and O'Keeffe*, Berkeley and Los Angeles, 1996, p276. The credit line notes recto. Allen Memorial Art Museum, Oberlin

College, Oberlin, Ohio. The composition of *Prop Pieces* in this sketch, like Peter Moore's photograph from the show, includes Tate's *Shovel Plate Prop*. It is also worth here noting Vik Muniz's *After Richard Serra, Prop, 1968* of 2000, which is a photographic print of Serra's *Prop* made from dust collected from the floor of the Whitney Museum. This piece seems to also frame Serra's heavy metal works within the ephemeral. In 2004 Serra revealed how when he had started making the props he thought 'How do you hold something up against the wall? How do you use something on the wall to hold up something coming off the floor? How do you lean a couple of things together to make them freestanding?' He added, 'I understood I could take material, roll it up, and it'd still be an object, even though it was primarily about its own making'. See 'Richard Serra in Conversation with Hal Foster' from conversations that took place in October and November 2004 and published in *Richard Serra: The Matter of Time* (exh. cat., Guggenheim Museum), Bilbao, Göttingen:Steidl Publishers, 2005, p.30.

¹⁹³ See for example Benjamin Buchloh's text in Foster, H. and Hughes, G. (eds.) *Richard Serra*, October files, The MIT Press, Cambridge and London, 2000, and Hal Foster's text in *Richard Serra: The Matter of Time* (exh. cat., Guggenheim), Bilbao, 2005.

¹⁹⁴ It is interesting that in an interview with John Wilson for Radio 4's *Front Row*, broadcast on 1 October 2008, whilst installing his show at the Gagosian Gallery in London in 2008, Serra emphasised his interest in things that are obdurate, heavy and weighted at one moment and free, floating and light in another. For Serra, when you walk through *Open Ended* which has pieces of steel weighing 30-40 tonnes, you do not sense the weight.

¹⁹⁵ At a McGill-Concordia Student Symposium on Media and Communication Policy on 9 April 2008 Mél Hogan presented a paper that used ephemerality to explore the concept of materiality in relation to creativity and distribution in online archives within a legal, cultural and economic framework.

¹⁹⁶ These omissions are noted by Briony Fer in *The Infinite Line: Remaking Art after Modernism*, New Haven and London, 2004, p.156.

¹⁹⁷ McShine, K. and Cooke, L. (eds.) *Richard Serra: Sculpture: Forty Years*, (exh. cat., The Museum of Modern Art), New York, 2007, p.28. Serra acknowledges that, in this, he was similar to Carl Andre.

¹⁹⁸ This emphasis on Serra as an action or process artist is also highlighted in Serra's films, *Hand Catching Lead*, 1968, *Hands Tied*, 1968 and *Hands Scraping*, 1968.

¹⁹⁹ Müller, G. *The New Avant-Garde: Issues for Art of the Seventies*, New York, 1972, p.20.

²⁰⁰ Tucker, M. *Anti-Illusion: Procedures/Materials* (exh. cat., Whitney Museum of American Art), New York, 1969, p.35.

²⁰¹ Cited at the beginning of this chapter, from 'Interview: Richard Serra and Liza Béar', 1976, in *Richard Serra: Interviews, Etc. 1970-80*, written and compiled in collaboration with Weyergraf, C., New York, 1980, pp. 68-70.

²⁰² A later work, *Trip Hammer* 1988 also in Tate's Collection, consists of a pair of large thin steel plates of equal dimensions assembled in a T-shaped formation. Made from a rust-coloured weathering steel, which is particularly resistant to corrosion, the work was originally produced in America in 1988. *Trip Hammer* was remade in London in 1997 using new plates of steel which were purchased pre-cut. In order for the plates to develop a patina, they were left outside for a time before being exhibited.

²⁰³ As put forward by Lynne Cooke in Richard Serra: A Case Study' published in *Tate Papers*, Issue 8, Autumn 2007: <http://www.tate.org.uk/research/publications/tate-papers/richard-serra-case-study>, last accessed 11 February 2015. Trina McKeever from Richard Serra's studio confirmed this via email correspondence, 26 June 2015.

²⁰⁴ Cooke, L. 'Richard Serra: A Case Study' published in *Tate Papers*, Issue 8, Autumn 2007: <http://www.tate.org.uk/research/publications/tate-papers/richard-serra-case-study>, last accessed 11 February 2015.

²⁰⁵ This *Shovel Plate Prop* is part of the museum's Panza Collection.

²⁰⁶ The term vicissitude was used throughout *Inherent Vice: The Replica and its Implications in Modern Sculpture*, held at Tate Modern, 18-19 October 2007. Similarly, at *The Object in Transition: A Cross-Disciplinary Conference on the Preservation and Study of Modern and Contemporary Art* held at the Getty Center, 25-26 January 2008, there was much discussion surrounding the prehistory and installation history of an object. It is interesting that the title of the conference also suggests the changing state of art objects, their precariousness and perhaps also their ephemerality, as a relevant topic today.

²⁰⁷ On 25 October 1993, a meeting was held at Tate to discuss Serra's suggestion of remaking *Shovel Plate Prop*.

²⁰⁸ See Alley, R. *Catalogue of the Tate Gallery's Collection of Modern Art other than works by British Artists*, Tate Gallery and Sotheby Parke-Bernet, London, 1981, p.679.

²⁰⁹ It would appear that the sheet was also displayed the wrong way round so that the markings on the lead sheet faced inwards to the wall.

²¹⁰ The conservation record in Tate Archives does not include an explanation as to why the re-rolling was necessary or why the roll was not re-rolled again to achieve a wider diameter. The original installation notes from Galerie Ricke suggest that the sheet should be flattened and the roll re-rolled each time the work is installed so this might explain why the roll was re-rolled in Liverpool. However the conservation record also notes that the work has been stored as a sheet and roll. The author investigated the discrepancy in the size of the roll and mocked-up the dimensions of the sculpture based on the 1983 installation plan. The resulting diameter (105mm) looked too thin. Measurements based on the Galerie Ricke and pre-1981 Tate reproduction images resulted in a pole with a diameter of 203mm.

²¹¹ The author assisted. The procedure, in fact, was carried out based on the author's research and was made using a template to achieve dimensions more in keeping with the 1969 reproductions of the work. Tate also decided to use mirror clips behind the flat sheet to reduce the risk of collapse.

²¹² Interview with Elizabeth McDonald, Sculpture Conservator, Tate, at Tate Modern, 27 July 2011. It was Elisabeth Andersson, Sculpture Conservator at Tate, who had carried out this conservation treatment on 8 June 2011.

²¹³ Tate's CCTV footage revealed that no-one had touched the piece, no-one was even near the work and there was no issue with the wall or the adjacent gallery.

²¹⁴ Zorio's *Odio* is another interesting example of a precarious lead sculpture. *Odio*, meaning I hate or hatred, was made by Zorio hammering a rope into an industrial lead ingot to form the word odio in lower case cursive. The ends of the rope were then fixed to the walls to make a swing-like structure for the show. The actions of Zorio are embedded in a metal known for its weight as well as its malleability. Zorio acknowledged in an interview in 1972 of *Odio*, that one day the lead could fall as it is a very heavy material, 'At some stage the plant materials from which the rope is made

could become the fulcrum of the piece' - from an interview with Mirella Bandini, Turin, October 1972, translated by Caroline Beamish, in *Zero to Infinity: Arte Povera 1962-1972*, (exh cat., Walker Art Center, Tate Modern), Minneapolis and London, 2001, p.326. *Odio*, by the artist's own admission, is not stable; it has the potential to change as his original action might not be able to be sustained due to the materials employed.

²¹⁵ Noted in relation to Serra's rubber works of the 1960s in 'Richard Serra in Conversation with Hal Foster' published in *Richard Serra: The Matter of Time* (exh. cat., Guggenheim Museum), Bilbao, Göttingen:Steidl Publishers, 2005, p.27.

²¹⁶ Ashby M.F. and Jones, D.R.H. *Engineering Materials 1: An Introduction to Properties, Applications, and Design*, Fourth Edition, Elsevier Ltd, Oxford, 2012, p.312. On p.315, figure 20.3 illustrates that lead pipes often creep noticeably over time. Metals are crystalline solids with a metallic bonding. They do not share electrons as all the atoms are the same, however, they do share outer moving electrons which is why metals conduct electricity. This stable, metallic bonding is strong but force or energy can cause the layers to start to move, they slip deforming the crystal structures. Deformation can occur due to force or an increase in temperature or both. At room temperature, enough force can be applied to break the lattice or heat energy can be applied to cause the material to deform. Creep is the slow deformation of a material; it is connected to time and dependent on the melting temperature of the material. Creep is different in polymers. Rubber, much like glass, is amorphous and disordered and because it is made of carbon and hydrogen, the forces of attraction between polymer chains are weak and readily broken. In elastomers there will be critical points of cross-linking, for example vulcanized rubber, where groups link intermittently by a strong covalent bond. In terms of creep, over time, gravity, the load of itself and the critical point, will mean that the material will fail and become brittle or, if it does not reach that point, it will allow relaxation to occur.

²¹⁷ Williams, R. J. *After modern sculpture: Art in the United States and Europe 1965-70*, Manchester and New York, 2000, p.86.

²¹⁸ This, in part, could be because the Italian works arrived late. See Torres, M.G. 'As I Found It: A Preface', footnote 4, page 5 in *9 at Leo Castelli Instituto de Cultura Puertorriqueña (2da Trienal Poli/Gráfica de San Juan: América Latina y el caribe, 18 April - 28 June) 2009*, p.5.

²¹⁹ The art critic Germano Celant coined the term 'Arte Povera' in a text to accompany his exhibition *Arte Povera e IM Spazio* at Genoa's Galleria La Bertesca in September 1967. The term appeared in the last sentence which also concludes his discussion of a work by Emilio Prini. He appropriated the term from the Polish experimental theatre director and innovator Jerzy Grotowski, employing his notion of 'poor theatre' to define the work of a number of young artists from Turin, Rome, Genoa and Milan. See also Celant, G. 'Arte Povera: Notes for a Guerrilla War' originally published in *Flash Art*, no.5, Rome November/December 1967. In 'Giovanni Anselmo: Matter and Monochrome' published in *October 124*, Summer 2008, Rosalind Krauss discusses the 'poor' of Arte Povera in terms of purity, energy and entropy. She utilises Richard Serra's *Prop Pieces* in her text also.

²²⁰ Excerpt from an interview with Mirella Bandini, Turin, October 1972, translated by Caroline Beamish, in *Zero to Infinity: Arte Povera 1962-1972*, Minneapolis and London, 2001, p.326. A version of this interview was originally published in *NAC*, no. 3, March 1973.

²²¹ Charles Harrison organised the London showing of *When Attitudes Become Form* and in his text, 'Against Precedents', published in the catalogue he noted, many of the artists exhibited were dissatisfied with a specific object in a finite state. See Harrison, C. 'Against Precedents' in *When Attitudes Become Form (Works - Concepts - Processes - Situations - Information)* (exh. cat., Kunsthalle Bern and ICA, London), 1969, in parentheses, unpaginated.

²²² 'To suspend' formed part of Serra's *Verb List* of 1967-8.

²²³ This was noted by Gregoire Müller in 'Robert Morris Presents Anti-Form: The Castelli Warehouse Show' in *Arts Magazine*, February 1969, p.29.

²²⁴ In *Arte Povera: Movements in Art*, London, 2004, Robert Lumley's section on Zorio in 'Materials, Energy and Process' is entitled 'The Unstable Object: Gilberto Zorio'. See also Lumley, R. 'Spaces of Arte Povera' in *Zero to Infinity: Arte Povera 1962-1972*, Minneapolis and London, 2001, p.54.

²²⁵ Celant, G. *Art Povera: Conceptual, Actual or Impossible Art?*, London, 1969, p.6. This state was very much of the publication. Celant repositioned Arte Povera within an international context with this book but it was Piero Gilardi who was instrumental in the internationalism of Arte Povera and, as a consequence of the international network, shows featuring Arte Povera works were organised abroad including *Prospect '68* in Düsseldorf and *9 at Leo Castelli* in New York as well as Harald Szeemann's *When Attitudes Become Form* and Wim Beeren's *Op losse schroeven; situaties en cryptostructuren*, loosely translated to 'Square Pegs in Round Holes: Situations and Cryptostructures'.

²²⁶ Press release of Gilberto Zorio exhibition held at Blain|Southern, London, 9 August - 28 September 2013:

http://artreview.com/reviews/october_2013_review_gilberto_zorio, last accessed 13 January 2015.

²²⁷ This becoming is a material process with conceptual implications.

²²⁸ Celant, G. 'Arte Povera: Notes for a Guerrilla War' 1967 in Christov-Bakargiev, C. (ed.) *Arte Povera*, London, 1999, p.195. Originally published in *Flash Art*, no.5, Rome November/December 1967.

²²⁹ Press release of Gilberto Zorio exhibition held at Blain|Southern, London, 9 August - 28 September 2013:

http://artreview.com/reviews/october_2013_review_gilberto_zorio, last accessed 13 January 2015.

²³⁰ 'A Passage in the Crucible of Artistic Irradiation' Germano Celant and Gilberto Zorio, October 1987 in *Gilberto Zorio* (exh. cat., IVAM Centro del Carne), Valencia, 1991-2, p.45.

²³¹ At the Sculptural Process Working Group meeting at the Courtauld Institute, 15 February, 2008, focusing on finish in relation to Hesse's studio works and Canova's marble sculptures, Satish Padiyar discussed Canova and the studio fetish, his compulsion to polish his marble surfaces. Interestingly, Padiyar believes that Canova never finished finishing his surfaces. Alex Potts noted that one can overpolish marble and lose the smooth surface. It might then be that there is an excess of finish, where the surface is lost through the act of creating a 'perfect' smooth finish. Here, however, I want to question the idea of finish; surface finish and finishedness.

²³² Zorio, G. in Celant, G. *Art Povera: Conceptual, Actual or Impossible Art?*, London, 1969, p.185.

- ²³³ Szeemann, H. 'About the exhibition' in *When Attitudes Become Form (Works - Concepts - Processes - Situations - Information)* (exh. cat., Kunsthalle Bern and ICA, London), 1969, unpaginated.
- ²³⁴ Burton, S. 'Notes on the New' in *When Attitudes Become Form (Works - Concepts - Processes - Situations - Information)* (exh. cat., Kunsthalle Bern and ICA, London), 1969, in parentheses, unpaginated.
- ²³⁵ Kozloff, M. 'The Poetics of Softness' 1967 in *Renderings: Critical essays on a century of modern art*, London, 1970, p.224. Originally published in the catalogue of the exhibition *American Sculpture of the Sixties*, Los Angeles County Museum of Art, 28 April - 25 June, 1967.
- ²³⁶ Kozloff, M. 'The Poetics of Softness' 1967 in *Renderings: Critical essays on a century of modern art*, London, 1970, p.224.
- ²³⁷ Other examples of CASB, for example, include *casb 1'67*, *casb 3'67*, *casb 5'67* *casb 6'67* and *al casb 4'67* and all are quite distinct.
- ²³⁸ Conversation with Barry Flanagan in 1976, Tate Archives, unpaginated.
- ²³⁹ The letter, dated July 1985 is from Julian Andres, Director of the Fine Arts Department. Tate Archives, unpaginated.
- ²⁴⁰ It was paid for by the British Council and remains the property of Tate.
- ²⁴¹ The replica has been displayed at Tate Liverpool in 2000, Tate Modern in 2000-2001, San Paolo in 2003 and the Irish Museum of Modern Art in 2006. The original has been displayed at Tate Liverpool and Tate Britain since the replica was made.
- ²⁴² The replicas are clearly marked up on the packing cases.
- ²⁴³ See Foster, H. 'The Un/Making of Sculpture' in Foster, H. with Hughes, G. (eds.) *Richard Serra*, Cambridge and London, 2000.
- ²⁴⁴ In 'Richard Serra: A Case Study' in *Tate Papers*, Issue 8, Autumn 2007, Lynne Cooke argues that replication and reconstruction are not applicable to Serra's oeuvre.
- ²⁴⁵ And, as noted in the introduction of this thesis, as of 1 June 2014 museums can create preservation copies without obtaining specific permission from copyright holders.
- ²⁴⁶ Tate's conservation record, Tate Archives, unpaginated.
- ²⁴⁷ Hiiop, H., 'The Possibility of Patina in Contemporary Art or, Does the 'New Art' Have a Right to Get Old' in Närriepa, E., Sarapik, V. and Tomberg, J. (eds.) *Koht ja Paik. Place and Location. Studies in Environmental Aesthetics and Semiotics VI* 2008 p.155.
- ²⁴⁸ Tate's conservation record, Tate Archives.
- ²⁴⁹ Further investigation is required to discover what Serra's issue is with the piece. Without this clarification, Tate might not be ready to give up on the original *Shovel Plate Prop*. Its status is also complicated by the more recent collapse at Tate Modern whereby a decision about a possible remake will only be made if, and when, the work is requested for exhibition. Like the performative nature of the materials and work, its status is also then precariously hanging in the balance.
- ²⁵⁰ In Bern, for *When Attitudes Become Form*, Serra threw approximately five hundred pounds of molten lead along a skirting of the entrance hall recreating the *Splash Piece* that had appeared a month before on the cover of *Artforum*. And, with Szeemann's permission, it was shown concurrently at Wim Beeren's *Op losse schroeven; situaties en cryptostructuren*. Here Serra splashed his lead on the curb outside the museum. As Bruce Altshuler notes, 'it quickly became an icon of the new emphasis on process in Post-minimalist sculpture', Altshuler, B. *The Avant-Garde in Exhibition: New Art in the 20th Century*, New York, 1994, p.250.

²⁵¹ Kozloff, M. '9 in a Warehouse: An "attack on the status of the object"' in *Artforum*, February 1969, p.38. In 'Richard Serra's Early Work: Sculpture between Labor and Spectacle' in McShine, K. and Cooke, L. (eds.) *Richard Serra: Sculpture: Forty Years* (exh. cat., The Museum of Modern Art), New York, 2007, Benjamin Buchloh also discusses liquidation in relation to Serra's molten lead and splatter pieces.

²⁵² Altshuler, B. *The Avant-Garde in Exhibition: New Art in the 20th Century*, New York, 1994, p.248.

²⁵³ More recently *Piombi* was exhibited at the Serralves Museum of Contemporary Art in Porto Portugal from 30 May - 27 September 2009 [Figure 30]. And *Piombi II*, which was also made in 1968, with similar lead trays containing corrosive liquids, was exhibited at Blain|Southern in London from 9 August - 28 September 2013 [Figure 31]. In contrast to *Piombi*, *Piombi II* was suspended from the ceiling by ropes rather than being propped against a wall. The yellow copper sulphate and blue-green hydrochloric acid in their respective buckled sheets of lead actively crystallised on the suspended copper braid which connected the volatile elements whilst facilitating the reaction causing coloured crystals to form.

²⁵⁴ Letter from Robert Morris to Michael Compton, 19 January 1971, Tate Archives.

²⁵⁵ Morris, R. 'The Present Tense of Space' in *Continuous Project Altered Daily: The Writings of Robert Morris*, October, The MIT Press, Cambridge and London, 1995, pp.175-6. Originally published in *Art in America* January/February 1978. Morris opens this text with a quote about swords: 'The sword was the primary side arm before the perfection of the flintlock. For centuries two types of sword were made. Those tempered soft were flexible but held no cutting edge. Those tempered hard held an edge but were brittle and easily broken. The idea of a good sword was a contradiction in terms until around the 11th century when the Japanese brought the mutually exclusive together by forging a sheath of hard steel over a flexible core of softer temper'. It was taken from Frederick Wilkinson's *Swords and Daggers* New York, Hawthorn Books, 1967 p.50 and p.54. It is relevant here in relation to the condition of malleability which I am arguing for. On p.202 there is a reproduction of Richard Serra's *Spin Out (For Robert Smithson)* 1973 which is noteworthy as it links Serra, Smithson and Morris.

²⁵⁶ *955,000*, the Vancouver Art Gallery, 13 January - 8 February 1970.

²⁵⁷ See 'Richard Serra in Conversation with Hal Foster' from conversations that took place in October and November 2004 and published in *Richard Serra: The Matter of Time* (exh. cat., Guggenheim Museum), Bilbao, Göttingen:Steidl Publishers, 2005, p.32.

²⁵⁸ Hapgood, S. 'Remaking Art History' in *Art in America*, July 1990, p.122.

²⁵⁹ Hapgood, S. 'Remaking Art History' in *Art in America*, July 1990, p.181.

²⁶⁰ Morris, R. 'The Present Tense of Space' in *Continuous Project Altered Daily: The Writings of Robert Morris*, October, The MIT Press, Cambridge and London, 1995, p.176.

²⁶¹ Statement made by Yve-Alain Bois at *Inherent Vice: The Replica and its Implications* and noted in the introduction of this thesis.

²⁶² As with the previous chapter, the idea of being is not used here in terms of an ontological essence, rather it is very much part of the process of the work, its coming into being as a material entity.

²⁶³ Raspail, T. 'From time to time' in *Continenti di Tempo (Continents of Time)* (exh. cat., Musée d'Art Contemporain de Lyon), Lyon, 2000, p.196.

²⁶⁴ Much like Pistoletto's earlier series, *il presente*, again a play on the present and to present. That reflected is presented and represented in *il presente*. See also Morris, R. 'The Present Tense of Space' in *Continuous Project Altered Daily: The Writings of Robert Morris*, October, The MIT Press, Cambridge and London, 1995.

²⁶⁵ Bishop, C. 'Mirror displacements' in *Installation Art: A Critical History*, Tate Publishing, London, 2005, p.90. She lists Pistoletto's *Mirror Paintings* and Morris' *Untitled* mirror cubes as examples to illustrate the use of mirrors as a 'logical extension of the interest in phenomenological perception'. For her though, Jacques Lacan's 'The Mirror Stage' and 'The Four Fundamental Concepts of Psychoanalysis' highlight the idea of a reflection as a misrecognition, the ego is destabilised and fragile.

²⁶⁶ As noted in the last chapter, 'The Enduringly Ephemeral' was the title of Potts' text presented at *Inherent Vice Inherent Vice: The Replica and its Implications in Modern Sculpture* and published in *Tate Papers*, Issue 8, Autumn 2007. The title of Weiss' article on recent Morris remakes in *Artforum International*, February 2014, is 'Eternal Return: Jeffrey Weiss on Robert Morris's Recent Work' See *Artforum International*, February 2014, pp.174-181.

²⁶⁷ The cases selected were created for the new *Energy and Process* hub at Tate Modern in 2009 and for Tate's annual *The Long Weekend 'DO IT YOURSELF'* 22-25 May 2009.

²⁶⁸ Reconstructions were made for the un-participatory section of the Morris retrospective at Tate in 1971 partly due to the practicality of transporting his pieces including his mirrored cubes work *Untitled* 1965 as discussed in the introduction of this thesis. In his *Artforum International* text, Jeffrey Weiss looks at fifteen new works produced by craftsman Josh Finn of early 1960s Morris works. *Box for Standing* 2012, *Wheels* 2012 and *Tracks* (two versions, both of 2013) are 'almost exact replicas' of works in plywood or fir previously made by Morris in 1961, 1963 and 1965 respectively. Two objects called *Column* and *Spiral Column* of 2013 derive their titles and physical proportions from Morris' first large work in plywood of 1961. *Steps* 2013, *Bench* 2013 and two new works titled *Arch* 2012 are more loosely based on early forms. Weiss is Senior Curator at the Solomon R. Guggenheim Museum in New York and is also leading the Panza Collection Initiative (PCI). For Weiss, the new works 'depict' the prototype rather than replicating it. 'Being at once formally familiar yet, materially speaking, estranged, they are startling, even uncanny' Weiss, J. 'Eternal Return: Jeffrey Weiss on Robert Morris's Recent Work' in *Artforum International*, February 2014, p.178. As this article highlights, Morris has been making and authorising others to make earlier works even in alternative materials which he now deems better.

²⁶⁹ Noted by Weiss in 'Eternal Return: Jeffrey Weiss on Robert Morris's Recent Work' in *Artforum International*, February 2014, p.176.

²⁷⁰ Weiss, J. 'Eternal Return: Jeffrey Weiss on Robert Morris's Recent Work' in *Artforum International*, February 2014, p.176.

²⁷¹ Weiss, J. 'Eternal Return: Jeffrey Weiss on Robert Morris's Recent Work' in *Artforum International*, February 2014, p.176. Weiss notes that this circumstance has largely been overlooked in the literature on the artist.

²⁷² Acknowledged by Weiss in his 'Eternal Return: Jeffrey Weiss on Robert Morris's Recent Work' in *Artforum International*, February 2014, p.178.

²⁷³ Weiss, J. 'Eternal Return: Jeffrey Weiss on Robert Morris's Recent Work' in *Artforum International*, February 2014, p.178.

-
- ²⁷⁴ Weiss, J. 'Eternal Return: Jeffrey Weiss on Robert Morris's Recent Work' in *Artforum International*, February 2014, p.178.
- ²⁷⁵ Mark Godfrey, Curator of International Art, Tate Modern.
- ²⁷⁶ The Robert Morris exhibition in Eindhoven ran from 16 February to 31 March 1968.
- ²⁷⁷ As noted by Morris during a meeting with Tate, 24 January 2009. This connection was also apparent during the installation of the work at Tate Modern.
- ²⁷⁸ It is worth noting that Tate was also interested in RM-26, a similar felt sculpture, that still exists in its original material structure.
- ²⁷⁹ Hapgood, S. 'Remaking Art History' in *Art in America*, July 1990, p.115.
- ²⁸⁰ Compton, M. and Sylvester, D. *Robert Morris* (exh. cat., The Tate Gallery), London, 1971, p.105.
- ²⁸¹ Email correspondence from Robert Morris to Melanie Rolfe, Sculpture Conservator, Tate, 1 August 2008, Tate Archives.
- ²⁸² Email correspondence between Barbara Bertozzi Castelli and Mark Godfrey, 13 May 2008, Tate Archives. This is not the case for the new works that Weiss writes about in *Artforum International* February 2014: *Box for Standing* (2012), *Wheels* (2012), *Tracks* (two versions, both of 2013), two versions of *Column* (2013), *Spiral Column* (2013), *Steps* (2013), *Bench* (2013) and two works titled *Arch* (2012) all reflect the use of new dates.
- ²⁸³ Email correspondence from Robert Morris to Melanie Rolfe, Sculpture Conservator, Tate, 1 August 2008, Tate Archives.
- ²⁸⁴ As laid out in *Artforum*, April 1968, pp.33-35.
- ²⁸⁵ Morris, R. 'The Present Tense of Space' in *Continuous Project Altered Daily: The Writings of Robert Morris*, October, The MIT Press, Cambridge and London, 1995, p.177.
- ²⁸⁶ See the Introduction in Dezeuze, A. and Kelly, J. (eds.) *Found Sculpture and Photography from Surrealism to Contemporary Art*, Ashgate Publishing Limited, Farnham and Burlington, 2013, p.4. They also acknowledge that sculpture's relationship to photography has become a focus of scholarly interest since the late 1990s citing Frizot, M. and Païni, D. (eds.) *Sculpteur Photographier/Photographie Sculpture*, Paris, 1993, Billeter, E. (ed.) *Skulptur im Licht der Fotografie*, Duisburg, 1997 and Johnson, G. (ed.) *Sculpture and Photography: Envisioning the Third Dimension*, Cambridge, 1998.
- ²⁸⁷ Dezeuze, A. and Kelly, J. (eds.) *Found Sculpture and Photography from Surrealism to Contemporary Art*, Ashgate Publishing Limited, Farnham and Burlington, 2013, p.7.
- ²⁸⁸ Instructions for Tate's *Untitled* as sent to Curator Mark Godfrey, 3 October 2008.
- ²⁸⁹ The new bracket was designed to allow the felt at the bottom to support the felt nearer the top. Interview with Sculpture Conservator, Melanie Rolfe, Tate Sculpture Conservation studio, 10 February 2009.
- ²⁹⁰ Interview with Sculpture Conservator, Melanie Rolfe, Tate Sculpture Conservation studio, 10 February 2009.
- ²⁹¹ As opposed to being 'beyond time'.
- ²⁹² Aspects of time, action and space were discussed in relation to this exhibition by Cristina Mundici at *Arte Povera: Between Europe and America*, a conference held at Tate Modern exploring Arte Povera in the context of the art and culture of its time, 15-16 June 2001.

-
- ²⁹³ de Brugerolle, M. *Continenti di Tempo* (Continents of Time) (exh. cat., Musée d'Art Contemporain de Lyon), Lyon, 2000, p.73.
- ²⁹⁴ Fer, B. 'Mobility' in *The Infinite Line: Remaking Art After Modernism*, New Haven and London, 2004, p.165.
- ²⁹⁵ Pistoletto, M. in *Continenti di Tempo* (Continents of Time) (exh. cat., Musée d'Art Contemporain de Lyon), Lyon, 2000, p.87. A similar statement was made in 1966 in 'The Minus Objects'.
- ²⁹⁶ As noted by Briony Fer at *Arte Povera: Between Europe and America*, Tate Modern Conference, 15-16 June 2001.
- ²⁹⁷ As part of Tate's *The Long Weekend 'DO IT YOURSELF'* 22-25 May 2009.
- ²⁹⁸ Tateshots, Long Weekend 09: Michelangelo Pistoletto:
<http://www.tate.org.uk/context-comment/video/long-weekend-09-michelangelo-pistoletto>, last accessed 28 January 2015.
- ²⁹⁹ Pistoletto, M. interview with Simon Grant and Kate Vogel, 18 March 2009. Biella at Cittadellarte - Fondazione Pistoletto for *3 Minute Wonder*, unpublished.
- ³⁰⁰ Tateshots, Long Weekend 09: Michelangelo Pistoletto:
<http://www.tate.org.uk/context-comment/video/long-weekend-09-michelangelo-pistoletto>, last accessed 28 January 2015.
- ³⁰¹ Although Kathy Noble, Assistant Curator, Tate Modern, noted that neither she nor the artist felt this was a re-enactment of a past event, interview 25 February 2009.
- ³⁰² *Buongiorno Michelangelo* 1968, by Ugo Nespolo, was screened as part of the film programme during *The Long Weekend* just prior to the re-performance of *Newspaper Sphere*. Direct experience was promoted in 'Arte Povera' by Germano Celant in 1969.
- ³⁰³ de Brugerolle, M. in *Continenti di Tempo* (Continents of Time) (exh. cat., Musée d'Art Contemporain de Lyon), Lyon, 2000, 2000, p.73.
- ³⁰⁴ Pistoletto refers to the specific time, place and system of the piece in his interview with Simon Grant and Kate Vogel, 18 March 2009, Biella at Cittadellarte - Fondazione Pistoletto for *3 Minute Wonder*, unpublished.
- ³⁰⁵ This quote was published in Pill, S. 'Pistoletto on how to keep art on a roll', <http://metro.co.uk/2009/05/19/pistoletto-on-how-to-keep-art-on-a-roll-124096/>, last accessed 23 May 2009. *Metro* was the media partner of *UBS Openings: The Long Weekend 2009*.
- ³⁰⁶ *Zero to Infinity*, 31 May - 19 August 2001.
- ³⁰⁷ The performance was filmed by Ugo Nespolo and the film, *Buongiorno Michelangelo*, was screened at Pistoletto's solo show at L'Attico gallery in Rome in 1968.
- ³⁰⁸ As noted by Alex Potts "'Minus Objects': Arte Povera and the Situation of Sculpture in the 1960s" a talk given at the University of Michigan at Ann Arbor, 2001. This reference is also cited by Briony Fer in her chapter 'Mobility' in *The Infinite Line: Remaking Art After Modernism*, New Haven and London, 2004, p.165.
- ³⁰⁹ The exhibition ran from 2 November 2010 to 16 January, 2011. More than 100 works were exhibited including *Quadri specchianti* (Mirror Paintings). Concurrent with this historical exhibition, *Michelangelo Pistoletto: Cittadellarte* transported Pistoletto's current work to Philadelphia, reflecting the mission of the artist's creative laboratory in Biella, Italy.
- ³¹⁰ The giant ball of newspapers was made by Spiral Q Puppet Theater. The procession was around Philadelphia, beginning at the Museum's West Entrance. The museum's information regarding the show and piece can be found at:

<http://www.philamuseum.org/exhibitions/412.html?page=3>, last accessed 4 January 2015.

³¹¹ Pistoletto, M. in *Continenti di Tempo* (Continents of Time) (exh. cat., Musée d'Art Contemporain de Lyon), Lyon, 2000, p.81. Pistoletto's statement about each unrepeatable instant was also published in 'Gli oggetti in meno' in *M. Pistoletto*, Genoa, Galleria La Bertesca, 1966 in relation to the mirror pictures. Celant refers to Pistoletto's statement in 'Arte povera' in *Zero to Infinity: Arte Povera 1962-1972*, Minneapolis and London, 2001, p.152. Originally published in *Arte povera*, Bologna, Galleria De Focherari, 1968.

³¹² Catherine Wood assumes that this ball was destroyed, email correspondence with the author, 10 February 2015.

³¹³ Pistoletto, M. *Zero to Infinity*, p.306, originally 'L'immagine e il suo dop(pi)o, *Bit*, 1 December 1967/9.

³¹⁴ Pistoletto noted this observation about mirrors in an interview with Simon Grant and Kate Vogel, 18 March 2009, Biella at Cittadellarte - Fondazione Pistoletto for *3 Minute Wonder*, unpublished.

³¹⁵ Do-it-yourself is a theme that has been explored in detail by Anna Dezeuze. See *The 'do-it-yourself' artwork: Participation from Fluxus to new media* (Rethinking Art's Histories), Manchester University Press, July 2012. In relation to replication, see Dezeuze, A. 'Blurring the Boundaries between Art and Life (in the Museum?)' in *Tate Papers* Autumn 2007.

³¹⁶ Jon Hendricks, email to Anna Dezeuze, 13 September 2007 as referenced in Dezeuze, A. 'Blurring the Boundaries between Art and Life (in the Museum?)' published in *Tate Papers* Autumn 2007:

<http://www.tate.org.uk/research/publications/tate-papers/blurring-boundaries-between-art-and-life-museum>, last accessed 4 January 2015.

³¹⁷ Bird, J. 'Minding the Body: Robert Morris's 1971 Tate Gallery Retrospective' in Newman, M and Bird, J. (eds.) *Rewriting Conceptual Art*, Reaktion Books, London, 1999, p.96.

³¹⁸ Even for Morris arguing against a finished product in April 1969, 'The notion that work is an irreversible process ending in a static icon-object no longer has much relevance'. Morris, R. 'Notes on Sculpture: Part IV: Beyond Objects' in *Continuous Project Altered Daily: The Writings of Robert Morris*, The MIT Press, Cambridge and London, 1995, p.68. Original published in *Artforum* April 1969, pp.50-54.

³¹⁹ Works Specification, 7 April 1971, Tate Archives. The contractors (Beck and Pollitzer Contracts Ltd) also relinquished any liability for any injuries sustained or damage caused to or by persons using the exhibits in a letter dated 8 April 1971, Tate Archives.

³²⁰ Letter from Robert Morris to Michael Compton, 5 March 1971, Tate Archives.

³²¹ The exhibition opened on 27 April 1971 and was closed on 3 May after 1964 visitors attended. It then reopened on 8 May as a slightly amended exhibition with no participatory section. Injuries and damages were attributed to 'over zealous participation' of 'more exuberant visitors', memorandum, 7 May 1971, Tate Archives. Michael Compton listed all the issues in a letter to Morris on 13 May 1971, Tate Archives. 16 members of the public required first aid or hospital treatment. Injuries included a sprained finger, a torn leg muscle, minor abrasions, cuts and splinters and one case of a damaged toe nail caused by the stone roller. For journalistic accounts of the Tate exhibition and its closure, see Guy Brett 'Heavy Weights' *The Times* London, April 28, 1971; Caroline Tisdall 'Sculpture for

Performing On' *Guardian Weekly* London, May 8, 1971; Nigel Gosling 'The 'Have-a-go' Show' *Observer Review* London, May 2, 1971. These headlines reflect how involved the public were in the participatory nature of the exhibition.

³²² Bird, J. 'Minding the Body: Robert Morris's 1971 Tate Gallery Retrospective' in Newman, M and Bird, J. (eds.) *Rewriting Conceptual Art*, Reaktion Books, London, 1999, p.90.

³²³ Catherine Wood uses the terms props and prompts in relation to this work and the links Morris had with the Judson Dance Theater at this time in 'Robert Morris's *Bodyspacemotionthings: Participation Re-enacted*, unpublished, sent to the author, 23 February 2015.

³²⁴ This statement was part of the wall text to the side of the entrance to the exhibition: 'In re-staging the exhibition, re-fabricated according to today's methods and safety standards, within a museum that has evolved towards a certain familiarity with challenges such as these, we hope to explore this moment of intersection between Tate's evolution and the evolution of art practice'.

³²⁵ Until 14 June 2009.

³²⁶ Interview with Kathy Noble, Assistant Curator, Tate Modern, 25 February 2009

³²⁷ Wood, C and Noble, K 'CHILD'S PLAY' published in *Artforum International* March 2010 p. 32.

³²⁸ Tuchman, P. 'Robert Morris: Tate Modern' in *Artforum International* November 2009, p.242.

³²⁹ Goshka Macuga's *I Am Become Death* at the Kunsthalle Basel, 2008, included replicas of some of the sculptures also.

³³⁰ A list of rules were included at the entrance of the work and read:

- Children under 12 must be accompanied by an adult
- Suitable footwear must be worn
- Please do not run inside the installation
- Please deposit your belongings in the cloakroom
- Visitors under the influence of drugs or alcohol are not allowed to participate in this installation
- Whilst all precautions have been taken by Tate, visitors interact with the installation at their own risk

Catherine Wood also notes in her unpublished text 'Robert Morris's *Bodyspacemotionthings: Participation Re-enacted*' that the large rolling ball with rope was felt to be too dangerous to stand on by Tate's health and safety officer and so was used in a way not originally intended, that is, simply rolled around a channel made by a doubled circle of sandbags.

³³¹ Dezeuze, A. 'Blurring the Boundaries between Art and Life (in the Museum?)', *Tate Papers* Autumn 2007: <http://www.tate.org.uk/research/publications/tate-papers/blurring-boundaries-between-art-and-life-museum>, last accessed 4 January 2015.

³³² Dezeuze, A. 'Blurring the Boundaries between Art and Life (in the Museum?)', *Tate Papers* Autumn 2007: <http://www.tate.org.uk/research/publications/tate-papers/blurring-boundaries-between-art-and-life-museum>, last accessed 4 January 2015.

³³³ Wood, C. 'The rules of engagement: displaced figuration in Robert Morris's mise-en-scene', published in *The 'Do-It-Yourself' Artwork (Rethinking Art's Histories)* edited by Anna Dezeuze, Manchester University Press, July 2012 p.129. For Wood the staged photographs clearly resembled publicity and archive images similar to

those taken by Peter Moore of performances at the Judson Dance Theater in the 1960s.

³³⁴ Wood, C. 'Robert Morris's *Bodyspacemotionthings*: Participation Re-enacted, unpublished, unpaginated.

³³⁵ Morris, R. 'The Present Tense of Space' in *Continuous Project Altered Daily: The Writings of Robert Morris*, October, The MIT Press, Cambridge and London, 1995, p.202.

³³⁶ See Clausen, B. (ed) 'On the Performativity of Performance Documentation' in *After the Act*, MUMOK, Vienna, 2007 for specific examples.

³³⁷ Wood, C. 'The rules of engagement: displaced figuration in Robert Morris's mise-en-scene' in *The 'Do-It-Yourself' Artwork*, Manchester University Press, July 2012 p.127.

³³⁸ Morris stated 'I want to provide a situation where people can become more aware of themselves and their own experience rather than more aware of some version of my experience' in a letter from Robert Morris to Michael Compton, 5 March 1971, Tate Archives.

³³⁹ A shift from the original noted by Wood. For Morris himself, the new work was too 'image like' and for Tuchman no longer part of the Duveen Galleries, the new work 'resembled a freestanding stage set, especially when viewed from the Level 1 Bridge. See Wood, C. 'Robert Morris's *Bodyspacemotionthings*: Participation Re-enacted, unpublished, unpaginated and Tuchman, P. 'Robert Morris: Tate Modern' in *Artforum International* November 2009, p.242.

³⁴⁰ Wood does not discuss the restaging of the work in her text 'The rules of engagement: displaced figuration in Robert Morris's mise-en-scene'. Wood however has written a longer text, 'practicable' which does discuss the restaging but it remains unpublished. Her texts 'Robert Morris's *Bodyspacemotionthings*: Participation Re-enacted, and 'Rules of Engagement *Précis*', both unpublished but sent to the author on 23 February 2015, as well as her response to Tuchman's *Artforum International* review, 'Child's Play' in *Artforum International* March 2010 do discuss the 2009 re-performance.

³⁴¹ Reid, N. 'The limits of collecting' in *Studio International*, July/August 1971, p.38.

³⁴² Berger, M. *Labyrinths: Robert Morris, Minimalism, and the 1960s*, New York, 1989, p.49.

³⁴³ Pistoletto, M. *Famous Last Words 1967*: <http://www.pistoletto.it/eng/home.htm>, last accessed 3 June 2009.

³⁴⁴ Hapgood, S. 'Remaking Art History' in *Art in America*, July 1990, p.119.

³⁴⁵ Images documenting artists at work and their materials at this time also included those by Ugo Mulas, Gerry Schum in his *Identifications*, 1970, a series of short films of 'actions' by artists such as Giovanni Anselmo, Joseph Beuys, Alighiero Boetti, Daniel Buren, Pier Paolo Calzolari, Ger van Elk, Gilbert and George, Mario Merz, Richard Serra, Lawrence Weiner and Gilberto Zorio, and Claudio Abate's photographs of the work of the Arte Povera artists.

³⁴⁶ Carolyn Christov-Bakargiev notes that Arte Povera's principles had, 'more in common with Smithson's critique of rational techniques and his concern with the primordial conditions of materials' than with Conceptual Art and Minimalism. Smithson's *Asphalt Rundown* was exhibited in Rome in 1969 and his 'A sedimentation of Mind: Earth Projects', 1968, was translated immediately into Italian by Tommaso Trini and widely read in the art community. See Christov-Bakargiev, C. (ed), *Arte Povera*, London, 1999, p.27.

³⁴⁷ Smithson, R. 'A Tour of the Monuments of Passaic, New Jersey' 1967, in Flam, J. (ed.) *Robert Smithson: The Collected Writings*, University of California Press, Berkeley, Los Angeles, London, 1996, p.74. Originally published as 'The Monument of Passaic' *Artforum*, December 1967.

³⁴⁸ 'Entropy made Visible: interview with Alison Sky' in Flam, J. (ed.) *Robert Smithson: The Collected Writings*, University of California Press, Berkeley, Los Angeles, London, 1996, p.301, recorded two months before he died in 1973.

Smithson posits entropy as an irreversible condition. He cites *Humpty Dumpty* as an example of entropy as he could not be put back together, 'You have a closed system which eventually deteriorates and starts to break apart and there's no way you can really piece it back together again'.

³⁴⁹ Smithson, R. 'A Tour of the Monuments of Passaic, New Jersey' 1967, in Flam, J. (ed.) *Robert Smithson: The Collected Writings*, University of California Press, Berkeley, Los Angeles, London, 1996, p.74. Originally published as 'The Monument of Passaic' *Artforum*, December 1967.

³⁵⁰ Sleeman, A.J. 'Playing in the Continuous Present: Richard Long and Emilio Prini' at *Arte Povera: Between Europe and America*, Tate Modern, 15-16 June, 2001.

³⁵¹ The continuous present formed part of the title of Sleeman's paper at *Arte Povera: Between Europe and America*, Tate Modern, 15-16 June, 2001.

³⁵² Prokopoff, S.S. *Six Sculptors: Extended Structures*, (exh. cat., Museum of Contemporary Art), Chicago, 30 October - 12 December, 1971, unpaginated.

³⁵³ Trini, T. 'The Prodigal Maker's Trilogy. Three Exhibitions: Bern, Amsterdam, Rotterdam' in *Exhibiting the New Art 'Op Losse Shroeven' and 'When Attitudes Become Form' 1969*, Vienna and Eindhoven, 2010, p.205. This text was originally published in *Domus* vol.478, September 1969, pp.45-53.

³⁵⁴ Smithson's wife, Nancy Holt, supervised the making of the piece in 2005 for Smithson's retrospective at the Whitney Museum. Sailing from 17 to 25 September, the weeping willow was chosen for its resemblance to Smithson's sketch and six other specimen trees came from the Rappleyea Nursery, in Allentown, New Jersey. *Rachel Marie* was rented from Island Towing, captained by Bob Henry, and was repainted red to evoke the classic New York Harbour tug.

³⁵⁵ Smithson, R. 'Cultural Confinement' 1972 in Flam, J. (ed.) *Robert Smithson: The Collected Writings*, University of California Press, Berkeley, Los Angeles, London, 1996, p.155, originally published in *Artforum* October 1972 and in the Documenta 5 catalogue of Smithson's contribution to the exhibition.

³⁵⁶ There have been, more recently, exhibitions dealing with the concept of nature in artworks from the 1960s. For example, in London, *The Greenhouse Effect* at the Serpentine Gallery, 4 April - 21 May 2000 and *Radical Nature - Art and Architecture for a Changing Planet 1969 - 2009* at the Barbican Art Gallery, 19 June - 18 Oct 2009.

³⁵⁷ In 1969, the German film director Gerry Schum founded the Television Gallery in Berlin. It was to reach a large audience through regular TV-broadcasts of art films. For Schum, this imaginary place for 'exhibitions' represented a temporary and modern medium for art which negated traditional generic concepts. The *Land Art* TV gallery exhibition included:

1. Richard Long, *Walking a Straight 10 Mile Line*, Dartmoor England, January 1969.
2. Barry Flanagan, *A Hole in the Sea*, Scheveningen, Holland, February 1969.
3. Denis Oppenheim, *TimeTrack*, Fort Kent, 17 March 1969.

-
4. Robert Smithson, *Fossil Quarry Mirror*, Cayuga Lake Region, New York State, March 1969.
 5. Marinus Boezem, *Sandfountain*, Camargue, France, January 1969.
 6. Jan Dibbets, *12 Hours Tide Object with Correction of Perspective*, Dutch coast, February 1969.
 7. Walter de Maria, *Two Lines Three Circles on the Desert*, Mohave Desert, California, March 1969.
 8. Michael Heizer, *Coyote - Coyote Dry Lake California*, March 1969.

For an excellent discussion of Schum's *Land Art*, see Sleeman, J. 'Land Art and the Moon Landing' in the *Journal of Visual Culture*, December 2009, pp.299-328.

³⁵⁸ See Gandy, M. *Concrete and Clay: Reworking Nature in New York City*, The MIT Press, Cambridge, Massachusetts, London, England, 2002. Gandy uses the views of Thomas Jefferson and Henry Thoreau to open up his argument. For Jefferson, the agrarian idyll of small-town America fostered great human virtue, whereas for Thoreau the beauty of nature was a solitary and transcendental experience rooted in romantic idealism. p.7.

³⁵⁹ Gandy, M. *Concrete and Clay: Reworking Nature in New York City*, The MIT Press, Cambridge, Massachusetts, London, England, 2002 p.93 and p.230.

³⁶⁰ The exhibition was installed in Bern at the Kunsthalle, 22 March - 27 April, in Krefeld at the Museum Haus Lange, 9 May - 15 June, and in London at the Institute of Contemporary Arts, 28 August - 27 September.

³⁶¹ In this exhibition there were other artists who employed rope and chain-link or metal mesh: Roelof Louw (*Rope Sculpture*), Bill Bollinger (*Screen Piece*), Alan Saret (*Zinc Fire*) and Gilberto Zorio (*The Fire Has Passed*).

³⁶² The catalogue cover for the ICA show dropped 'Live in Your Head' and added 'London Location'. Photographic images from the Charles Harrison Papers in Tate Archives and Barry Flanagan's website: <http://barryflanagan.com/>, reveal the placement of the works in London. ICA instead of the Institute of Contemporary Arts will furthermore be used throughout the thesis.

³⁶³ Harrison also included extra works by the South African artist Roelof Louw.

³⁶⁴ See Harrison, C. 'Against Precedents' published in *When Attitudes become Form (Works - Concepts - Processes - Situations - Information)* (exh. cat., Institute of Contemporary Arts), London, 28 August - 27 September 1969, unpaginated and printed in *Studio International*, vol.178, no.914, September 1969, pp.90-93.

³⁶⁵ Not the 'primal energy' of Ferrer emphasised by April Kingsley, Associate Curator at the Pasadena Art Museum, in 'Rafael Ferrer' in *Rafael Ferrer* (exh. cat., Pasadena Art Museum), 11 January - 27 February 1972, unpaginated.

³⁶⁶ Clarrie Wallis notes that whilst Flanagan 'might select the materials for a given work, he would remove himself, witnessing the effects of physics on the materials themselves. As such, Flanagan shifted the focus of a work's meaning to circumstances beyond the sculptor's immediate control' see 'The business is in the making' *Barry Flanagan: Early Works 1965-1982* (exh. cat., Tate Britain), London, 27 September 2011 - 2 January 2012, p.22.

³⁶⁷ Smithson, 'A Sedimentation of the Mind: Earth Projects' 1968 in Flam, J. (ed.) *Robert Smithson: The Collected Writings*, University of California Press, Berkeley, Los Angeles, London, 1996, p.106, originally published in *Artforum* September 1968.

³⁶⁸ Walter Benjamin's 1936 essay, 'The Work of Art in the Age of Its Technical Reproducibility' (Arendt, H. (ed) *Illuminations: Essays and Reflections* New York,

Schocken, 1969) is of course the seminal text which looks at the aura and the reproducibility of objects.

³⁶⁹ For Kozloff, 's views on anthropomorphism see 'The Poetics of Softness' published in *American Sculpture of the Sixties*, Los Angeles County Museum of Art, Los Angeles, 1967. For Smithson's observation regarding entropy see 'Entropy and the New Monuments' in *Artforum* June 1966.

³⁷⁰ Second nature; something that is so familiar it can be done again without much thought. It is habitual, repetitive, relatively the same or barely different. The notion of second nature itself will here be considered in relation to replication. As such, second nature will be seen as a way back to the original work or the natural aspect of the work. Replication as a second nature, as second nature, nature translated and transformed again. This approach questions not only the so-called authenticity of the artwork but inevitably the authenticity of 'nature'. As well as Gandy's conception of 'metropolitan nature', the term 'Second Nature' is used for the title of an interview between Paul Galvez and Michel Serres published in *Artforum International* Volume 52,1, September 2013. Serres' 'liquid history' represents the intersection between nature, technology, science, and culture. Serres seeks to construct a 'new humanism' and believes we should listen to nature as man is 'the equal partner of all living beings and all things on the planet' *Artforum International* Volume 52,1, September 2013 p.365. As a term second nature is also used in relation to architecture and ecology.

³⁷¹ This exhibition, curated by Deborah Cullen, was held at Museo del Barrio, New York, 8 June - 22 August 2010. For Ferrer, 'Retroactive is ambiguous and subversive. What is coming back? Retro? No. I'm Active', Rafael Ferrer questionnaire, received 26 March 2014.

³⁷² Gandy, M. *Concrete and Clay: Reworking Nature in New York City*, The MIT Press, Cambridge, Massachusetts, London, England, 2002, p.3.

³⁷³ In 1963 the poet Nick Wayte gave Flanagan the special issue of *Evergreen Review* published in 1960 which was the only English language compendium of writings on the subject.

³⁷⁴ Melvin, J. 'Dedicated to the memory of Barry Flanagan and Charles Harrison' in *Barry Flanagan: Works 1966-2008* (exh. cat., Waddington Galleries), London, 17 March - 17 April 2010, p.5.

³⁷⁵ These characteristics are noted by Tim Hilton in 'Less a slave of other people's thinking ...' in *Barry Flanagan* (exh. cat., Whitechapel Art Gallery), London, 1982, p.9.

³⁷⁶ Flanagan, F. 'That's My Dad' in *Tate Etc. Issue 23* Autumn 2011, p.51.

³⁷⁷ Cullen, D. *Rafael Ferrer A Ver: Revisioning Art History*, Volume 7, UCLA Chicano Studies Research Center, Los Angeles, 2012, p.35.

³⁷⁸ As cited in footnote 6, p.35, in 'Actions and Improvisational Sculpture, 1966-1969' from an interview with Deborah Cullen in Cullen, D. *Rafael Ferrer A Ver: Revisioning Art History*, Volume 7, UCLA Chicano Studies Research Center, Los Angeles, 2012.

³⁷⁹ Ferrer, R. 'Autobiography' in Ratcliff, C. *Deseo: an adventure by Rafael Ferrer* (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973, p.52.

³⁸⁰ Rafael Ferrer with Barry Schwabsky' in *The Brooklyn Rail: Critical Perspectives on Arts, Politics, and Culture*, 15 July 2013:

<http://www.brooklynrail.org/2013/07/art/rafael-ferrer-with-barry-schwabsky>, last accessed 25 March 2014.

³⁸¹ ‘Rafael Ferrer with Barry Schwabsky’ in *The Brooklyn Rail: Critical Perspectives on Arts, Politics, and Culture*, 15 July 2013:

<http://www.brooklynrail.org/2013/07/art/rafael-ferrer-with-barry-schwabsky>, last accessed 25 March 2014.

³⁸² See Thomas Crow’s recent article, ‘Head Trip’ in *Artforum International* Volume 52, Issue 1, September 2013, p.322..

³⁸³ Prokopoff, S.S. *Six Sculptors: Extended Structures*, (exh. cat., Museum of Contemporary Art), Chicago, 30 October - 12 December, 1971, unpaginated. The six artists were Rafael Ferrer, Nancy Graves, Eva Hesse, Robert Morris, Alan Saret and Italo Scanga. Prokopoff was an important curatorial supporter of Ferrer so it is not surprising that Ferrer was one of the six artists selected for this show. He exhibited *Niche* comprising telephone poles, wood, neon, metal vats and hides, natural and industrial materials.

³⁸⁴ Deborah Cullen, El Museo del Barrio’s Director of Cultural Programs, uses this phrase in relation to Ferrer’s works made from leaves, hay, peat moss, ice and grease. See ‘Poetry on the Margins’ in *Retro/Active: The Work of Rafael Ferrer* (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010, p.8.

³⁸⁵ ‘Animal Vegetable and Mineral’ was the title of Gene Baro’s text in *Art and Artists*, volume 1, no.6, September 1966, p.63.

³⁸⁶ Harrison, C. ‘Barry Flanagan’s Sculpture “Claiming attention for objects by statement”’ in *Studio International*, May 1968, Volume 175, Number 900, p.266.

³⁸⁷ Harrison, C. ‘Barry Flanagan’s Sculpture “Claiming attention for objects by statement”’ in *Studio International*, May 1968, Volume 175, Number 900, p.268.

³⁸⁸ Further examples are included in the catalogue of Flanagan’s exhibition at the Museum Haus Lange, Krefeld, September - October 1969.

³⁸⁹ Felt is a fabric of wool, often mixed with fur, hair, cotton, or rayon fibre, which have been worked together through pressure, heat, or chemical action. Another artist who focused on the inherent characteristics and connotations of felt at this time was Joseph Beuys.

³⁹⁰ Rafael Ferrer questionnaire, received 26 March 2014.

³⁹¹ Ferrer, R. ‘Autobiography’ in Ratcliff, C. *Deseo: an adventure by Rafael Ferrer* (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973, p.52. Ferrer met Morris beforehand and told him about his plans.

³⁹² Katz, V. ‘Rapping with Rafi: An Exchange with Rafael Ferrer’ in *Retro/Active: The Work of Rafael Ferrer* (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010, p.42.

³⁹³ Ferrer, R. ‘Autobiography’ in Ratcliff, C. *Deseo: an adventure by Rafael Ferrer* (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973, p.53.

³⁹⁴ Ratcliff, C. ‘Rafael Ferrer in the Tropical Sublime’ in *Retro/Active: The Work of Rafael Ferrer* (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010, p.69. Reprinted from a 1973 essay published in *Deseo: an adventure by Rafael Ferrer* (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973.

³⁹⁵ Ratcliff, C. ‘Rafael Ferrer in the Tropical Sublime’ in *Retro/Active: The Work of Rafael Ferrer* (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010, p.70. Reprinted from a 1973 essay published in *Deseo: an adventure by Rafael Ferrer* (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973, see p.11.

³⁹⁶ Ratcliff, C. ‘Rafael Ferrer in the Tropical Sublime’ in *Retro/Active: The Work of Rafael Ferrer* (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010, p.70. Reprinted from a 1973 essay published in *Deseo: an adventure by Rafael Ferrer*

(exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973, see p.11 which included 'supporting the development of serious abstract art' which is edited out in 2010.

³⁹⁷ Carter Ratcliff notes the idea of Ferrer asserting natural imagery in 'Abstraction and the Climate of Post-Romanticism' in *Deseo: an adventure by Rafael Ferrer* (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973, p.12. His observation regarding an insurgent operating in hostile territory is from 'Autumn Leaves' in the same publication, p.11.

³⁹⁸ See 'The Properties of Materials: In the Shadow of Robert Morris' *New York Times*, December 22, 1968.

³⁹⁹ Kozloff, M. '9 in a Warehouse: An "attack on the status of the object."' in *Artforum*, February 1969.

⁴⁰⁰ Ratcliff, C. 'Rafael Ferrer in the Tropical Sublime' in *Retro/Active: The Work of Rafael Ferrer* (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010, p.73. Reprinted from a 1973 essay published in *Deseo: an adventure by Rafael Ferrer* (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973, p.12.

⁴⁰¹ John Perrault reviewing the Castelli show in *The Village Voice* 19 December, 1968, mentioned the leaf pieces, quoting from a letter Ferrer had written him. It was also later reproduced on p.64 of Lucy Lippard's *Six Years*, Berkeley, Los Angeles, London, 2001.

⁴⁰² Szeemann saw the leaf piece at the Castelli Warehouse and when he met Ferrer at the Chelsea Hotel the curator invited Ferrer to participate in the show *When Attitudes Become Form*. See Ferrer, R. 'Autobiography' in Ratcliff, C. *Deseo: an adventure by Rafael Ferrer* (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973, p.53. Also, just to note, Stephen S. Prokopoff and Marcia Tucker were important curatorial supporters of Ferrer's early work and Carter Ratcliff became one of Ferrer's most important critics.

⁴⁰³ Nemser, C. 'The Art of Frustration' from *Art Agenda*: <http://art-agenda.com/reviews/anti-illusion-proceduresmaterials/>, originally published in *Art Education*, Vol. 24, No. 2 (February 1971), pp. 12-15.

⁴⁰⁴ This is noted by Carter Ratcliff in 'Rafael Ferrer in the Tropical Sublime' in *Retro/Active: The Work of Rafael Ferrer* (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010, p.77. Reprinted from a 1973 essay published in *Deseo: an adventure by Rafael Ferrer* (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973, p.17.

⁴⁰⁵ Rafael Ferrer questionnaire, received 26 March 2014.

⁴⁰⁶ Torres, M.G. 'An Interview with Rafael Ferrer' in *9 at Leo Castelli Instituto de Cultura Puertorriqueña (2da Trienal Poli/Gráfica de San Juan: América Latina y el caribe, 18 April - 28 June) 2009*, p.8. This interview was conducted between October 2008 and February 2009. It was translated from the Spanish by Maria Elena Ortiz.

⁴⁰⁷ Ratcliff goes as far to say that ice was not a natural element for Ferrer. See Ratcliff, C. 'Rafael Ferrer in the Tropical Sublime' in *Retro/Active: The Work of Rafael Ferrer* (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010, p.78. Reprinted from a 1973 essay published in *Deseo: an adventure by Rafael Ferrer* (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973, p.17.

⁴⁰⁸ Ferrer stressed in a questionnaire, received 26 March 2014, that leaves and ice 'ARE natural, inexpensive and magical'. It is also worth noting that Ferrer travelled to Düsseldorf in the autumn of 1969 to meet Joseph Beuys at his home and this was an extremely important experience for him. Obviously Beuys and Hans Haacke might

have been a more obvious choice for a chapter focusing on natural materials and processes but I believe that Ferrer and Flanagan demonstrate a close connection with nature and the natural and have been overlooked for too long now.

⁴⁰⁹ See for example, Roberta Smith's 'After Process: A Return to the Tropics' in the *New York Times* 11 June 2010, p.C23 as well as Carter Ratcliff's 'Rafael Ferrer in the Tropical Sublime' published in *Deseo: an adventure by Rafael Ferrer* (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973 and *Retro/Active: The Work of Rafael Ferrer* (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010.

⁴¹⁰ See 'Rafael Ferrer in the Tropics: Encounters with Caribbean Art' in *Retro/Active: The Work of Rafael Ferrer* (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010, p.55. It is Cullen that stresses the romantic and lyrical associations for Ferrer in ice, water, leaves, hay and grease, see Cullen, D. *Rafael Ferrer A Ver: Revisioning Art History*, Volume 7, UCLA Chicano Studies Research Center, Los Angeles, 2012, p.43.

⁴¹¹ Douglas, M. *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo*, London, Routledge, 2000, p.36. Originally published in 1966.

⁴¹² In 1991 Kaprow noted that he saw these as reinventions not reconstructions, because the works differ markedly from their originals and intentionally so. They were planned to change each time they were remade. See Kaprow, A. 7 *Environments*, (exh. cat., Fondazione Mudima) Milan, 1991, p. 23.

⁴¹³ Allan Kaprow, October 2004. See http://allankaprow.com/about_reinvention.html, last accessed 16 April 2015.

⁴¹⁴ Ferrer, R. *Rafael Ferrer: Enclosures* (exh. cat., Institute of Contemporary Art, University of Pennsylvania), Philadelphia, 1971.

⁴¹⁵ Cullen, D. *Rafael Ferrer A Ver: Revisioning Art History*, Volume 7, UCLA Chicano Studies Research Center, Los Angeles, 2012, p.38.

⁴¹⁶ Morris, R. 'Notes on Sculpture Part 4: Beyond Object' in *Artforum* April, 1969, p.54 and Morris, R. 'Anti Form' in *Artforum*, April 1968, p.35.

⁴¹⁷ Reproduced on p.94 of Lucy Lippard's *Six Years*, Berkeley, Los Angeles, London, 2001. Lippard's text states that *Land Art* transmitted on German television on 15 April.

⁴¹⁸ Sleeman, J. 'Land Art and the Moon Landing' in the *Journal of Visual Culture*, December 2009, p.311.

⁴¹⁹ For further discussion about after nature see the work of Bruno Latour who has persuasively argued for the politics of nature. The title of Bruno Latour's 2004 publication is *Politics of Nature: How to Bring the Sciences into Democracy*, translated by Catherine Porter, Harvard University Press, Cambridge, Massachusetts and London, England, 2004. At *Nature Space Society* 'Air-Condition', Tate Modern, 19 March 2004, Latour questioned the successor to nature. He compared Damián Ortega's exploded view of a VW Beetle from the 2003 Venice Biennale (*Cosmic Thing* 2001) to the Columbia shuttle disaster to demonstrate how matters of fact should be transformed into matters of concern: 'If only we could think of all the matters of fact in the way that we now think of the shuttle after it has been broken, we would understand what is the matter of concern'. For every single fact we would have a whole network, a whole life support as Peter Sloterdijk has recently argued. So, for Latour, matters of concern are what happens to the facts when their life support becomes visible. If Latour's argument for matters of concern over matters of fact is deployed in relation to the display and replication of 'natural' works of art, the

purpose of a replica could be seen as a way to recapture nature, to recapture the natural character of the original work. That is, to replicate; to re-present, to re-consider and to re-capture that nature again. Replication may, in this instance, be seen as a possible way back to nature rather than what happens after nature.

⁴²⁰ The exhibition included Flanagan's *Kope* 1966 made of cloth, plaster and wood, and *Line* 1968 a rope with piece of felt hung from it. Outside in the garden of the museum was Ferrer's *Two Rolls of Standard Barbed Wire Fencing* 1969.

⁴²¹ See 'Barry Flanagan' in *Studio International*, CLXXIV, 1967, p.98.

⁴²² From 'Barry Flanagan' in *Studio International*, CLXXIV, 1967, p.98.

⁴²³ In *Found Sculpture and Photography from Surrealism to Contemporary Art*, Ashgate Publishing Limited, Farnham and Burlington, 2013, Anna Dezeuze and Julia Kelly use 'Involuntary Sculptures', a selection of photographs by Brassai with captions by Salvador Dalí published in the surrealist periodical *Minotaure* in 1933, as a way into discussing sculpture which 'points to its own transience or its role as part of an ongoing process, where it exists beyond a serendipitous photographic image.' p.2.

⁴²⁴ 'Rafael Ferrer with Barry Schwabsky' in *The Brooklyn Rail: Critical Perspectives on Arts, Politics, and Culture*, 15 July 2013: <http://www.brooklynrail.org/2013/07/art/rafael-ferrer-with-barry-schwabsky>, last accessed 25 March 2014.

⁴²⁵ 'Rafael Ferrer with Barry Schwabsky' in *The Brooklyn Rail: Critical Perspectives on Arts, Politics, and Culture*, 15 July 2013: <http://www.brooklynrail.org/2013/07/art/rafael-ferrer-with-barry-schwabsky>, last accessed 25 March 2014.

⁴²⁶ Culebra also refers to the island of Culebra, which is one of the two notorious islands used by the U.S. Navy to practice a form of World War II warfare that was already obsolete. 'Rafael Ferrer with Barry Schwabsky' in *The Brooklyn Rail: Critical Perspectives on Arts, Politics, and Culture*, 15 July 2013: <http://www.brooklynrail.org/2013/07/art/rafael-ferrer-with-barry-schwabsky>, last accessed 25 March 2014.

⁴²⁷ 'Rafael Ferrer with Barry Schwabsky' in *The Brooklyn Rail: Critical Perspectives on Arts, Politics, and Culture*, 15 July 2013: <http://www.brooklynrail.org/2013/07/art/rafael-ferrer-with-barry-schwabsky>, last accessed 25 March 2014.

⁴²⁸ *Barry Flanagan: Early Works 1965-1982*, Tate Britain 27 September 2011 - 2 January 2012.

⁴²⁹ Katz, V. 'Rapping with Rafi: An Exchange with Rafael Ferrer' in *Retro/Active: The Work of Rafael Ferrer* (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010, p.47.

⁴³⁰ Reiss, J. H. *From Margin to Center: The Spaces of Installation Art*, The MIT Press, 2000, p.83

⁴³¹ Kozloff, M. '9 in a Warehouse: An "attack on the status of the object."' in *Artforum*, February 1969, p.39.

⁴³² Cullen, D. *Rafael Ferrer A Ve: Revisioning Art History*, Volume 7, UCLA Chicano Studies Research Center, Los Angeles, 2012, p.41. The receipt for the fifteen cakes of ice, ordered on April 19, 1969, and a memorandum to Jim Monte and Marcia Tucker dated May 19, 1969, describing '15 cakes of ice (4500 lbs.) and 28 bushels of Philadelphia leaves scattered on the entrance ramp of the Museum' are reproduced in *Rafael Ferrer: Drawing*, New York, Nancy Hoffman Gallery, 1995.

⁴³³ At the Galerie M. E. Thelen in Essen in October 1969 Ferrer made an ice and leaf installation in the entryway courtyard. For his two-day exhibition at the Castelli Warehouse in January 1970 blocks of ice led from the street into the first gallery where protruding steel segments of heavy steel mesh were sandwiched between additional blocks of ice. As the ice melted, the heavy elements sank to the floor. The government of Puerto Rico supplied Puerto Rican rum, and Ferrer ordered an extra block of ice for drinks at the opening, see Cullen, D. *Rafael Ferrer A Ver: Revisioning Art History*, Volume 7, UCLA Chicano Studies Research Center, Los Angeles, 2012, p.50.

⁴³⁴ Cullen, D. *Rafael Ferrer A Ver: Revisioning Art History*, Volume 7, UCLA Chicano Studies Research Center, Los Angeles, 2012, p.57.

⁴³⁵ Cullen, D. *Rafael Ferrer A Ver: Revisioning Art History*, Volume 7, UCLA Chicano Studies Research Center, Los Angeles, 2012, p.57.

⁴³⁶ Torres, M.G. 'An Interview with Rafael Ferrer' in *9 at Leo Castelli* Instituto de Cultura Puertorriqueña (2da Trienal Poli/Gráfica de San Juan: América Latina y el caribe, 18 April - 28 June) 2009, p.7.

⁴³⁷ Torres, M.G. 'An Interview with Rafael Ferrer' in *9 at Leo Castelli* Instituto de Cultura Puertorriqueña (2da Trienal Poli/Gráfica de San Juan: América Latina y el caribe, 18 April - 28 June) 2009, p.11.

⁴³⁸ Rafael Ferrer questionnaire, received 26 March 2014. Here, Ferrer is referring to a blues song written by Rick Darnell and Roy Hawkins in 1951 and popularised by B. B. King in 1970.

⁴³⁹ This question was asked by John Perreault in his review of *Retro/Active: The Work of Rafael Ferrer* at El Museo del Barrio' in *Artopia*, 19 July 2010: <http://www.artsjournal.com/>, last accessed 4 March 2014.

⁴⁴⁰ Schwabsky, B. 'An Art of Time: Rafael Ferrer and Christian Marclay prize an aesthetic of spontaneous responsiveness irrespective of subject' in *The Nation*, 25 August 2010: <http://www.thenation.com/article/154143/art-time>, last accessed 4 March 2014.

⁴⁴¹ Email correspondence with Deborah Cullen, 23 March 2014.

⁴⁴² Whilst still living in San Juan, P.R., Ferrer knew of the Happenings 'I did follow Kaprow's work at Rutgers. There was a didactic, quasi academic element in Kaprow's work with groups of students that I found uninteresting. I learned about the ice work and it did not change my opinion nor did it interest me as there was no element of excitement in it'. Email correspondence with Rafael Ferrer, 3 June 2015. 'My interest focused on Oldenburg especially because of his use of objects made and painted out of cardboard and his obvious debt to Dubuffet. Dine was also interesting'.

⁴⁴³ One exception is Mario Garcia Torres' *Passengers* exhibition at the Wattis Institute at the California College of the Arts in San Francisco in 2009 which aimed to reproduce *9 at Leo Castelli* by fabricating all of the objects shown there. Torres included a pile of green leaves on the staircase leading up to the top floor of the Wattis Institute, in homage to Ferrer. See Killian, K. 'Mario Garcia Torres' July 12 2009 in *SFMOMA Open Space*: <http://openspace.sfmoma.org/2009/07/mario-garcia-torres/>, last accessed 25 November 2014. What is interesting is neither Ferrer nor Cullen mentioned this remake during the author's correspondence.

⁴⁴⁴ As argued by April Kingsley in 'Rafael Ferrer at Hoffman and MoMA' in *Art in America*, September-October, 1974, p.108.

⁴⁴⁵ In 'Some recent sculpture in Britain' in *Studio International*, January 1969, Volume 177, Number 907, p.30 Charles Harrison acknowledges that at this time

artists were concerned with the forms things take and the processes which condition shape.

⁴⁴⁶ Cited in 'The Poet of Life and Sculpture' in *Tate Etc Issue 23*, Autumn 2011, p.48.

⁴⁴⁷ In a documentary on the conversion of Bankside Power Station into Tate Modern, Harry Guggler, a partner with Herzog & de Mueron, offered a definition of art museums: he referred to them as 'intensive care stations of art'. Harry Guggler was the contract manager during the conversion of bankside power station into Tate Modern. This description alluded to the museum providing the best possible conditions for the presentation of a work, be it lighting, benches or gallery sizes. 'Intensive care' presupposes patients, seriously ill ones, and so a second meaning suggests itself. 'Ever since art has become Modern, it is both vital and ill, demanding and vulnerable. Thus every visit to see modern art in an "Intensive Care Museum" is also a visit to the hospital'. See 'Étienne-Louis Boullée Visits Tate Modern' by Adolf Max Vogt in Ursprung, P. (ed.) *Herzog & De Meuron: Natural History*, Canadian Centre for Architecture and Lars Müller Publishers, 2002, p.177 and p.178.

⁴⁴⁸ Morris, R. 'Anti Form' in *Artforum*, April 1968, p.35.

⁴⁴⁹ 'Richard Serra in conversation with Lucy Steeds, 13 November 2009' in *Exhibiting the New Art 'Op Losse Shroeven' and 'When Attitudes Become Form' 1969*, Vienna and Eindhoven, 2010, p. 261.

⁴⁵⁰ As cited in Lippard, L. *Eva Hesse*, New York University Press, New York, 1976, p.115

⁴⁵¹ The exhibition ran from 20 September - 8 October 1966. Hesse exhibited *Metronomic Irregularity* 1966, where many white threads connected three equally spaced grey wall-mounted plywood panels. Sonnier exhibited *Untitled* 1966 comprising inflatable geometric forms made of clear plastic and plywood. 'Eccentric Abstraction' was also the title of Lippard's text in *Art International* November 1966, Volume X/9 p.28 and pp. 34-40. This text included installation shots from the show.

⁴⁵² Lippard, L. *Eva Hesse*, New York University Press, New York, 1976, pp.201-2. The similar forms observation is based on works from 1967 to 1969.

⁴⁵³ 'Richard Serra in conversation with Lucy Steeds, 13 November 2009' in *Exhibiting the New Art 'Op Losse Shroeven' and 'When Attitudes Become Form' 1969*, Vienna and Eindhoven, 2010, p. 261.

⁴⁵⁴ See Morris, R. 'Anti Form' published in *Artforum*, April 1968, p.35.

⁴⁵⁵ Lippard, L. *Eva Hesse*, New York University Press, New York, 1976, p.136.

⁴⁵⁶ This term non-rigid art was used by Scott Burton in the exhibition catalogue of 'Live in your head' *When Attitudes Become Form (Works - Concepts - Processes - Situations - Information)*, Bern and London catalogues, 1969, unpaginated. He created five classifications based on intentions or choice of material. 1. Multiformal or non-rigid art; 2. Conceptual or ideational art; 3. Earthworks and organic-matter art; 4. Geometric abstraction; and 5. Procedural or 'process' art. Sonnier's pieces came under procedural or process art and Hesse's as multiformal or non-rigid art.

⁴⁵⁷ Sonnier also exhibited *Rat-Tail Exercise* 1968, fabric and string and *Wall Piece with Fluorescent Light* 1968, fabric and neon.

⁴⁵⁸ Noted by Szeemann in 'How Does an Exhibition Come into Being?', Diary and travelogue for the exhibition, published in *Exhibiting the New Art 'Op Losse Shroeven' and 'When Attitudes Become Form' 1969*, Vienna and Eindhoven, 2010, p.177. The importance of this show for Szeemann was reflected in the documentary film seen at the 2013 restaging. Thomas Crow's recent article, 'Head Trip' in *Artforum International* Volume 52, Issue 1, September 2013 discusses the shortfalls

of the 'live in your head' from the original title having been dropped. However, for the purposes of this chapter, I too will use the abbreviated title for the original show, *When Attitudes Become Form*.

⁴⁵⁹ Sonnier also exhibited *Untitled (Neon and Cloth)* 1968, *Neon with Bulbs* 1969 and possibly *Wrapping Light Piece / Big Red* 1969. For an excellent description of the installation of *When Attitudes Become Form*, see Bruce Altshuler's 'The Dematerialization: The Voice of the Sixties' in Altshuler, B. *The Avant-Garde in Exhibition: New Art in the 20th Century*, New York, 1994.

⁴⁶⁰ Also on display were Sonnier's *Untitled (Neon and Cloth)* (Courtesy of the artist / Pace Gallery, New York), and *Neon Wrapping Neon and Incandescent Bulbs* 1969 (Häusler Contemporary München-Zürich) replaced *Neon with Bulbs*.

⁴⁶¹ This case reflects how we have moved from an artwork to an exhibition as a suitable subject for replication. It should be acknowledged here that there are also precedents for this in the 1960s including Jean Leering's 1965 reconstruction of El Lissitzky's *Prounenraum* 1923 for the Van Abbemuseum. See Berndes, C. 'Replicas and Reconstructions in Twentieth-Century Art' published in *Tate Papers* Issue 8, Autumn 2007.

⁴⁶² Rattemeyer, C. 'Drama and Dynamism: How an Exhibition came into Being' in *When Attitudes Become Form Bern 1969/Venice 2013* (exh. cat., Ca' Corner della Regina), Venice, 1 June - 3 November 2013, p.481.

⁴⁶³ On p.43 there are more images of the process of making *Flocking. Anti-Illusion: Procedures/Materials* (exh. cat., Whitney Museum of American Art), New York 1969. Hesse was also in this show and exhibited *Expanded Expansion, Ice Piece* and *Vinculum II*. Hesse was ill at the time and Fiore came to her studio in March to take process shots.

⁴⁶⁴ See Jones, A. *Body Art/Performing the Subject*, Minnesota University Press, Minneapolis, 1998

⁴⁶⁵ Sonnier believes he made between twenty and twenty-five latex pieces at this time, Keith Sonnier questionnaire, received by the author on 18 December 2013. The fact that the flocked works form a series, like Morris' felt pieces, makes these an especially interesting case study as different examples have aged differently or are being made anew.

⁴⁶⁶ Sonnier's flock came from a company called DonJer, Winther, T, 'Interview with Keith Sonnier, 29 January 2008 at the artist's home in New York', unpublished, p.3, received by the author on 8 March 2009. In this interview Sonnier also points out that flock is shredded cloth so already the notion of recycling and remaking are inherent to the materiality of the work.

⁴⁶⁷ Dean, K. 'Interview "Behind the Green Door"' in *Keith Sonnier: New Work 2000* (exh. cat., Marlborough Chelsea), New York, 2000, p.4.

⁴⁶⁸ Wasserman, E. 'New York: Eva Hesse, Fischbach Gallery' originally published in *Artforum*, January, 1969, and reproduced in Armstrong, R. and Marshall, R. (eds.) *The New Sculpture 1965-75: Between Geometry and Gesture* (exh. cat., Whitney Museum of American Art), New York, 1990, p.94. *Augment* is reproduced on this page.

⁴⁶⁹ Lippard, L. *Eva Hesse*, New York University Press, New York, 1976, p.135. In the model for *Augment* and *Aught* twenty-nine units of latex on cotton, each 4½ x 8½ inches, were stacked on top of each other vertically and not the stepped arrangement of *Augment*.

⁴⁷⁰ Barrette, B. *Eva Hesse Sculpture: Catalogue Raisonné*, Timken Publishers, New York, 1989, footnote 10, page 17.

⁴⁷¹ Nemser, C. *Art Talk: Conversations with 15 Women Artists*, New York, 1995, p.191. The interview was also published in Nixon, M. (ed.) *Eva Hesse*, MIT Press, 2002.

⁴⁷² Fer, B. 'The Work of Salvage: Eva Hesse's Latex Works' in *Eva Hesse* (exh. cat., San Francisco Museum of Modern Art, Wiesbaden, Tate Modern), New Haven and London, 2002, p.81.

⁴⁷³ It is interesting that the study for *Augment* and *Aught* was made from units of latex on cotton.

⁴⁷⁴ In *Sans II* Hesse used fiberglass rather than latex making the units rigid rather than flexible.

⁴⁷⁵ McGreevy, L. 'Keith Sonnier's Cross Cultural Symbiosis' in *Keith Sonnier: Neon Sculpture* (exh. cat., The Chrysler Museum), Norfolk Virginia, 28 October - 24 December, 1988, p.10.

⁴⁷⁶ In his review of the Castelli Warehouse show Kozloff discusses the painterliness of sculpture, Kozloff, M. '9 in a Warehouse: An "attack on the status of the object"' in *Artforum*, February 1969, p.39. In 'Keith Sonnier: Materials and Pictorialism' in *Artforum* October 1969 Pincus-Witten groups the work of Alan Saret, Bill Bollinger, David Novros and Eva Hesse with the chief figure as Sonnier as all have an interest in colour and painterly issues.

⁴⁷⁷ Kuspit, D. 'Voluptuous Technology: Keith Sonnier's Painterly Sculpture' in *Idiosyncratic identities: artists at the end of the avant-garde*, Cambridge, 1996, p.224.

⁴⁷⁸ In 'The Work of Salvage: Eva Hesse's Latex Works' in *Eva Hesse* (exh. cat., San Francisco Museum of Modern Art, Wiesbaden, Tate Modern), New Haven and London, 2002, Briony Fer discusses the layering of Hesse using 'The Layering' as a sub-heading within the text.

⁴⁷⁹ Lippard, L. *Eva Hesse*, New York University Press, New York 1976, p.135. It is interesting that in 'Voluptuous Technology: Keith Sonnier's Painterly Sculpture' Donald Kuspit noted that Sonnier's materials appeared soft and were always flexible. See *Idiosyncratic identities: artists at the end of the avant-garde*, Cambridge, 1996, p.209 and 224.

⁴⁸⁰ See Kozloff, M. '9 in a Warehouse: An "attack on the status of the object"' in *Artforum*, February 1969.

⁴⁸¹ Burton, S. 'Notes on the New' in *Live in your head' When Attitudes Become Form (Works - Concepts - Processes - Situations - Information)* (exh. cat., Kunsthalle), Bern 1969, unpaginated.

⁴⁸² As noted by Martin Langer in 'Conserving Eva Hesse's latex works' a film where he discusses the challenges of conserving Hesse's latex works. The film was made by Tate Media for *The Gallery of Lost Art*:

<http://vimeo.com/album/2152181/video/53732900>, last accessed 7 October 2014.

⁴⁸³ Michelle Barger used the analogy of a rubber band in her paper at *The Object in Transition: A Cross-Disciplinary Conference on the Preservation and Study of Modern and Contemporary Art*, The Getty Center, 25-26 January 2008.

⁴⁸⁴ Wasserman's analogy of *Augment* as a lumpy rubber rug formed part of her review of this show. See Wasserman, E. 'New York: Eva Hesse, Fischbach Gallery' originally published in *Artforum* January, 1969.

⁴⁸⁵ 'Ray Thorburn Talks with Keith Sonnier' in *Art International* 20, January - February 1976, p.69.

-
- ⁴⁸⁶ Winther, T. Interview with Keith Sonnier, 29 January 2008, unpublished, p.3.
- ⁴⁸⁷ As outlined in Winther, T. 'Understanding *Flocked* - a case study of a latex wall piece by Keith Sonnier from 1969' presented at Authenticity, History, and Reproducibility session at *Permanence in Contemporary Art - Checking Reality*, 3-4 November 2008, arranged by Statens Museum for Kunst in collaboration with The Royal Danish Academy of Fine Arts, Copenhagen, Denmark and supported by the International Network for the Conservation of Contemporary Art.
- ⁴⁸⁸ *Red Flocked Wall* was presented by the American Fund for the Tate Gallery in 2010. It had been installed at Tate Modern in 2009. Sawdust replaced flocking for *Red Flocked Wall* as the original coloured powdered rayon was not available to Sonnier working in Cologne in 1969.
- ⁴⁸⁹ Tate's pre-acquisition report, 19 November 2008, Melanie Rolfe and Derek Pullen, Tate Archives.
- ⁴⁹⁰ Barrette, B. *Eva Hesse Sculpture: Catalogue Raisonné*, Timken Publishers, New York, 1989, p.14.
- ⁴⁹¹ Barrette, B. *Eva Hesse Sculpture: Catalogue Raisonné*, Timken Publishers, New York, 1989, p.14. In footnote 11 on p.17 Barrette adds that the issue of instability and fragility in Hesse's work has become distorted, 'the impression that all her work is unstable is vastly exaggerated. Not all the latex pieces disintegrated and not to the same degree. Of the sixteen sculptures in which latex was used, seven remain in remarkably good, four are no longer exhibitable and five are in a 'somewhat compromised condition'.
- ⁴⁹² Nemser, C. *Art Talk: Conversations with 15 Women Artists*, New York, 1995, p.190.
- ⁴⁹³ See in particular 'Uncertain Mandate: A Roundtable Discussion on Conservation Issues' New York, 14 November 2000 published in *Eva Hesse* (exh. cat., San Francisco Museum of Modern Art, Wiesbaden, Tate Modern), New Haven and London, 2002.
- ⁴⁹⁴ See Barrette, B. *Eva Hesse Sculpture: Catalogue Raisonné*, Timken Publishers, New York, 1989, p. 192; *Eva Hesse* (exh. cat., San Francisco Museum of Modern Art, Wiesbaden, Tate Modern), New Haven and London, 2002, p.254; and Petzinger, R. and Rosen, B. (eds.) *Eva Hesse: Catalogue Raisonné*, Yale University Press, Museum Wiesbaden, New Haven and London, 2006, p.296.
- ⁴⁹⁵ Telephone conversation with Martin Langer, 24 October 2013. Langer discusses the degradation of Hesse's latex works in 'Conserving Eva Hesse's latex works' Tate Media for *The Gallery of Lost Art*: <http://vimeo.com/album/2152181/video/53732900>, last accessed 7 October 2014. *Augment* is on display in his studio as he talks. Langer is an independent conservator who has carried out treatments on Hesse works for Hauser & Wirth who represent the Eva Hesse Estate.
- ⁴⁹⁶ Lippard, L. *Eva Hesse*, New York University Press, New York, 1976, p.115.
- ⁴⁹⁷ From image caption in *Eva Hesse* (exh. cat., San Francisco Museum of Modern Art, Wiesbaden, Tate Modern), New Haven and London, 2002, p.239.
- ⁴⁹⁸ 'The Fourth Dimension' Doug Johns Interviewed by Alison Rowley in Pollock, G. and Corby, V. (eds.) *Encountering Eva Hesse*, Prestel, Munich and London, 2006. The Interview was conducted between September 2004 and March 2005.
- ⁴⁹⁹ See 'The Curatorial Encounter: Two Views from the Exhibition Front' in Pollock, G. and Corby, V. (eds.) *Encountering Eva Hesse*, Prestel, Munich and London, 2006, p.173. In 2002 the curator of the Eva Hesse retrospective at the San Francisco Museum of Modern Art, Elisabeth Sussman, visited the University of California

Museum in Berkeley to see the work. After consulting a latex expert, Sharon Blank, Sussman convinced the curators to lend the piece and it remained stable for the exhibition.

⁵⁰⁰ Stringari, C. in her paper at *The Object in Transition* conference at The Getty Center, 25-26 January 2008.

⁵⁰¹ Sterrett made these pertinent points at *The Object in Transition* conference at The Getty Center, 25-26 January 2008.

⁵⁰² Kozloff, M. '9 in a Warehouse: An "attack on the status of the object"' in *Artforum*, February 1969, p.38.

⁵⁰³ Kozloff, M. '9 in a Warehouse: An "attack on the status of the object"' in *Artforum*, February 1969, p.38. Similarly Dietmar Elger notes that Sonnier's *Mustee* cannot be stored away or transported but for him this reflects how this allowed Sonnier to determine who would present his objects and in what context. See Elger, D. 'Materials as a Process: Keith Sonnier's Work of the 1960s' in *Keith Sonnier: Werke / Works* (exh. cat., Sprengel Museum Hannover), Hanover, 1993, p.12.

⁵⁰⁴ Keith Sonnier questionnaire, received by the author on 18 December 2013.

⁵⁰⁵ Keith Sonnier questionnaire, received by the author on 18 December 2013.

⁵⁰⁶ As documented in Thea Winther's interview with Keith Sonnier, 29 January 2008, unpublished. This interview focused on the Moderna Museet *Flocked* 1969 which was remade in November 2007. Sonnier has also explicitly referred to his latex works as being like a Sol LeWitt *Wall Drawing* via email correspondence with the author, 14 April 2009. It is also documented as such on Tate's pre-acquisition report, Tate Archives. Sonnier also stressed the nature of ephemeral works in a questionnaire received by the author on 18 December 2013.

⁵⁰⁷ Email correspondence with the Sonnier Studio, 19 March 2009.

⁵⁰⁸ Crow, T. 'Head Trip' in *Artforum International* Volume 52, Issue 1, September 2013, pp.324-5. Crow believes this work was re-enacted in Venice but this was not the case.

⁵⁰⁹ 'Conversation Five, Juliette Rizzi May 2008' in Harrison, C. *Looking Back*, Ridinghouse, London, 2011, p.161. There is also an image of *Flock Pulled From Wall with String* 1968 installed at *When Attitudes become Form*, ICA, London on p.163

⁵¹⁰ Sonnier also authorised remakes for two smaller pieces, one at Kunstmuseum St Gallen and one at the Leo Castelli Gallery. The St Gallen piece has, in fact, been created three times as it has been included in three different exhibitions.

⁵¹¹ Tate's *Red Flocked Wall* was remade in March 2009 and the Moderna Museet's *Flocked* was remade in November 2007. In both instances Jason Reppert travelled to each museum to remake the works in situ after considerable input from Sonnier regarding the gallery environment.

⁵¹² Pre-acquisition report, Rachel Taylor September 2008, Tate Archives, and quoted in the work summary online on Tate's website:

<http://www.tate.org.uk/art/artworks/sonnier-red-flocked-wall-t13352/text-summary>, last accessed 8 January 2014.

⁵¹³ This assumed precedent for future remakes is however put into flux when we discover that Sonnier wanted to sign a photograph of the 2009 remake which will certify/authenticate Tate's sculpture.

⁵¹⁴ After interviewing Sonnier in New York in January 2008, Thea Winther had further contact with the artist where he made this point.

⁵¹⁵ Winther notes this in her paper ‘Understanding *Flocked* - a case study of a latex wall piece by Keith Sonnier from 1969’ presented at Authenticity, History, and Reproducibility session at *Permanence in Contemporary Art - Checking Reality*, 3-4 November 2008, unpaginated.

⁵¹⁶ Winther, T. ‘Understanding *Flocked* - a case study of a latex wall piece by Keith Sonnier from 1969’ presented at Authenticity, History, and Reproducibility session at *Permanence in Contemporary Art - Checking Reality*, 3-4 November 2008, unpaginated.

⁵¹⁷ Email correspondence with the Sonnier Studio, 19 March 2009.

⁵¹⁸ Harlan, C. ‘Keith Sonnier: An Interview’ *Parachute* 6, Spring 1977. p.28.

⁵¹⁹ Both the original and the 2009 remake of Sonnier’s *Red Flocked Wall* have been kept by Tate; they have separate component numbers and are recorded on the museum’s collection database. The original is clearly marked up as not being the artwork and the 2009 remake is referred to as ‘Conservation reference material kept following TM display’. Email correspondence with Melanie Rolfe, Sculpture Conservator, Tate, 11 February 2014.

⁵²⁰ See ‘The Fourth Dimension’ in Pollock, G. and Corby, V. (eds) *Encountering Eva Hesse*, Prestel, Munich and London, 2006. This is interesting as Johns was more involved with the fibreglass pieces and it was Barrette who worked with Hesse on the latex sculptures.

⁵²¹ ‘The Fourth Dimension’ in Pollock, G. and Corby, V. (eds.) *Encountering Eva Hesse*, Prestel, Munich and London, 2006, p.93.

⁵²² ‘The Fourth Dimension’ in Pollock, G. and Corby, V. (eds.) *Encountering Eva Hesse* Prestel, Munich and London, 2006, p.94.

⁵²³ Petzinger, R. ‘Life and Work’ in Gaßner, H., Kölle, B. and Roettig, P. (eds.) *Eva Hesse: One More than One* (exh. cat, Hamburger Kunsthalle, Hamburg), 29 November 2013 - 2 March 2014, p.197.

⁵²⁴ As discussed in ‘Conserving Eva Hesse’s latex works’ Tate Media for *The Gallery of Lost Art*: <http://vimeo.com/album/2152181/video/53732900>, last accessed 7 October 2014.

⁵²⁵ As highlighted by Elisabeth Sussman in her paper at *The Object in Transition* conference at The Getty Center, 25-26 January 2008.

⁵²⁶ Sol LeWitt was involved with the remake of Hesse’s *Metronomic Irregularity*

⁵²⁷ Fer, B in ‘Uncertain Mandate: A Roundtable Discussion on Conservation Issues’ New York, 14 November 2000 and published in *Eva Hesse* (exh. cat., San Francisco Museum of Modern Art, Wiesbaden, Tate Modern), New Haven and London, 2002, p.310. Fer has somewhat moderated her stance from that date and now feels that pieces can be retired if and when is necessary.

⁵²⁸ Stringari, C. in her paper at *The Object in Transition* conference at the Getty Center, 25-26 January 2008. Johns also worked with Michelle Barger on the mock-up of *Sans II* as part of the Eva Hesse exhibition held in San Francisco in 2002. The mock-up was presented by Johns during an educational symposium at SFMOMA on Hesse in the spring of 2002, ‘generating a collective gasp from the moved audience’. Barger discusses this work in ‘Thoughts on Replication and the Work of Eva Hesse’ 1 October 2007 *Tate Papers* Issue 8, last accessed 10 July 2015.

⁵²⁹ As emphasised by Michelle Barger at *The Object in Transition* conference at the Getty Center, 25-26 January 2008.

⁵³⁰ Pincus-Witten, R. ‘Keith Sonnier: Materials and Pictorialism’ in *Artforum* October 1969, pp.39-45.

⁵³¹ Sonnier, K. 'Critics Page, Bern 1969/Venice 2013' in *The Brooklyn Rail: Critical Perspectives on Arts, Politics and Culture*, 15 July, 2013:

<http://www.brooklynrail.org/2013/07/criticspage/bern-19698202venice-2013>, last accessed 12 November 2013.

⁵³² It is noteworthy that *Mustee* 2013 did not have as much flock in the upper section as images of the original 1968 work indicate and therefore looked quite different from this or, indeed, the 1969 *When Attitudes Become Form* original.

⁵³³ Email correspondence with the Sonnier Studio, 20 November 2013.

⁵³⁴ Petzinger, R. 'Life and Work' in Gaßner, H., Kölle, B. and Roettig, P. (eds.) *Eva Hesse: One More than One* (exh. cat, Hamburger Kunsthalle), Hamburg, 29 November 2013 - 2 March 2014, p.201. In footnote 65, p.215 Petzinger notes the venues where the exhibition travelled and states that *Sans III* was shown only in London. The installation images of Bern however demonstrate that all three works were exhibited and *Augment* travelled to Krefeld and London.

⁵³⁵ See Barrette, B. *Eva Hesse Sculpture: Catalogue Raisonné*, Timken Publishers, New York, 1989, p. 192. Nineteen sheets were recorded in Petzinger, R. and Rosen, B. (eds.) *Eva Hesse: Catalogue Raisonné*, Yale University Press, Museum Wiesbaden, New Haven and London, 2006, p.296, and more recently in *Eva Hesse: One More than One* (exh. cat, Hamburger Kunsthalle), Hamburg, p.233. In 1976, Lucy Lippard even refers to twenty sheets. See Lippard, L. *Eva Hesse*, New York University Press, New York, 1976, p.135.

⁵³⁶ Telephone conversation with Martin Langer, 24 October 2013 and email correspondence, 15 January 2014.

⁵³⁷ Telephone conversation with Martin Langer, 24 October 2013 and email correspondence, 15 January 2014.

⁵³⁸ Correctly identified in *When Attitudes Become Form Bern 1969/Venice 2013* (exh. cat., Ca' Corner della Regina), Venice, 1 June - 3 November 2013, p.563.

⁵³⁹ Email correspondence with Martin Langer, 15 January 2014.

⁵⁴⁰ Petzinger, R. and Rosen, B. (eds.) *Eva Hesse: Catalogue Raisonné*, Yale University Press, Museum Wiesbaden, New Haven and London, 2006, p.302.

⁵⁴¹ Email correspondence with Martin Langer, 15 January 2014.

⁵⁴² 'Uncertain Mandate: A Roundtable Discussion on Conservation Issues' New York, 14 November 2000 and published in *Eva Hesse* (exh. cat., San Francisco Museum of Modern Art, Wiesbaden, Tate Modern), New Haven and London, 2002, p.296. It should be noted that *Augment* was remade as part of Mario Garcia Torres' recreation of the works from *9 @ Leo Castelli* for *Passengers: 2.11*, 7 July - 1 August 2009, at the Wattis Institute in San Francisco [Figures 73 and 74].

⁵⁴³ Telephone conversation with Martin Langer, 24 October 2013, and demonstrated in 'Conserving Eva Hesse's Latex Works' part of *The Gallery of Lost Art*: <http://vimeo.com/album/2152181/video/53732900>, last accessed 7 October 2014.

⁵⁴⁴ Barrette, B. *Eva Hesse Sculpture: Catalogue Raisonné*, Timken Publishers, New York, 1989, p. 206.

⁵⁴⁵ Also absent were Sonnier's *Neon with Bulbs* and Hesse's *Vinculum II*. Sonnier's *Neon with Bulbs* was replaced by *Neon Wrapping Neon and Incandescent Bulbs*.

⁵⁴⁶ As emphasised by Thomas Crow in 'Head Trip' in *Artforum International* Volume 52, Issue 1, September 2013, p.322.

⁵⁴⁷ Searle, A. 'Venice Biennale' *The Guardian* 31 May 2013:

<http://www.theguardian.com/artanddesign/2013/may/31/prada-venice-biennale-2013>,

last accessed 7 January 2015. This loss of innocence is what the current exhibition commemorates for Searle.

⁵⁴⁸ Duncan, M. 'Ruins and Replicas' in *Art in America*, June 1996, pp76-79.

⁵⁴⁹ Briony Fer referred to a plurality of approaches in relation to the degraded Hesse works during 'Uncertain Mandate: A Roundtable Discussion on Conservation Issues' New York, 14 November 2000 and published in *Eva Hesse* (exh. cat., San Francisco Museum of Modern Art, Wiesbaden, Tate Modern), New Haven and London, 2002, p.310.

⁵⁵⁰ This is the title of Tara McDowell's text published on the Independent Curators International website *Recurating, Remaking, Redoing #1*: http://issuu.com/independentcuratorsinternational/docs/tara_mcdowell, last accessed 8 July 2015, and used to introduce the panel discussion 'Recurating: When Exhibitions Become Reified' with Rebecca Coaters and Terry Smith in Melbourne in December 2013. McDowell is the Associate Professor and Director, Curatorial Practice at Monash University Art Design & Architecture in Melbourne, Australia.

⁵⁵¹ See Szeemann, H. 'How Does an Exhibition Come into Being?', Diary and travelogue for the exhibition, 8 - 19 February 1969 and published in *Exhibiting the New Art 'Op Losse Shroeven' and 'When Attitudes Become Form' 1969*, Vienna and Eindhoven, 2010, p.187 and Crow, T. 'Head Trip' in *Artforum International* Volume 52, Issue 1, September 2013, p.324. He references the weightier German compounds used in Szeemann's original Bern text, 'Hippietum' and 'Rockerexistenz'.

⁵⁵² Buskirk, M. Jones, A. and Jones, C. A. 'The Year in "Re-"' in *Artforum International* December 2013 p.128. The idea of re-creating *When Attitudes Become Form* arose in 2010 based on a discussion about remakes of artworks that resulted in *The Small Utopia. Ars Multiplicata* held at Ca' Corner della Regina in 2012. The exhibition included twentieth-century editions and multiples and allowed curator Celant to also think about group exhibitions. The project was then based on research conducted in the Harald Szeemann Archive, now at the Getty Research Institute in Los Angeles; first-hand accounts by the artists or documents conserved in their foundations; as well as photographic and written documentation present in the Kunsthalle Bern library. This was carried out by the Fondazione Prada where Celant is artistic director, in collaboration with the Getty Research Institute curator Glenn Phillips and his team. The Harald Szeemann Archive and Library arrived at the Getty Research Institute in 2011 whilst Demand was there.

⁵⁵³ Crow, T. 'Head Trip' in *Artforum International* Volume 52, Issue 1, September 2013, p.321.

⁵⁵⁴ A characteristic that Germano Celant acknowledges in 'A Readymade: When Attitudes Become Form' in *When Attitudes Become Form Bern 1969/Venice 2013* (exh. cat., Ca' Corner della Regina), Venice, 1 June - 3 November 2013, p.390.

⁵⁵⁵ Crow, T. 'Head Trip' in *Artforum International* Volume 52, Issue 1, September 2013, p.321.

⁵⁵⁶ 'Why and How: A Conversation with Germano Celant' in *When Attitudes Become Form Bern 1969/Venice 2013* (exh. cat., Ca' Corner della Regina), Venice, 1 June - 3 November 2013, p.405.

⁵⁵⁷ Searle, A. 'Venice Biennale' *The Guardian* 31 May 2013:

<http://www.theguardian.com/artanddesign/2013/may/31/prada-venice-biennale-2013>, last accessed 7 January 2015.

⁵⁵⁸ Buskirk, M. Jones, A. and Jones, C. A. 'The Year in "Re-"' in *Artforum International* December 2013 p.128. Works cited in this thesis were also presented in

varied forms: Serra's lead *Shovel Plate Prop* was replaced by the Solomon R. Guggenheim Museums Panza Collection Steel *Shovel Plate Prop* 1969. The original lead *Close Pin Prop* 1969 was exhibited (The Solomon R. Guggenheim Museums / Panza Collection) and *Sign Board Prop* was replaced by *Sign Board Prop* 1969 (1987) lead and antimony (Private collection, courtesy m Bochum Kunstvermittlung, Germany). Flanagan's *two space rope sculpture (gr 2 sp 60)* was replaced by Tate's *rope (gr 2sp 60) 6 '67*.

⁵⁵⁹ Altshuler, B. 'Dematerialization: The Voice of the Sixties' in *The Avant-Garde in Exhibition: New Art in the 20th Century*, New York, 1994, p.245.

⁵⁶⁰ Esche C. 'A Different Setting Changes Everything' in *When Attitudes Become Form Bern 1969/Venice 2013* (exh, cat., Ca' Corner della Regina), Venice, 1 June - 3 November 2013, p.474.

⁵⁶¹ 'Why and How: A Conversation with Germano Celant' in *When Attitudes Become Form Bern 1969/Venice 2013* (exh, cat., Ca' Corner Della Regina), Venice, 1 June - 3 November 2013, p.420.

⁵⁶² 'Why and How: A Conversation with Germano Celant' in *When Attitudes Become Form Bern 1969/Venice 2013* (exh, cat., Ca' Corner Della Regina), Venice, 1 June - 3 November 2013, p.419.

⁵⁶³ Sonnier recently acknowledged his preference for latex which, 'has an anthropomorphic feel to it. Like skin'. Artist questionnaire, received by author 18 December 2013. And Briony Fer states that it is not surprising that Hesse's latex surfaces have been compared to skin in 'The Work of Salvage: Eva Hesse's Latex Works' in *Eva Hesse* (exh. cat., San Francisco Museum of Modern Art, Wiesbaden, Tate Modern), New Haven and London, 2002, p.80.

⁵⁶⁴ There was even an exhibition copy included in Bern, a Bruce Nauman work which had been rebuilt by Szeemann as per the artist's instructions. It is this copy that was exhibited in Venice as it was never destroyed in 1969, as had been requested, establishing a consistency of sorts.

⁵⁶⁵ In 2012 *When Attitudes Became Form Become Attitude*, another replica of sorts, was held at the CCA Wattis Institute of Contemporary Art in San Francisco. With this exhibition, Hoffmann wanted to revisit *When Attitudes Become Form* to 'get a fresh take and critical perspective, and create a sequel'. *When Attitudes Became Form Become Attitudes* included references to the 1969 exhibition in the format of documentation and historical artifacts but included mostly new works by nearly one hundred international artists who were invited to respond to the legacy of the 1969 exhibition and the forms it encompassed. See Hoffmann, J. 'Attitude Problems' in *When Attitudes Become Form Bern 1969/Venice 2013* (exh, cat., Ca' Corner Della Regina), Venice, 1 June - 3 November 2013, p.491. Réna Montero and Stephanie Tabb made a model overview of the original show.

⁵⁶⁶ Altshuler, B. 'Dematerialization: The Voice of the Sixties' in *The Avant-Garde in Exhibition: New Art in the 20th Century*, New York, 1994, p.254.

⁵⁶⁷ Crow, T. 'Head Trip' in *Artforum International* Volume 52, Issue 1, September 2013, p.325.

⁵⁶⁸ Crow, T. 'Head Trip' in *Artforum International* Volume 52, Issue 1, September 2013, p.325.

⁵⁶⁹ Crow, T. 'Head Trip' in *Artforum International* Volume 52, Issue 1, September 2013, p.325.

⁵⁷⁰ Crow, T. 'Head Trip' in *Artforum International* Volume 52, Issue 1, September 2013, p.325.

⁵⁷¹ Potts, A ‘The Enduringly Ephemeral’ in *Tate Papers*, Issue 8, Autumn 2007. Potts used this term in relation to performance works.

⁵⁷² Vetrocq, M. E. ‘RE:Re-’ in *The Brooklyn Rail: Critical Perspectives on Arts, Politics and Culture*, 15 July, 2013:

<http://www.brooklynrail.org/2013/07/editorsmessage/re8202re>, last accessed 30 November 2013.

⁵⁷³ Vetrocq, M. E. ‘RE:Re-’ in *The Brooklyn Rail: Critical Perspectives on Arts, Politics and Culture*, 15 July, 2013:

<http://www.brooklynrail.org/2013/07/editorsmessage/re8202re>, last accessed 30 November 2013.

⁵⁷⁴ Buskirk, M. Jones, A. and Jones, C. A. ‘The Year in “Re-”’ in *Artforum International* December 2013 p.128.

⁵⁷⁵ Buskirk, M. Jones, A. and Jones, C. A. ‘The Year in “Re-”’ in *Artforum International* December 2013 p.128.

⁵⁷⁶ Sonnier, K. ‘Critics Page, Bern 1969/Venice 2013’ in *The Brooklyn Rail: Critical Perspectives on Arts, Politics and Culture*, 15 July, 2013:

<http://www.brooklynrail.org/2013/07/criticspage/bern-19698202venice-2013>, last accessed 12 November 2013.

⁵⁷⁷ Crow, T. ‘Head Trip’ in *Artforum International* Volume 52, Issue 1, September 2013, pp.322-323.

⁵⁷⁸ Crow, T. ‘Head Trip’ in *Artforum International* Volume 52, Issue 1, September 2013, p.325. In the exhibition publication Boris Groys believes the gesture of repetition makes us search for the motives and attitudes hidden behind the act itself. He cites the novella *Pierre Menard, Author of Don Quixote* where Jorge Luis Borges describes a writer who tries to rewrite Cervantes’ novel *Don Quixote*. The rewritten text had to be an exact citation of the original. See ‘Art Topology: The Reproduction of Aura’. Francesco Stocchi also asks some pertinent questions in relation to the revisiting of whole exhibitions in ‘Every Critical Act is a Creative Act’ For both see *When Attitudes Become Form Bern 1969/Venice 2013* (exh, cat., Ca’ Corner Della Regina), Venice, 1 June - 3 November 2013.

⁵⁷⁹ This is quite at odds with the way Sonnier sensitised the artwork to architecture as discussed earlier.

⁵⁸⁰ Greenberg, R. ‘Remembering Exhibitions’: From Point to Line to Web’ in *Tate Papers* Issue 12, Autumn 2009, last accessed 20 May 2015.

⁵⁸¹ Greenberg cites Robert Morris’ *body spacemotion things* 2009 and Kaprow’s *Fluids* 1967/2008 as examples in her text which have both been considered in previous chapters of this thesis. For her, Morris’ project at Tate Modern was a replica which ‘constituted a public remembering of a moment in the museum’s history and a testimony to the changes in both individual and institutional responses to participatory exhibitions’. *Fluids* (1967/2008), by contrast, represents the various new possibilities for remembering exhibitions online, it is a reprise of a happening on the MOCA website which includes a list of the ten venues where *Fluids* was recreated, an historic photograph, a poster, a description, as well as two photo-grids and a video, also posted on YouTube, which give a sense of the event’s temporality. See ‘Remembering Exhibitions’: From Point to Line to Web’ in *Tate Papers* Issue 12, Autumn 2009, last accessed 20 May 2015.

⁵⁸² Greenberg, R. ‘Remembering Exhibitions’: From Point to Line to Web’ in *Tate Papers* Issue 12, Autumn 2009, last accessed 20 May 2015.

⁵⁸³ *Marcel Duchamp*, April - July 1993.

⁵⁸⁴ In Naumann, F. M. 'The Bachelor's Quest' in *Art In America* vol 81, no.9 September 1993, p.72, there is a reproduction of Francesco Turio Böhm's photograph of Linde's 1991-2 reconstruction installed at the Palazzo Grassi, Collection Moderna Museet, Stockholm.

⁵⁸⁵ Naumann, F. M. 'The Bachelor's Quest' in *Art In America* vol 81, no.9 September 1993. p.73

⁵⁸⁶ Hiiop, H. 'The Possibility of Patina in Contemporary Art or, Does the 'New Art' Have a Right to Get Old' in Närripea, E., Sarapik, V. and Tomberg, J. (eds.) *Koht ja Paik. Place and Location. Studies in Environmental Aesthetics and Semiotics VI* 2008 p.153.

⁵⁸⁷ As has already been noted, both materials are amorphous and disordered. In terms of creep or deformation, over time, gravity, the load of itself and the critical point, will mean that the glass or latex will fail or start to become less fixed.

⁵⁸⁸ Robert Morris argued for a different configuration with each new display of a work and a dismissal of preconceived enduring forms in 'Anti Form' published in *Artforum*, April 1968.

⁵⁸⁹ In 2012, Rebecca Gordon attempted to clarify authenticity in relation to contemporary art by using 'critical mass' in relation to Ross Sinclair's *Journey to the Edge of the World* exhibited at The Fruit Market Gallery, Edinburgh, in 1999, Aspex Gallery, Portsmouth, in 2000, Art Basel in 2001, Hamburger Kunsthalle in 2002 and Kunsthallen Brandts, Denmark, in 2009. Gordon stresses the importance of the artist's views but argues for a move away the idea of a single author. In mapping the different versions of the work she believes there is a 'core identity' that may 'transcend' an anchoring to the artist. She notes that this seems at odds with conservation's allegiance to the authenticity of a work through the original materials and suggests it may be a result of a 'misplacement of authority'. See Gordon, R. 'Identifying and pursuing authenticity in contemporary art' published in Gordon, R., Hermens, E. and Lennard, F. (eds.) *Authenticity and Replication: The 'Real Thing' in Art and Conservation* Proceedings of the International Conference held at the University of Glasgow, 6 -7 December 2012, p.105.

⁵⁹⁰ Morris, R. published in *Continuous Project Altered Daily: The Writings of Robert Morris*, The MIT Press, Cambridge and London, 1995, p.92. This quote is also cited in Bird, J. 'Minding the Body: Robert Morris's 1971 Tate Gallery Retrospective' in Newman, M and Bird, J. (eds.) *Rewriting Conceptual Art*, Reaktion Books, London, 1999, p.96.

⁵⁹¹ At the *Inherent Vice* workshop held at Tate Modern, 18-19 October 2007, and acknowledged earlier in the introduction of this thesis.

⁵⁹² The flat was located on 151-189 Harper Rd, London SE1.

⁵⁹³ Thanks to a gift by the artist, Artangel and the Jerwood Charitable Foundation through the Art Fund, with the support of The Henry Moore Foundation.

⁵⁹⁴ 'The impregnation of an object: Roger Hiorns in conversation with James Lingwood' July 2008:

http://www.artangel.org.uk/projects/2008/seizure/a_conversation_with_roger_hiorns/q_a, last accessed 20 July 2009.

⁵⁹⁵ 'Note to the reader' in *When Attitudes Become Form Bern 1969/Venice 2013* (exh. cat., Ca' Corner Della Regina), Venice, 1 June - 3 November 2013, p.372.

⁵⁹⁶ From the exhibition brochure of *When Attitudes Become Form Bern 1969/Venice 2013* and noted by Martha Buskirk, Amelia Jones and Caroline A Jones in 'The Year in "Re-" *Artforum International* 52.4 December 2013 p.127.

⁵⁹⁷ *When Attitudes Become Form Bern 1969/Venice 2013* (exh, cat., Ca' Corner Della Regina), Venice, 1 June - 3 November 2013, p.390.

⁵⁹⁸ Much like Hesse's latex sheets, so too the definition of a replica is based on to fold back, and as such has been understood in terms of looking back and reactivating a work materially in the present.

Bibliography

A

Alexander, W. and Street, A. *Metals in the Service of Man*, Middlesex, 1982

Allan Kaprow *Fluids*: <http://art-agenda.com/shows/allan-kaprow-fluids-19672005/>, last accessed 18 June 2014

Allan Kaprow: http://allankaprow.com/about_reinvention.html, last accessed 16 April 2015

Alley, R. *Catalogue of the Tate Gallery's Collection of Modern Art other than Works by British Artists*, Tate Gallery and Sotheby Parke-Bernet, London, 1981

Altshuler, B. 'Dematerialization: The Voice of the Sixties' in *The Avant-Garde in Exhibition: New Art in the 20th Century*, New York, 1994

Ammann, J-C. 'Schweizer Brief' in *Art International*, vol 13, no.5, 20 May 1969, pp.47-50

Andrews, O. *Living Materials: A Sculptor's Handbook*, Berkeley, Los Angeles, London, 1988

Anti-Illusion: Procedures/Materials (exh. cat., Whitney Museum of American Art), New York, 1969

Archer, M. 'Reconsidering Conceptual Art' in *Art Monthly* 193, February 1996, pp.12-16

Armstrong, R. and Marshall, R. (eds.) *The New Sculpture 1965-75: Between Geometry and Gesture* (exh. cat., Whitney Museum of American Art), New York, 1990

Arte Povera, Giovanni Lista, Harry N. Abrams, 2006

Arte Povera and Beyond: Milan-Turin-Rome, Italian Cultural Institute, 12 March 2011, transcribed by author

Arte Povera: Between Europe and America, Tate Modern, 15-16 June, 2001, transcribed by author

Artforum International Summer 2009

News Press Release for The Artist Initiative project at the San Francisco Museum of Modern Art, 10 February 2014:
http://www.sfmoma.org/about/press/press_news/releases/983, last accessed 4 December 2014

Ashby M.F. and Jones, D.R.H. *Engineering Materials 1: An Introduction to Properties, Applications, and Design*, Fourth Edition, Elsevier Ltd, Oxford, 2012

B

Bann, S. *The Clothing of Clio: A study of the Representation of History in Nineteenth-Century Britain and France*, Cambridge University Press, Cambridge, 1984

Barker, B. 'WHEN ATTITUDES BECOME FORM' in *Flash Art* no. 275 - November - December 2010:

http://www.flashartonline.com/interno.php?pagina=articolo_det&id_art=672&det=ok&title=WHEN-ATTITUDES-BECOME-FORM, last accessed 14 November 2013

Barker, R. and Bracker, A. 'Beuys is Dead: Long Live Beuys! Characterising Volition, Longevity, and Decision-Making in the Work of Joseph Beuys' in *Tate Papers* Autumn 2005: www.tate.org.uk/research/tateresearch/tatepapers/05autumn, last accessed 25 October 2007

Baro, G. 'Animal Vegetable and Mineral' in *Art and Artists*, volume 1, no.6, September 1966, p.63

Barrette, B. *Eva Hesse Sculpture: Catalogue Raisonné*, Timken Publishers, New York 1989

'Barry Flanagan' in *Studio International*, CLXXIV, 1967, pp.98-9

Barry Flanagan (exh. cat., Whitechapel Art Gallery), London, 1982

Barry Flanagan (exh. cat., Fundación 'la Caixa'), Madrid, 1993

Barry Flanagan: Early Works 1965-1982 (exh. cat., Tate Britain), London, 27 September 2011 - 2 January 2012

Barry Flanagan: Recent Sculpture - October 28 - 26 November 1983 (exh. cat., The Pace Gallery), New York, 1983

Barry Flanagan: A Visual Invitation - Sculpture 1967-1987 (exh. cat., The Laing Art Gallery), Newcastle Upon Tyne, 27 June - 9 August 1987

Barry Flanagan: Sculpture 1966-76 (exh. cat., Van Abbemuseum), Eindhoven, 1977

Barry Flanagan Sculptures (exh. cat., Musée national d'art moderne, Centre Georges Pompidou, Galeries contemporaines), Paris, 16 March - 9 May 1983

Barry Flanagan: Works 1966-2008 (exh. cat., Waddington Galleries), London, 17 March - 17 April 2010

Battcock *The New Art: A Critical Anthology*, 1966

- Benjamin, B. 'The Work of Art in the Age of Mechanical Reproduction' 1936, reprinted in *Illuminations*, translated by Harry Zohn, London, 1999, pp.211-244
- Berger, M. *Labyrinths: Robert Morris, Minimalism, and the 1960s*, New York, 1989
- Beyond Measure: conversations across art and science* (exh. cat., Kettle's Yard, University of Cambridge), Cambridge, 5 April - 1 June 2008
- Bishop, C. *Installation Art: A Critical History*, Tate Publishing, London, 2005
- Bloch, S. 'Marcel Duchamp's *Green Box*' in *Art Journal XXXIV/1*, Fall 1974, pp.25-29
- Blok, C 'Letter from Holland' in *Art International*, May 1969
- Bracewell, M. 'This Was the Modern World' in *Tate Etc* Spring 2014
- Brandi, C. *Theory of Restoration* 1963, translated by Cynthia Rockwell, Florence, 2005
- Brady, G.S. and Clauser, H.R. *Materials Handbook: An Encyclopedia for Managers, Technical Professionals, Purchasing and Production Managers, Technicians, Supervisors and Foremen*, 1986
- The bride stripped bare by her bachelors, even*, a typographic version by Richard Hamilton of Marcel Duchamp's *Green box*, translated by George Heard Hamilton, New York, Percy Lund, Humphries & Co. Ltd, 1960
- Bruno Latour: Nature Space Society 'Air-Condition', Tate Modern, 19 March 2004, <http://channel.tate.org.uk/media/27686262001>, last accessed 11 January 2012, transcribed by author
- Buchloh, B.H. D. 'Conceptual Art, 1962-1969: From the Aesthetic of Administration to the Critique of Institutions' in *October 55* Winter 1990, originally written for the exhibition catalogue for *L'art conceptuel: une perspective*, Musée d'art modern de la Ville de Paris, Paris, 1989
- Buist, J.M. *Ageing and Weathering of Rubber: A Monograph of the Institution of the Rubber Industry*, Cambridge, 1956
- Burnham, J. 'Alice's Head: Reflections on Conceptual Art' in *Artforum* February 1970, pp.37-43
- Buskirk, M. *The Contingent Object of Contemporary Art*, Cambridge Massachusetts and London England, 2003
- Buskirk, M. Jones, A. and Jones, C.A. 'The Year in "Re-"' in *Artforum International* December 2013

C

Cabanne, P. *Dialogues with Marcel Duchamp with an appreciation by Jasper Johns* translated from the French by Ron Padgett, Da Capo Press New York, 1987, originally published by Thames and Hudson London, 1971 1971 from the French *Entretiens avec Marcel Duchamp* Belfond Paris, 1967

Calas, N. 'The Large Glass' in *Art in America* Volume 57, no.4 July/August 1969, pp.34-35

Carlyle, L. Boon, J. Bustin, M, Smithen, P. 'The Substance of Things' in Borchardt-Hume, A. (ed.) *Rothko: The Late Series* (exh. cat., Tate Modern), London, 2008

Camnitzer, L. *Conceptualism in Latin American art: Didactics of Liberation*, University of Texas Press, 2007

Causey, A. *Sculpture Since 1945*, Oxford University Press, Oxford, New York, 1998

Celant, G. (ed.) *Art Povera: Conceptual, Actual or Impossible Art?*, London, 1969

Celant, G. *Gilberto Zorio* (exh. cat., IVAM Centro del Carme), Valencia, 1991-2

Celant, G. 'Information documentation archives, untitled' in *Domus*, March 1971, pp.47-50

Christov-Bakargiev, C. (ed.) *Arte Povera*, London, 1999

Clausen, B. (ed.) 'On the Performativity of Performance Documentation' in *After the Act*, MUMOK, Vienna, 2007

Coddington, J. 'The Material Life of Things Seminar: Weighing the Evidence', Courtauld Institute, 28 January 2011, transcribed by author

Compton, M. and Sylvester, D. *Robert Morris* (exh. cat., The Tate Gallery), London, 1971

Connor, S *The Book of Skin*, London, 2004

'Conserving Eva Hesse's latex works' Tate Media for *The Gallery of Lost Art*: <http://vimeo.com/album/2152181/video/53732900>, last accessed 7 October 2014

Continenti di tempo (Continents of Time) (exh. cat., Musée d'Art Contemporain de Lyon), Lyon, 2000

The Conversation Series 16: Gustav Metzger / Hans Ulrich Obrist, Cologne, 2008

Cornelia Parker *One More Time*: <https://www.royalacademy.org.uk/exhibition/cornelia-parker-st-pancras-international>, last accessed 7 June 2015

Cornelia Parker *Magna Carta (An Embroidery)*:
<http://www.bl.uk/events/cornelia-parker-magna-carta-an-embroidery>, last accessed 7 June 2015

Corzo, M.A. (ed.) *Mortality Immortality? The Legacy of 20th-Century Art*, The Getty Conservation Institute, Los Angeles, 1999

Cowie, J.M.G. *Polymers: Chemistry & Physics of Modern Materials*, 2nd edition, Blackie Academic & Professional, London, New York, 1991

Crimp, D. 'Richard Serra: Sculpture Exceeded' in *October* 18, Fall 1981

Cros, C. *Marcel Duchamp (Critical Lives)*, London, 2006

Crow, T. 'Head Trip' in *Artforum International* Volume 52, Issue 1, September 2013

Crow, T. *The Rise of the Sixties: American and European Art in the Era of Dissent 1955-69*, London, 1996

Cullen, D. *Rafael Ferrer A Ver: Revisioning Art History*, Volume 7, UCLA Chicano Studies Research Center, Los Angeles, 2012

D

Deseo: an adventure by Rafael Ferrer (exh. cat, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973

Deseo: an adventure by Rafael Ferrer (exh. poster, Contemporary Arts Center), Cincinnati, 9 March - 27 April 1973

Dezeuze, A. (ed.) *The 'do-it-yourself' artwork: Participation from Fluxus to new media* (Rethinking Art's Histories), Manchester University Press, July 2012

Dezeuze, A. 'The Politics of the Precarious' at *Location: the Museum, the Academy, and the Studio - The 34th Association of Art Historians Annual Conference*, 2-4 April 2008, transcribed by author

Dezeuze, A. and Kelly, J. (eds.) *Found Sculpture and Photography from Surrealism to Contemporary Art*, Ashgate Publishing Limited, Farnham and Burlington, 2013

D'Harnoncourt, A. and McShine, K. (eds.) *Marcel Duchamp* (exh. cat., The Museum of Modern Art and Philadelphia Museum of Art), New York, 1973

Douglas, M. *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo*, London, Routledge, 2000

Duchamp and Sweden: On the Reception of Marcel Duchamp after World War II, Moderna Museet, Sweden, 28-30 April 2015

Duchamp, M. *Notes and Projects for the Large Glass Selected*, ordered and with an introduction by Arturo Schwarz. Translated by George H Hamilton, Cleve Gray and Arturo Schwarz, London, Thames and Hudson, 1969

Duncan, M. 'Ruins and Replicas' in *Art in America*, June 1996, pp.76-79

Durham, A. 'Going, going, gone: the problem of preserving ephemeral art' in *Museum Practice*, Issue 23, August 2003, pp.32-36

Duve, T. de *The Definitively Unfinished Marcel Duchamp*, The MIT Press, Cambridge, Massachusetts, London, England, 1991

E

Ellis, S. 'Keith Sonnier at Nature Morte' in *Art in America*, June, 1987 pp.150-1

English Oxford Dictionary: <http://www.oed.com.libproxy.ucl.ac.uk>, last accessed 11 December 2014

Eva Hesse (exh. cat., San Francisco Museum of Modern Art, Wiesbaden, Tate Modern), New Haven and London, 2002

Eva Hesse Studiowork (exh cat, Fruitmarket Gallery), Edinburgh, 5 August - 25 October 2009

Exhibiting the New Art 'Op Losse Shroeven' and 'When Attitudes Become Form' 1969, Vienna and Eindhoven, 2010

'Eye-liners' in *Art and Artists* April 1968

F

FAIL BETTER, VDR-Symposium about Conservation Practice and Decision Making in Modern and Contemporary Art, Hamburger Kunsthalle, Hamburg, 6-7 December, 2013, transcribed by author

Fenner, D.E.W. (ed.) *Ethics and the Arts: An Anthology*, New York and London, 1995

Fer, B. 'Barriers for Thinking' in *Nairy Baghramian and Phyllida Barlow*, (exh. cat., the Serpentine Gallery), London, 8 May - 13 June 2010

Fer, B. *The Infinite Line: Remaking Art after Modernism*, New Haven and London, 2004

Fiske, T. 'White Walls, Absence, Iteration and Difference' in Richmond, A. and Bracker, A. (eds.) *Conservation: Principles, Dilemmas and Uncomfortable Truths*, London, 2009

Flam, J. (ed.) *Robert Smithson: The Collected Writings*, University of California Press, Berkeley, Los Angeles, London, 1996

Forge, A. 'In Duchamp's Footsteps' in *Studio International*, CLXXI, June 1966, pp.248-51

Foster, H. with Hughes, G. (eds.) *Richard Serra*, Cambridge and London, 2000

G

Gandy, M. *Concrete and Clay: Reworking Nature in New York City*, The MIT Press, Cambridge, Massachusetts, London, England, 2002

Gaßner, H., Kölle, B. and Roettig, P. (eds.) *Eva Hesse: One More than One* (exh. cat., Hamburger Kunsthalle), Hamburg, 29 November 2013 - 2 March 2014

Gilberto Zorio (exh. cat., Galleria Fumagalli), Bergamo, 2001

Gilberto Zorio (exh. cat., Kunstmuseum), Luzern, 1976

'Gilberto Zorio In Conversation', Milton Keynes Gallery, 26 November 2008, transcribed by author

Goldstein, A. and Rorimer, A. *Reconsidering the Object of Art: 1965-1975* (exh. cat., The Museum of Contemporary Art), Los Angeles, The MIT Press, 15 October 1995 - 4 February 1996

Gordon, R., Hermens, E. and Lennard, F. (eds.) *Authenticity and Replication: The 'Real Thing' in Art and Conservation*, Proceedings of the International Conference held at the University of Glasgow, 6-7 December 2012

Graham, D. W. 'Heraclitus', *The Stanford Encyclopedia of Philosophy* (Summer 2011 Edition), Edward N. Zalta (ed.): <http://plato.stanford.edu/archives/sum2011/entries/heraclitus>, last accessed 5 February 2014

Le Grand Déchiffreur - Richard Hamilton sur Marcel Duchamp: Une selection d'écrits, d'entretiens et de lettres JRP/Ringier, 2009 (eds. Diserens, C. and Tosin, G.) Texts translated from English by Jeanne Bouniort

Grattan, D.W. (ed.) *Saving the Twentieth Century: The Conservation of Modern Materials, Proceedings of "Symposium '91"*, Ottawa, CCI 1993

Gravity and Grace: The Changing Condition of Sculpture 1965-1975 (exh. cat., Hayward Gallery), London, 1993

Green, A. M. 'When Attitudes Become Form and the Contest over Conceptual Art's History' in Corris, M. (ed.) *Conceptual Art: Theory, Myth, and Practice* Cambridge, 2004

Greenberg, R. 'Remembering Exhibitions': From Point to Line to Web' in *Tate Papers* Issue 12, Autumn 2009, last accessed 20 May 2015

The Greenhouse Effect, (exh. cat., the Serpentine Gallery), London, 4 April - 21 May 2000

The Greenhouse Effect (summary booklet, the Serpentine Gallery), London, 4 April - 21 May 2000

Gustav Metzger Decades: 1959-2009 (exh. cat., Serpentine Gallery), London, 2009

H

Hamilton (exh. cat., Tate Modern), London, 2014

Hamilton, R. *The Almost Complete Works of Marcel Duchamp*, (exh. cat., Tate Gallery and the Arts Council), London, 18 June-31 July 1966

Hamilton, R. *The Bride Stripped Bare by Her Bachelors Even Again*, University of Newcastle upon Tyne, Department of Fine Art, Newcastle upon Tyne, 1966

Hamilton, R. *Collected Words: 1953-1982*, Thames and Hudson, London, 1982

Hamilton, R. 'Duchamp', in *Art International*, Volume 7, No.10, January 1964, pp.22-28

Hamilton, R. and Amaya, M. 'Son of the Bride Stripped Bare' in *Art and Artists I*, no.4, July 1966, pp.22-7

On Hamilton with Hal Foster, Vicente Todoli and Mark Godfrey, Tate Modern, 12 February 2014, transcribed by the author

Harlan, C. 'Keith Sonnier: An Interview' *Parachute 6*, Spring 1977

Harrison, C. 'Barry Flanagan's Sculpture "Claiming attention for objects by statement"' in *Studio International*, May 1968, Volume 175, Number 900

Harrison, C. *Looking Back*, Ridinghouse, London, 2011

Harrison, C. 'Notes Towards Art Work' *Studio International*, February 1970

Harrison, C. 'Some recent sculpture in Britain' in *Studio International*, January 1969, Volume 177, Number 907

Hiiop, H. 'The Possibility of Patina in Contemporary Art or, Does the 'New Art' Have a Right to Get Old' in Närripea, E., Sarapik, V. and Tomberg, J. (eds.) *Koht ja Paik. Place and Location. Studies in Environmental Aesthetics and Semiotics VI* 2008 pp.153-166

Holden, C. and Perry, R. 'The Reconstruction of the Lower Glass Panel of Duchamp/Hamilton's 'Large Glass' 1965-6' in *The Conservator* No.11 (UKIC) July 1987, pp.3-13

Hapgood, S. 'Remaking Art History' in *Art in America*, July 1990

Haxthausen, C.W. 'Reproduction/Repetition: Walter Benjamin/Carl Einstein in *October*, Winter 2004, pp.47-74

Heuman, J. (ed.) *From Marble to Chocolate: the Conservation of Modern Sculpture*, London 1995

Heuman, J. (ed.) *Material Matters: The Conservation of Modern Sculpture*, London 1999

Holman, M, review of Gilberto Zorio, Blain/Southern, London, 9 August - 28 September 2013 in *ArtReview* October 2013:
http://artreview.com/reviews/october_2013_review_gilberto_zorio/, last accessed 4 June 2014.

Hughes, R. 'Ferrer: A Voyage with Salsa' in *Time Magazine*, 28 February 1977,
<http://www.time.com/time/magazine/article/0,9171,918737,00.html>, last accessed 7 July 2009

Hummelen, I. and Sillé, D. (eds.) *Modern Art: Who Cares? An interdisciplinary research project and an international symposium on the conservation of modern and contemporary art*, Archetype Publications, London, 2005

I

'The impregnation of an object: Roger Hiorns in conversation with James Lingwood' July 2008:

http://www.artangel.org.uk/projects/2008/seizure/a_conversation_with_roger_hiorns/q_a, last accessed 20 July 2009

Inherent Vice: The Replica and its Implications in Modern Sculpture, a closed workshop held at Tate Modern on 18-19 October 2007, transcribed by author. Papers from this workshop were published, edited with the assistance of the author, in the 2007 autumn issue of *Tate Papers*, Tate's online research journal:

<http://www.tate.org.uk/research/publications/tate-papers/issue-08>

Barassi, S. 'The Modern Cult of Replicas: A Rieglian Analysis of Values in Replication'

Barger, M. 'Thoughts on Replication and the Work of Eva Hesse'

Beerens, L. 'Nothing but the Real Thing: Considerations on Copies, Remakes and Replicas in Modern Art'

Berndes, C. 'Replicas and Reconstructions in Twentieth-Century Art'

Brett, G. 'Hélio Oiticica'

Cooke, L. 'Richard Serra: A Case Study'

Cooper, C. 'Thoughts on Thoughts on Replication'

Curtis, P. 'Replication: Then and Now'

Dezeuze, A. 'Blurring the Boundaries between Art and Life (in the Museum?)'

Gale, M. 'Amazement and Uneasiness: Early Thoughts'

Godfrey, M. and McCall, A. 'Anthony McCall's Line Describing a Cone'

Grasskamp, W. 'The Rules of the Game'

Hackney, S. 'Degradation of Naum Gabo's Plastic Sculpture: The Catalyst for the Workshop'

Heuman, J. and Morgan, L. 'Tate Sculpture Replica Project'

Iversen, M. 'Resistance to Replication'

Lang, U. 'The Passing Away of Art'

Lange-Berndt, P. 'Replication and Decay in Damien Hirst's Natural History'

Leleu, N. 'The Model of Vladimir Tatlin's Monument to the Third International: Reconstruction as an Instrument of Research and States of Knowledge'

Lie, H. 'Replicas of László Moholy-Nagy's Light Prop: Busch-Reisinger Museum and Harvard University Art Museums'

Lodder, C. 'Naum Gabo and the Quandaries of the Replica'

Lydiate, H. 'Posthumous Legal and Ethical Issues'

Mancusi-Ungaro, C. 'Authority and Ethics'

McNally, A. 'Gabo Cataloguing Project at the Tate Archive'

Mundy, J. 'Why/Why Not Replicate?'

Orchard, K. 'Kurt Schwitters: Reconstructions of the Merzbau'

Phillips, J. 'Reconstructing the Forgotten: An Exhibition of 1970s and 1980s Video Installations, Re-staged with Authentic Technology'

Potts, A. 'The Enduringly Ephemeral'

Rider, A. 'Carl Andre'

Skowranek, H. 'Should We Reproduce the Beauty of Decay? A Museumsleben in the work of Dieter Roth'

Stallabrass, J. 'Inherent Vice'

Starling, S. 'Replication: Some Thoughts, Some Works'

Sturtevant 'Inherent Vice or Vice Versa'

Vermeiren, D. 'Je travaille sur la présence'

Williams, N. and G. 'Replicas of Constructions by Naum Gabo: A Statement by the Copyright Holders'

Supporting documents

'Afterthoughts'

Tate Legal and Copyright Department 'Digitisation and Conservation: Overview of Copyright and Moral Rights in UK Law' and 'Replication of Sculpture / Works of Art: Legal Guidelines'

'Terminology for Further Expansion'

The Italian Metamorphosis, 1943-68 (exh. cat., Solomon R. Guggenheim Museum, Triennale di Milano, Kunstmuseum Wolfsburg), New York, 1994

J

'The John Tusa Interview with Richard Hamilton' 5 May 2002, 17:45 on BBC Radio 3, http://www.bbc.co.uk/radio3/johntusainterview/hamilton_transcript.shtml, last accessed 14 July 2009

Jones, A. *Body Art/Performing the Subject*, Minnesota University Press, Minneapolis, 1998

Judd, D. 'Specific Objects' in *Donald Judd: Complete Writings 1959-1975*, Halifax, 1975, originally published in *Arts Yearbook* 8 1965

K

Kaprow, A. 'The Shape of the Art Environment: How Anti Form is "Anti-Form"?' in *Artforum*, Summer 1968, pp.32-33

Kaye, N. 'Materials' in *Site-specific Art: Performance, Place and Documentation*, London and New York, 2000

Keith Sonnier: Neon (exh. cat., Hirshhorn Museum and Sculpture Garden), Washington, D.C., 2 August - 29 October 1989

Keith Sonnier: Neon Sculpture (exh. cat., The Chrysler Museum), Norfolk Virginia, 28 October - 24 December, 1988

Keith Sonnier: New Work 2000 (exh. cat., Marlborough Chelsea), New York, 2000

Keith Sonnier: Werke / Works (exh. cat., Sprengel Museum), Hanover, 1993

Kennedy, R. 'Tricky Business: Defining Authenticity: Guggenheim Project Confronts Conceptual Art's Nature' in *The New York Times* December 20, 2013: <http://www.nytimes.com/2013/12/22/arts/design/guggenheim-project-confronts-conceptual-arts-nature.html>, last accessed 11 February 2014

Killian, K. 'Mario Garcia Torres' July 12 2009 in *SFMOMA Open Space*: <http://openspace.sfmoma.org/2009/07/mario-garcia-torres/>, last accessed 25 November 2014

Kimmelman, M. 'Art in Review' in *The New York Times*, 22 September 1995: <http://www.nytimes.com/1995/09/22/arts/art-in-review-759995.html>, last accessed 7 July 2009

Kingsley, A. 'Rafael Ferrer at Hoffman and MoMA' in *Art in America*, September - October, 1974, p.108

Kinsella, E. 'The Brillo-Box Scandal' in *ARTnews* 1 November 2009: <http://www.artnews.com/2009/11/01/the-brillo-box-scandal>, last accessed 1 June 2015

Kozloff, M. '9 in a Warehouse: An "attack on the status of the object"' in *Artforum*, February 1969

Kozloff, M. 'The Poetics of Softness' in *Renderings: Critical essays on a century of modern art*, London, 1970

Krauss, R. *The Originality of the Avant-Garde and Other Modernist Myths*, The MIT Press, 1981

Krauss, R. *Passages in Modern Sculpture*, New York, 1977

Krauss, R. 'Retaining the Original: The State of the Question' in *Retaining the Original: Multiple Originals, Copies and Reproductions*, Washington, 1989

Kuspit, D. *Idiosyncratic Identities: Artists at the End of the Avant-Garde*, Cambridge, 1996

Kuspit, D. *Keith Sonnier* (exh. cat., The Douglas Hyde Gallery and Halle Sud), Dublin and Genève, 1989

Kuspit, D. 'Keith Sonnier PS1' in *Artforum*, September, 1983, pp.71-2

L

Lange, C. '55th Venice Biennale: Do Attitudes Still Become Form?' in *frieze blog* 30 May, 2013: <http://blog.frieze.com/55th-venice-biennale-do-attitudes-still-become-form/>, last accessed 14 November 2013

Larkin, G. 'Things Fall Apart' in *Artforum* April 2008

Latour, B. 'Atmosphere, Atmosphere' in *Olafur Eliasson: The Weather Project*, (exh. cat., Tate Modern), London, 16 October 2003 - 21 March 2004

Latour, B. *Politics of Nature: How to Bring the Sciences into Democracy*, translated by Catherine Porter, Harvard University Press, Cambridge, Massachusetts and London, England, 2004

Lebel, R. 'The Ethic of the Object' in *Art and Artists* Volume 1, no.14 July 1966, pp.16-19

Lebel, R. *Duchamp*, Paris, 1985

Lippard, L. 'Eccentric Abstraction' in *Art International* November 1966, Volume X/9, p.28 and pp. 34-40

Lippard, L. *Eva Hesse*, New York University Press, New York, 1976

Lippard, L. (ed.) *Six Years: The dematerialization of the art object from 1966 to 1972; a cross-reference book of information on some esthetic boundaries: consisting of a bibliography into which are inserted a fragmented text, art works, documents,*

interviews, and symposia, arranged chronologically and focused on so-called conceptual or information or idea art with mentions of such vaguely designated areas as minimal, anti-form, systems, earth, or process art, occurring now in the Americas, Europe, England, Australia, and Asia (with occasional political overtones), edited and annotated by Lucy R. Lippard, Berkeley, Los Angeles, London, 2001

Lippard, L. and Chandler, J. 'The Dematerialization of Art' 1968 in Wood, J., Hulks, D., Potts, A. (eds) *Modern Sculpture Reader*, Leeds, 2007

Live in Your Head: Concept and Experiment in Britain 1965-75 (exh. cat., the Whitechapel Art Gallery), London, 2000

'Live in your head' *When Attitudes become Form (Works - Concepts - Processes - Situations - Information)* (exh. cat., Bern - Krefeld - London), Kunsthalle Bern 22 March - 27 April 1969

The Long Weekend 2009: www.tate.org.uk/modern/thelongweekend2009, last accessed 29 April 2009

Tateshots, Long Weekend 09: Michelangelo Pistoletto: <http://www.tate.org.uk/context-comment/video/long-weekend-09-michelangelo-pistoletto>, last accessed 28 January 2015

Luber, K and Sommermeyer, B. 'Remaking Artworks: Realized Concept versus Unique Artwork' in Scholte, T. and Wharton, G. (eds.) *Inside Installations: Theory and Practice in the Care of Complex Artworks*, Amsterdam University Press, 1 April 2012

Lumley, R. *Arte Povera*, London 2004

Lumley, R. 'Between Pop Art and Arte Povera' in Passerini, L. (ed.) *Across the Atlantic: Representations and Cultural Exchanges between Europe and the United States*, Brussels, 2000

M

Manacorda, F. and Yedgar, M. (eds.) *Radical Nature: Art and Architecture for a Changing Planet 1969-2009*, (exh. cat., Barbican Art Gallery), London, 19 June - 10 October 2009

Mapping the Studio (exh. cat., Stedelijk Museum), Amsterdam, 2006

Marcel Duchamp (exh. cat., Pasadena Art Museum), 8 October - 3 November 1963

Marcel Duchamp, (exh. cat., Philadelphia Museum of Art), Philadelphia, 22 September - 11 November 1973

Marcel Duchamp's *Large Glass* Study Day, Tate Britain, 24 May 2003, transcribed by author

- Marcel Duchamp: Readymades, etc* (exh. cat., Galleria Schwarz), Paris, 1964
- Marcel Duchamp 66 Creative Years* (exh. cat., Gallery Schwarz), Milan, 12 December 1972 - 28 February 1973
- Mayer, J, 'Keith Sonnier' in *Arts Magazine* September 1982
- McDowell, T 'Towards an Ethics of Recuration: When Attitudes Become Form Bern 1969/Venice 2013' published on the Independent Curators International website *Recurating, Remaking, Redoing #1*: http://issuu.com/independentcuratorsinternational/docs/tara_mcdowell, last accessed 8 July 2015
- McShine, K. and Cooke, L. (eds.) *Richard Serra: Sculpture: Forty Years* (exh. cat., The Museum of Modern Art), New York, 2007
- Messer, T.M. 'Impossible Art, What it is' *Art in America*, vol. 57, no.3 May/June 1969, pp.30-47
- Minola, A. *Gian Enzo Sperone: Torino Roma New York: 35 anni di mostre tra Europa e America* Hopefulmonster, Torino, 2000
- Molesworth, H. *Part Object Part Sculpture*, Wexner Center for the Arts, 2005
- Morphet, R. (ed.) *Richard Hamilton* (exh. cat., Tate Gallery), London, 17 June - 6 September 1992
- Morris, R. 'Anti Form' in *Artforum*, April 1968
- Morris, R. 'Notes on Sculpture Part 4: Beyond Object' in *Artforum* April, 1969, pp.50-54
- Morris, R. 'The Present Tense of Space' in *Continuous Project Altered Daily: The Writings of Robert Morris* October, The MIT Press, Cambridge and London, 1995
- Morris, R. 'Some Notes on the Phenomenology of Making: The Search for the Motivated' in *Artforum*, April 1970, pp.62-66
- Müller, G. 'Robert Morris Presents Anti-Form: The Castelli Warehouse Show' in *Arts Magazine*, February 1969, pp.29-30
- Müller, G. *The New Avant-Garde: Issues for Art of the Seventies*, New York, 1972
- Mundy, J. *Duchamp Man Ray Picabia*, (exh. cat., Tate Modern), London, 21 February - 26 May 2008
- Mundy, J. *Lost Art: Missing Artworks of the Twentieth Century*, Tate Publishing, London, 2013

N

Nara Document on Authenticity, drafted following Nara Conference on Authenticity in Relation to the World Heritage Convention, 1994

Naum Gabo: Prototypes for Sculpture, Gabo Scholars morning, Tate Britain, 29 March 2011, transcribed by author

Naumann, F. M. 'The Bachelor's Quest' in *Art In America* vol 81, no.9 September 1993, pp.71-81, 67, 69

Nemser, C. 'The Art of Frustration' originally published in *Art Education*, Vol. 24, No. 2, February 1971, pp.12-15.

Nemser, C. *Art Talk: Conversations with 15 Women Artists*, New York, 1995

Nesbit, M. 'Ready-made Originals: The Duchamp Model' in *October* vol 37, Summer 1986, pp.53-64

Nixon, M. (ed.) *Eva Hesse*, MIT Press, Cambridge, Mass. and London, 2002

Newman, M. and Bird, J. (eds.) *Rewriting Conceptual Art*, Reaktion Books, London, 1999

O

The Object in Transition: A Cross-Disciplinary Conference on the Preservation and Study of Modern and Contemporary Art, the Getty Institute, 25-26 January 2008: www.getty.edu/conservation/publications/videos/object_in_transition.html, last accessed 19 August 2008, transcribed by author

October 124, Summer 2008

Oliva, A. B. 'The Mark of Zorio' in *Gilberto Zorio* (exh. cat., *Oredaria Arti Contemporanee*), Rome, 2003

Op losse schroeven situaties en cryptostructuren, (exh. cat., Stedelijk Museum), Amsterdam, 1969

Owens, C. 'Allan McCollum: Repetition and Difference' in *Art in America*, LXXI/8, September 1983, pp.130-132

Ozenfant, A. *Foundations of Modern Art*, John Rodker, London, 1931

P

The Panza Collection Initiative:
<http://www.guggenheim.org/new-york/collections/about-the-collection/the-panza-collection-initiative>, last accessed 6 July 2015

Parigoris, A. 'Truth to Material: Bronze, on the Reproducibility of Truth' in Hughes, A. and Ranfft, E. *Sculpture and its Reproductions*, London, 1997

Perrone, J. 'Rafael Ferrer at Nancy Hoffman' in *Artforum*, April, 1977, pp.62-64

Petzinger, R. and Rosen, B. (eds.) *Eva Hesse: Catalogue Raisonné*, Yale University Press, Museum Wiesbaden, Wiesbaden; New Haven and London, 2006

'Phyllida Barlow in conversation with Tamar Garb & Briony Fer', CSCA Event, 17 October 2011, transcribed by author

Pill, S. 'Pistoletto on how to keep art on a roll':
<http://metro.co.uk/2009/05/19/pistoletto-on-how-to-keep-art-on-a-roll-124096/>, last accessed 23 May 2009

Pincus-Witten, R. 'Keith Sonnier: Materials and Pictorialism' in *Artforum* October 1969, p.39-45

Pistoletto, M. *Famous Last Words* 1967

Pistoletto: <http://www.pistoletto.it/eng/home.htm>, last accessed 3 June 2009

Pohlad, M. B., "'Macaroni repaired is ready for Thursday....'" Marcel Duchamp as Conservator', *tout-fait: The Marcel Duchamp Studies Online Journal, Volume 1, Issue 3, December 2000*:
http://www.toutfait.com/issues/issue_3/Articles/pohlad/pohlad.html, last accessed 9 August 2013

Pollock, G. and Corby, V. (eds.) *Encountering Eva Hesse*, Prestel, Munich and London, 2006

Potts, A. *The Sculptural Imagination: Figurative, Modernist, Minimalist*, New Haven and London, 2000

R

Rafael Ferrer, (exh poster, Castelli Warehouse) New York, January to February 1970

Rafael Ferrer, (exh. cat., Pasadena Art Museum), 11 January - 27 February 1972

'Rafael Ferrer: an interview with Stephen Prokopoff' in *Art and Artists*, April 1972

'Rafael Ferrer at the Castelli Warehouse' in Reviews and Previews in *Art News* March 1970

Rafael Ferrer: Enclosures (exh. cat., Institute of Contemporary Art University of Pennsylvania), Philadelphia, 25 September - 30 October 1971

Rafael Ferrer: Recent Work and an Installation (exh. cat., Institute of Contemporary Art), Boston, 13 September - 29 October 1978

‘Rafael Ferrer with Barry Schwabsky’ in *The Brooklyn Rail: Critical Perspectives on Arts, Politics, and Culture*, 15 July 2013:
<http://www.brooklynrail.org/2013/07/art/rafael-ferrer-with-barry-schwabsky>, last accessed 25 March 2014

‘Ray Thorburn Talks with Keith Sonnier’ in *Art International* 20, January - February 1976, pp.69-74

Recent Works Richard Serra (exh. cat., Gagosian), London, 2008

‘The reconstruction of Duchamp’s Large Glass: Richard Hamilton in conversation with Jonathan Watkins’ in *Art Monthly* no.136, May 1990, pp.3-5

Reid, N ‘The limits of collecting’ in *Studio International*, July/August 1971, pp.38-39

Reise, B. ‘A Tale of Two Exhibitions: The Aborted Haacke and Robert Morris Shows’ in *Studio International* 182, July 1971

Reiss, J. H. *From Margin to Center: The Spaces of Installation Art*, The MIT Press, 2000

Retro/Active: The Work of Rafael Ferrer (exh. cat., Museo del Barrio), New York, 8 June - 22 August 2010

‘Retro/Active: The Work of Rafael Ferrer’ in *e-flux*, 2 June 2010:
<http://www.e-flux.com/announcements/retroactive-the-work-of-rafael-ferrer/>, last accessed 4 March 2014

‘Retro/Active: The Work of Rafael Ferrer at El Museo del Barrio’ in *Artopia: John Perreault's art diary*, 19 July 2010, <http://www.artsjournal.com/>, last accessed 4 March 2014

Rich, J.C. *The Materials and Methods of Sculpture*, New York, 1961

Richard Serra in Conversation, the Courtauld Institute of Art, 17 September 2013, transcribed by author

‘Richard Serra in Conversation with Hal Foster’ in *Richard Serra: The Matter of Time* (exh. cat., Guggenheim Museum), Bilbao, Göttingen:Steidl Publishers, 2005

Richard Serra: Interviews, Etc. 1970-80, written and compiled in collaboration with Weyergraf, C., New York, 1980

Richard Serra: The Matter of Time (exh. cat., Guggenheim), Bilbao, 2005

Richard Serra Sculpture 1985-1998 (exh. cat., The Museum of Modern Art), Los Angeles, 1998-9

Richard Serra: Works 66-77 (exh. cat., Kunsthalle), Baden-Baden, 1978

Richard Hamilton (exh. cat., The Tate Gallery) London, 12 March - 19 April 1970

Richard Hamilton dans le reflet de / in the Reflection of Marcel Duchamp a film by Pascal Goblot, Le Miroir/Vosges Télévision, 2014 (53 minutes) and the booklet inside with 'Richard Hamilton in the Mirror with Marcel Duchamp' Interview by Pascal Goblot as well as the bonus film *Travelling Version 2007* (26 minutes) a film by Pascal Goblot, *Le Grand Verre au Centre Pompidou / The Large Glass* at the Centre Pompidou

Riegl, A. 'The Modern Cult of Monuments' 1903, in *Oppositions* 25, Fall 1982

Roger Hiorns Seizure (exh. cat., 151-189 Harper Road) London, 3 September - 2 November 2008

Roger Hiorns *Seizure*:

http://www.artangel.org.uk/projects/2008/seizure/about_the_project, last accessed 20 July 2009

S

Saletnik, J. 'Josef Albers, Eva Hesse, and the Imperative of Teaching' in *Tate Papers* Spring 2007: www.tate.org.uk/research/tateresearch/tatepapers/07spring, last accessed 31 March 2008

Schjeldahl, P. 'New York Letter' in *Art International*, volume 13/7, September 1969

Schnapp, J.T. 'Crystalline Bodies: Fragments of a Cultural History of Glass' in *West 86th* Vol. 20 No. 2, Fall/Winter 2013: www.west86th.bgc.bard.edu/articles/schnapp-crystalline-bodies.html, last accessed 14 March 2015

Schulze, F. 'The View from the MCA' in *Art in America*, May-June, 1972, pp.96-99

Schwabsky, B. 'An Art of Time: Rafael Ferrer and Christian Marclay prize an aesthetic of spontaneous responsiveness irrespective of subject' in *The Nation*, 25 August 2010: <http://www.thenation.com/article/154143/art-time#>, last accessed 4 March 2014

Schwander, M. 'Serra in Switzerland 1969-1994' in *Richard Serra: Intersection Basel*, Düsseldorf, 1996

Schwarz, A. *The Complete Works of Marcel Duchamp* with catalogue raisonné, Thames and Hudson, London, 1969

Schwarz, A. *The Large Glass*, Milan, 1966

Schwarz, A. (Anon). 'Marcel Duchamp at the Tate' in *Art International* Volume X, no.6 Summer 1966, pp.101-4

- Schwarz, A. 'Marcel Duchamp: The Great Inspirer' in *Tema Celeste* 36, Summer 1992 pp.36-40
- Schwartz, G. 'Ars Moriendi: The Mortality of Art' in *Art in America*, November 1996, pp.72-75
- Schwartz, H. *The Culture of the Copy: Striking likenesses, unreasonable facsimiles*, New York, 1996
- Sculptural Process Working Group meeting, Courtauld Institute, 15 February 2008, transcribed by author
- 'Sculpture made visible' Barry Flanagan in discussion with Gene Baro in *Studio International*, October 1969, Volume 178, Number 915
- Searle, A. 'Venice Biennale' in *The Guardian* 31 May 2013: <http://www.theguardian.com/artanddesign/2013/may/31/prada-venice-biennale-2013>, last accessed 7 January 2015
- 'Second Nature' in *Artforum International* Volume 52, 1, September 2013, translated from French by Molly Stevens
- Serota, N. 'Experience or Interpretation; The Dilemma of Museums of Modern Art', Walter Neurath Memorial Lecture, London, 1996
- Serra, R. *Writings Interviews*, Chicago and London, 1994
- Six Sculptors: Extended Structures* (exh. cat., Museum of Contemporary Art), Chicago, 30 October - 12 December 1971
- Sleeman, J. 'Land Art and the Moon Landing' in the *Journal of Visual Culture*, December 2009, pp.299-328
- Smith, R. 'After Process: a Return to the Tropics' in *The New York Times*, 10 June 2010 <http://www.nytimes.com/2010/06/11/arts/design/11ferrer.htm>, last accessed 4 March 2014
- Sonnier, K. *Object Situation Object 1969-70*, Galerie Ricke, Cologne
- Sonnier, K. 'Critics Page, Bern 1969/Venice 2013' in *The Brooklyn Rail: Critical Perspectives on Arts, Politics and Culture*, 15 July, 2013: <http://www.brooklynrail.org/2013/07/criticspage/bern-19698202venice-2013>, last accessed 12 November 2013
- Spencer, C. 'Making it New: the trend for recreating exhibitions' in *Apollo* May 2015 <http://www.apollo-magazine.com/making-it-new-the-trend-for-recreating-exhibitions/>, last accessed 19 June 2015.
- 'A Statement on Standards for Sculptural Reproduction and Preventive Measures to Combat Unethical Casting in Bronze' in *Art Journal* XXXIV/1, Fall 1974, pp.44-50

Stevens, M. 'Floating Opus' *New York Magazine*, *New York Fall Art Preview 2005*, September 4, 2005: <http://nymag.com/guides/fallpreview/2005/art/12862/>, last accessed November 16, 2011

Studio International, July/August, 1970, Volume 180, Number 924

T

Tate Etc. Issue 23, Autumn 2011 pp.45-55

The Tate Gallery 1972-4 Biennial Report and Illustrated Catalogue of Acquisitions, London 1975

Temkin, A. 'Wear and Care: Ann Temkin charts the complicated terrain surrounding the preservation of Donald Judd's work' in *Artforum* June 22 2004

Thirkell, P. 'From the *Green Box* to Typo/Topography: Duchamp and Hamilton's Dialogue in Print, *Tate Papers*, Issue 3, 1 April 2005, <http://www.tate.org.uk/research/publications/tate-papers/green-box-typotopography-duchamp-and-hamiltons-dialogue-print>, last accessed 7 September 2013

Tomkins, C. *The World of Marcel Duchamp*, New York, 1966

Tomkins, C. *The Bride and the Bachelors: Five Masters of the Avant-Garde*, Viking, Compass Books, New York, 1968

Torres, M.G. *9 at Leo Castelli* Instituto de Cultura Puertorriqueña (2da Trienal Poli/Gráfica de San Juan: América Latina y el caribe, 18 April - 28 June) 2009

Trini, T. 'The Sixties in Italy' in *Studio International*, November 1972, Volume 184, Number 949

Tuchman, P. 'Robert Morris' in *Artforum International* November 2009

Tully, J. 'The Messiest Subject Alive' in *ARTnews* XCIV/10 December 1995, pp.112-8

U

Urprung, P. (ed.) *Herzog & De Meuron: Natural History*, Canadian Centre for Architecture and Lars Müller Publishers, 2002

V

Vetrocq, M. E. 'RE:Re-' in *The Brooklyn Rail: Critical Perspectives on Arts, Politics and Culture*, 15 July, 2013: <http://www.brooklynrail.org/2013/07/editorsmessage/re8202re>, last accessed 30 November 2013

<http://www.visitchurches.org.uk/Ourchurches/Completelistofchurches/st-peters-church-cambridge-cambridgeshire/>, last accessed 8 February 2015

W

Wasserman, E. 'New York' in *Artforum*, September 1969

Weiss, J. 'Eternal Return: Jeffrey Weiss on Robert Morris's Recent Work' in *Artforum International*, February 2014, pp.174-181

When Attitudes Become Form: Works - Concepts - Processes - Situations - Information (exh. cat., Institute of Contemporary Arts), London, 28 September - 27 October 1969

When Attitudes Become Form Bern 1969/Venice 2013, (exh. cat., Fondazione Prada, Ca' Corner della Regina), Venice 1 June - 3 November 2013

Williams, R.J. *After modern sculpture: Art in the United States and Europe 1965-70*, Manchester and New York, 2000

Wilson, A. *Tate Gallery: An Illustrated Companion*, Tate Gallery, London, revised edition 1991

Winther, T. 'Understanding *Flocked* - a case study of a latex wall piece by Keith Sonnier from 1969' presented at Authenticity, History, and Reproducibility session at *Permanence in Contemporary Art - Checking Reality*, 3-4 November 2008, arranged by Statens Museum for Kunst in collaboration with The Royal Danish Academy of Fine Arts, Copenhagen, Denmark and supported by the International Network for the Conservation of Contemporary Art

Whitney Stories Video: Carol Mancusi-Ungaro, 4 November, 2013:
<http://whitney.org/WhitneyStories/CarolMancusiUngaro>, last accessed 11 November 2014

'With Modern Art, a Question of What's 'Original'' in *Newsweek*, 5 June 2008, updated 13 March 2010: <http://www.newsweek.com/modern-art-question-whats-original-90645>, last accessed 27 September 2014

Wood, C. 'The Rules of Engagement: Displaced Figuration in Robert Morris's Sculptural *Mise en Scene*, unpublished March 2009 version. Later edited and published in Deuze, A. (ed) *The 'do-it-yourself' artwork: Participation from Fluxus to new media* (Rethinking Art's Histories), Manchester University Press, July 2012

Wood, C. and Noble, K. 'Child's Play' in *Artforum International* March 2010

Z

Zero to Infinity: Arte Povera 1962-1972 (exh. cat., Walker Art Center, Tate Modern), Minneapolis and London, 2001

Zorio (exh. cat., Institute of Contemporary Art), Amsterdam, 1992

Press release of Gilberto Zorio exhibition held at Blain|Southern, London,
9 August - 28 September 2013:

http://artreview.com/reviews/october_2013_review_gilberto_zorio, last accessed 13
January 2015

Zürcher, I. *When Attitudes Escape Form: Kunsthalle Basel 1969-1970*, Revolver,
Frankfurt am Main, 2004

Archival Research

Carlsen, M. *Replication of Modern Sculptures: A Study of Naum Gabo's Work and
the Process of Replicating his Artworks*, Tate Report 2004

Carlsen, M. Research: Interviews with: Michelle Barger (San Francisco Museum of
Modern Art, San Francisco), Jennifer Gross and Mark Aronson (Yale University Art
Gallery Collection, New Haven), Jackie Heuman and Matthew Gale (Tate), Susan
Lake (Hirshhorn Museum and Sculpture Garden, Washington), Sally Malenka and
Emily Hage (Philadelphia Museum of Art, Philadelphia), Carol Mancusi-Ungaro and
Elisabeth Sussman (Whitney Museum of American Art, New York), Siukku
Nurminen and Eija Aarnio (Kirsti Harva Kiasma, Nykytaiteen Museo, Museum for
Samtidskunst, Helsingfors), Christian Scheidemann (Contemporary Conservation,
New York), Shelley Sturman (National Gallery of Art, Washington) and Lynda
Zycherman (Museum of Modern Art, New York)

Conservation records for Barry Flanagan's *4 casb 2 '67, ringl 1'67, rope (gr 2sp 60) 6
'67* and *2 space rope sculpture (gr 2 sp 60) 1967*, Tate Archives

Conservation record for *The Bride Stripped Bare by her Bachelors, Even (The Large
Glass)* Marcel Duchamp 1915-23, reconstruction by Richard Hamilton 1965-6, lower
panel remade 1985, Tate Archives

Conservation records for Robert Morris' *Untitled* 1965, reconstructed 1971 and 1976
and *Untitled* 1967-8, remade 2008, Tate Archives

Conservation records for Richard Serra's *Shovel Plate Prop* 1969, *2-2-1: To Dickie
and Tina* 1969, 1994 and *Trip Hammer* 1988, Tate Archives

Conservation record for Keith Sonnier's *Red Flocked Wall* 1969, Tate Archives

'Marcel Duchamp interviewed by Richard Hamilton' BBC *Monitor* recorded 27
September 1961, aired 17 June 1962. Transcript from the BBC Written Archive
Centre and viewed footage at the BFI National Archive on 17 September 2013

Photo Coll. Exhibition London Mixed: ICA 'When Attitudes Become Form, 1969,
Tate Archives

Pierce, L. 'Richard Hamilton Interview', 1 November 1988, unpublished, Tate
Archives

Pistoletto, M. Interview with Michelangelo Pistoletto, Simon Grant and Kate Vogel, 18 March 2009, Biella at Cittadellarte - Fondazione Pistoletto for *3 Minute Wonder*, unpublished

Taylor, M. ““To Lose the Possibility of Recognising 2 Similar Objects””: Richard Hamilton's Version of Marcel Duchamp's *Large Glass*’ unpublished, MA Courtauld Institute of Art Thesis, University of London, 1994

TG 4/2/442/1 Letter to Richard Hamilton from Ronald Alley, Keeper of the Modern Collection, the Tate Gallery, 27 July 1976, Tate Gallery Records

TG 5/5/2/1 Visitor Services & Publicity: Print: Exhibitions & Displays, Slides / Information Sheets / Publicity Leaflets, Tate Gallery 1969-1974

TG 92/236/2: Exhibition Robert Morris 1971: Installation, plans etc., 6 October 1970 - 19 March 1971, Tate Archives

TG 92/236/1: Exhibition Robert Morris 1971: Organisation, 16 October 1969 - 14 June 1984, Tate Archives

TG 92/236/3: Exhibition Robert Morris 1971: Publicity, Tate Archives

TGA 7841: Drawing/Floor Plan for Robert Morris exhibition, Tate Archives

TGA 839/1/2/1 Harrison, Charles: Papers relating to the exhibition at the ICA Gallery 1969, Tate Archives

TGA 839/1/2/2 Harrison, Charles: Photographs of works in ‘When Attitudes Become Form’ and other conceptual art c.1969, Tate Archives

TGA 955/7/2/11 Institute of Contemporary Art, London: Papers relating to ‘When Attitudes Become Form’ July-Aug 1969, Tate Archives

Winther, T, Installation Instructions for *Flocked*, 7 March 2008, unpublished, sent to author 8 March 2009

Winther, T.: Interview with Keith Sonnier, 29 January 2008 at the artist’s home in New York, unpublished, sent to author 8 March 2009

Wood, C. ‘Robert Morris’s *Bodyspacemotionthings*: Participation Re-enacted, unpublished, sent to author 23 February 2015

Wood, C. ‘Rules of Engagement *Précis*’ unpublished, sent to author 23 February 2015

Yule, M “*The Large Glass*” *Reproduced by Richard Hamilton 1965-6* April 1990, unpublished, Tate Archives

Interviews and Correspondence

Conversation with Luigi Coppola, Assistant to Michelangelo Pistoletto, Tate Modern, 23 May 2009

Interview with William Easterling, Sculpture Conservation Technician, Tate, Tate Britain, 27 November 2007

Rafael Ferrer questionnaire, received 26 March 2014

Interview with Michelangelo Pistoletto's assistant, Roberto Fioccardi, conducted by author and Jodie Glen-Martin at Tate Store, 10 and 11 October 2005, unpublished

Richard Hamilton Interview, 19 April 2005, Tate Britain, Paintings Conservation Studio, Tim Green, Stephen Hackney, Toby Treves, Dave Clarke and Bryony Bery. Transcript by author, May 2005, Tate Archives

Conversation with Martin Langer, Conservator, Hauser & Wirth, 24 October 2013

Interview with Elizabeth McDonald, Sculpture Conservator, Tate, Tate Modern, 27 and 29 July 2011

Interview with Kathy Noble, Assistant Curator, Tate, Tate Modern, 25 February 2009

Interview with Jason Reppert, Assistant to Keith Sonnier, Tate Modern, 4-6 May 2009

Interview with Melanie Rolfe, Sculpture Conservator, Tate, Tate Britain, Sculpture Conservation studio, 10 February 2009

Meeting with Derek Pullen and Andrew Wilson, Tate Modern, 9 July 2009

Interview with Derek Pullen, Head of Sculpture Conservation, Tate, Tate Britain, 4 February 2008

Conversation with Patricia Smithen, Head of Conservation, Tate, 1 May 2012

Conversation and correspondence with Gates Sofer, Sculpture Conservator, Tate, 16 November 2011

Keith Sonnier questionnaire, received 18 December 2013

Email correspondence with Lynne Cooke, Senior Curator, Special Projects in Modern Art, at the National Gallery of Art, Washington DC, June 2015

Email correspondence with Deborah Cullen, Director & Chief Curator, The Miriam & Ira D. Wallach Art Gallery, Columbia University in the City of New York, 23 March 2014

Email correspondence with Rafael Ferrer, March 2014 and 3 June 2015

Email correspondence with Elizabeth Fisher, Curator for *Beyond Measure: Conversations Across Art and Science*, 10 March 2015

Email correspondence with Ceri-Anne van de Geer, Arts Administrator, Kettle's Yard, December 2014 and March 2015

Email correspondence with Timothy Green, Paintings Conservator, Tate, November 2009 and March 2012

Email correspondence with Annika Gunanrsson, Curator, Prints and Drawings, Moderna Museet Stockholm, October 2013 and April 2015

Email correspondence with Susan Hapgood, 3 February 2015

Email correspondence with Margaret Iverson, Professor of Art History and Theory at the University of Essex, November 2014

Email correspondence with Martin Langer, Conservator, Hauser & Wirth, September, October and November 2013, and 15 January 2014

Email correspondence with Francesco Manacorda, February 2012

Email correspondence with Elizabeth McDonald, Sculpture Conservator, Tate Modern, 26 July 2015

Email correspondence with Trina McKeever, Richard Serra's studio, 26 June 2015

Email correspondence with Barry Phipps, Fellow, Tutor & Curator of Works of Art, Churchill College, Cambridge, January and February 2015

Email correspondence with Melanie Rolfe, Sculpture Conservator, Tate, February 2014

Email correspondence with Christian Scheidemann, Contemporary Conservation Ltd., November 2011

Email correspondence with Patricia Smithen, Head of Conservation, Tate, 29 August 2014

Email correspondence with Keith Sonnier studio, March - April 2009 and November 2013 - February 2014

Email correspondence with Barbara Sommermeyer, Conservator, Hamburger Kunsthalle, March and June 2015

Email correspondence with Michael Taylor, Deputy Director/Chief Curator, Virginia Museum of Fine Arts, May 2012, September 2013 and June 2015

Email correspondence with Thea Winther, Conservator, Moderna Museet, Stockholm, Sweden, March 2009

Email correspondence with Catherine Wood, Curator, Contemporary Art and Performance, Tate, February 2015