The Photocopier: Re-evaluating the Substance of a Heterogeneous Technology

EVAN DANIEL JONES

Thesis submitted to the University of Nottingham
for the degree of Doctor of Philosophy
July 2018

The Photocopier: Re-evaluating the Substance of a Heterogeneous Technology

By Evan Daniel Jones

Acknowledgements

I would like to thank the University of Nottingham for giving me the opportunity to undertake this PhD. This thesis would be not have been possible without the support of my supervisors Dr Mark Rawlinson and Dr Lucy Bradnock. Each supervisory session with them was a genuine joy and I always looked forward to our discussions. Their constant enthusiasm for the subject and guidance throughout helped keep me enthused and kept me inspired for the four years of research and writing. I would also like to thank Professor Richard Wrigley who was always happy to lend an ear for matters both professional and personal. I must also thank the administrative staff of the Humanities Post-Graduate Management Office, in particular Amanda Samuels, who was a constant help in dealing with all the administrative details that make a PhD possible.

I would like to thank the AHRC for their studentship award and their International Placement Scheme award that allowed me the opportunity to spend 6 months at the Library of Congress. I would like to thank the LoC and its staff for use of their archives and the support they offered while undertaking my research there. I would also like to thank the New York University: Fales Library and The University of Iowa Libraries for the use of their archives and the help and support of their staff.

Finally, I must thank my Mum, Dad and Brother whose love and support throughout the last 34 years has always been constant. I must also thank my friends whose friendship helped keep me going, stopped me from becoming a hermit, and who did their best to keep me grounded.

Abstract

Marshal McLuhan once wrote that 'societies have always been shaped more by the nature of the media by which men communicate than by the content of the communication'[1]. He argued that the methods and technologies we use to communicate shape our culture and ultimately our human behaviour. The intention of this thesis is the examination of a piece of technology that has been largely overlooked within the field of art history and visual culture, but the creation of which has influenced a significant cross-section of contemporary western culture; namely the photocopier. Our dominant perception of the photocopier is of a banal technology, with little or no creative potential, and whose sphere of influence is marked most strongly by its association with the office and the workplace. Although its use in the workplace is well established, and its role in creating one of America's most successful companies, the Xerox Corporation, is well documented, its history and influence is far from clear-cut. The creation of the photocopier initiated an entirely new market for office copying machines, doing away with nearly all its predecessors. It has been responsible for the creation of a subsection of folklore called Xeroxlore or photocopy lore, which is study of a form of individual subversion which takes place within the workplace environment. The photocopier played a significant role in the British punk scene of the 1970s and the 1990s American Riot Grrrl movement. It has also been used by artists from the early 1960s, right through to the high point of its use as an artistic tool in the 1980s and 1990s. It continues to play a role

[1] Marshall McLuhan and Quentin Fiore, The Medium Is the Massage (London, Penguin, 2008), p. 8.

in current sub- and counter-cultural movements and is still being used by countless creators of fanzines, comics, and other material.[2]

My intention in this thesis is to demonstrate that the photocopier is a complex substance.[3] This complexity is expressed through the disparate items the machine has been used to produce, office paperwork, fanzines, material advocating for political and social change, artworks, and the social significance of these objects. Equally, this complexity can be argued from the point of view of an individual's perception, whether the photocopier is identified as a device that reinforces workplace routine, enables individual expression, offers the possibility of challenging perceived social inequality, or combinations of them all. I will demonstrate throughout this thesis that this complexity is undervalued by a singular reading of the photocopier as solely a facilitator of the office or workplace, and will argue throughout for a reading of the photocopier that rejects its dominant cultural assessment as banal, intending to outline a diverse framework for the discussion of a culturally complex technology that has received little academic study in the fields of art history and visual culture.

[2] It is also worth noting that its uses can been seen to prefigure many of the activities the Internet has made so ubiquitous.
[3] I will be using the word substance throughout this thesis in the Latourian sense, and will discuss his argument concerning what a substance is as part of the introduction.

Table of Contents

Acknowledgements: P.1.

Abstract: P.2.

Contents: P.4.

List of Illustrations: P.6.

Introduction: P.9.

Chapter One: Electrophotography and Xerox: P.57.

Section One –	**Beginnings:**	**P.58.**
Part One:	Before Electrophotography:	P.58.
Part Two:	The Notion of the Copy:	P.71.
Part Three:	The Beginnings of the Photocopier:	P.82.
Section Two –	**Capitalism and the Machine:**	**P.94.**
Part One:	Capitalist Theory and Mechanical Reproduction:	P.94.
Part Two:	The Outcome of the Corporate Machine:	P.105.
Part Three:	Xerox and Xerography:	P.113.

Chapter Two: The Office: P.126.

Section One –	**The Foundations of the Modern Office:**	**P.127.**
Part One:	Business Growth and Administration:	P.127.
Part Two:	A Change in Management:	P.142.
Part Three:	A New Office Design:	P.150.
Section Two –	**Office Workers:**	**P.160.**
Part One:	The Clerk:	P.160.
Part Two:	Administration and Management:	P.168.
Part Three:	The White-Collar Worker:	P.177.
Part Four:	The ‘Feminisation’ of Office Work:	P.184.
Section Three –	**Office Machines:**	**P.195.**
Part One:	Labour Saving Office Machines:	P.195.
Part Two:	Devalued Labour and the Feminised Machine:	P.202.
Section Four –	**Xeroxlore and Little Rebellions:**	**P.213.**
Part One:	The Appropriation of the Photocopier:	P.213.
Part Two:	Images of Appropriation:	P.222.

Chapter Three: Debord, the Spectacular, and the Spectacular: Subverted P.235.

Section One –	**The Spectacle and Commodity:**	**P.236.**
Part One:	Debord's Spectacular:	P.236.
Part Two:	Debord's Commodity:	P.243.
Part Three:	Debord and Mass Media:	P.248.
Section Two –	**Subculture and Commodity:**	**P.257.**
Part One:	The Roots of Subculture:	P.257.
Part Two:	Subverting the Culture:	P.267.
Part Three:	The Subverted Commodity:	P.276.
Section Three –	**Subculture and the Photocopier:**	**P.284.**
Part One:	Cultural Anomaly:	P.284.
Part Two:	Subversion of the Photocopier and Subcultural Commodities:	P.297.
Part Three:	Subculture and the Photocopier:	P.310.
Part Four:	From Necessity to Intentional Ideology:	P.322.

Chapter Four: Art and the Machine: P.330.

Section One –	**Environment, Institution and Substance:**	**P.331.**
Part One:	Environment:	P.331.
Part Two:	Institution:	P.338.
Part Three:	Substance:	P.347.
Section Two –	**Aura, Intention, and Choice:**	**P.356.**
Part One:	Benjamin's Aura and the Machine Made:	P.356.
Part Two:	Benjamin, Genuineness and Designation:	P.364.
Part Three:	Aesthetics of Intention and Perception:	P.371.
Section Three –	**Two Perspectives:**	**P.378.**
Part One:	Electrophotographic:	P.378.
Part Two:	Contrasting Definitions:	P.391.

Conclusion: P.404.

Bibliography: P.414.

Illustrations: P.434.

List of Illustrations

Figure.01: Seth Siegelaub and others, Untitled, 1968

Figure.02: Seth Siegelaub and others, Untitled, 1968

Figure.03: Xerox® VersaLink®, 2018

Figure.04: HP Color LaserJet Enterprise Flow MFP M681z Network printer, 2018

Figure.05: Xerox 914, 1959

Figure.06: Photocopying, 2018

Figure.07: Women Using Photocopier, 2018

Figure.08: Women with Copier, 2018

Figure.09: Some of the World's Most Boring Jobs, 01 August 2016

Figure.10: Xerox, New way of office copying, 1960

Figure.11: Networking, 2018

Figure.12: Would you give way at the photocopier?

Figure.13: Work Hard and You Shall Be Rewarded: Urban Folklore from the Paperwork Empire, 1975, Alan Dundes and Carl R. Pagter

Figure.14: Sniffin' Glue, 1976, Mark Perry, Mark Perry, Sniffin' Glue and Other Rock and Roll Habits

Figure.15: Maggie Finger, The Most Beautiful Girl is a Dead Girl, 1992

Figure.16: Seth Siegelaub and others, Untitled, 1968

Figure.17: Neaderland, 'International Society of Copier Artists', *ISCA*, 1.1, 1982.

Figure.18: Árnyékkötők, 1.1, 1990.

Figure.19: James Watt Copying Press 1780 Patent Diagram, 1780

Figure.20: First Xerographic Print, 1938, Chester Carlson,

Figure.21: First Xerox Commercial Ever, 1959

Figure.22. First Xerox Commercial Ever, 1959

Figure.23: First Xerox Commercial Ever, 1959
Figure.24: Billy Wilder, The Apartment, 1960
Figure.25: Frank Lloyd Wright and His Forgotten Larkin Building, 1903
Figure.26: Action Office 1, 1964
Figure.27: Action Office 2, 1967
Figure.28: The Action Office II in Action, 1969
Figure.29: Scott Adams, Friday July 15, 2011, 15 July 2011
Figure.30: Billy Wilder, The Apartment, 1960
Figure.31: Billy Wilder, The Apartment, 1960
Figure.32: Ultimate Go To Market Strategy for Success Xerox George Lois, 1960
Figure.33: Photocopier Engineer, 2017
Figure.34: Fax and Photocopier Technician, 2016
Figure.35: Work Hard and You Shall Be Rewarded: Urban Folklore from the Paperwork Empire, 1975, Alan Dundes and Carl R. Pagter
Figure.36: Work Hard and You Shall Be Rewarded: Urban Folklore from the Paperwork Empire, 1975, Alan Dundes and Carl R. Pagter
Figure.37: Achtung, 1974, Keystone Folklore
Figure.38: Send Help!, 1986, Photocopy Lore and the Naturalization of the Corporate Body: Paul Smith Collction
Figure.39: Biuletyn Dolnoslaski, 1979
Figure.40: NME: Bowie's Back, 1976, NME: New Musical Express
Figure.41: Olympia Summer, 1996, Fales Library and Special Collection: Kathleen Hanna Papers
Figure.42: Olympia Summer, 1996, Fales Library and Special Collection: Kathleen Hanna Papers
Figure.43: Dear Daddy Master, Fales Library and Special Collection: Kathleen Hanna Papers

Figure.44: Dear Daddy Master, Fales Library and Special Collection: Kathleen Hanna Papers
Figure.45: Olympia Summer, 1996, Fales Library and Special Collection: Kathleen Hanna Papers
Figure.46: NME: Sex Pistols Anniversary Special, 2012, NME: New Musical Express
Figure.47: Seth Siegelaub and others, *Untitled*, 1968
Figure.48: Seth Siegelaub and others, *Untitled*, 1968
Figure.49: Seth Siegelaub and others, *Untitled*, 1968
Figure.50: Seth Siegelaub and others, *Untitled*, 1968
Figure.51: Seth Siegelaub and others, *Untitled*, 1968
Figure.52: Seth Siegelaub and others, *Untitled*, 1968
Figure.53. Olbrich, Jurgen O, *Rock'n Roll*, 1984, MIDE
Figure.54. Christian Rigal, *2 Bienal Internacional: Electrografie Y Copy Art*, 1988
Figure.55. Neaderland, 'International Society of Copier Artists', *ISCA*, 1.1, 1982.

Introduction

Introduction

In 1968 Seth Siegelaub and Jack Wendler published *The Xerox Book*; its official title was *Untitled*. The book was Siegelaub's radical proposal for an exhibition of conceptual art, in which the book acted as the exhibition space, in place of a conventional gallery. Siegelaub invited seven artists to take part: Carl Andre, Robert Barry, Douglas Huebler, Joseph Kosuth, Sol LeWitt, Robert Morris, and Lawrence Weiner, specifying that 'each artist was given 25 consecutive pages on which to display their work; the rule being those 25 pages had to be an artwork in itself and not the documentation of existing work.'[1] The resulting works ranged from Andre's twenty-five 1" x 1" blocks of cardboard dropped, one by one, onto the screen of the photocopier and copied at each stage, to Kosuth's matter of fact itemisation of the 'constituent elements that had gone into the production of *The Xerox Book* itself' (figs 1-2).[2] Wendler mentions in a 2013 interview with the Kadist Foundation in San Francisco that 'this was not a catalogue of work, this was the work', that is the book functioned simultaneously as the work, the exhibition space, and its documentation.[3] The pages were then to be photocopied using a Xerox machine to produce a book in an edition of one thousand.[4] *The Xerox Book* has achieved a vaunted, almost mythic status in histories of post-war art, conceptual art more specifically; yet the paradoxes in the project are rarely acknowledged.

[1] 'THE XEROX BOOK: The Book That Was an Exhibition That Became an Artwork', *Ambit*, 214.Autumn (2013), p. 81.
[2] Alberro, Alexander. *Conceptual Art and the Politics of Publicity*. (Massachusetts: Massachusetts Institute of Technology, 2003), p. 147.
[3] Kadist Art Foundation, 'Jack Wendler Speaks About the Xerox Book', Youtube <https://www.youtube.com/watch?v=85wsUOaqCN8> [accessed 5 July 2018].
[4] 'THE XEROX BOOK: The Book That Was an Exhibition That Became an Artwork', p. 81.

The democratisation of the art object, something that could 'be distributed beyond cultural centers and sold cheaply,' that Siegelaub sought is challenged by the financial cost of its creation and its subsequent commodification as a high-status art object.[5] His desire to employ the photocopier's bland method of production, used in the creation of the individual works themselves is in contrast against the more professional lithographic method of production that was eventually used to finish the project. Equally, his belief in the blandness of the photocopier's output is called into question when we begin to examine its use in the creation of work of Xeroxlore and other subcultural artefacts, areas I will discuss later on in the thesis. What this suggests is that there is limited understanding of the photocopier in art historical scholarship, and a need to engage with the photocopier's influence and significance more fully.

The Xerox Book was conceived at a time when artists were becoming increasingly aware of the complex network of inter-connected structures that were 'indicative of not only the art world but of society itself.'[6] It was an attempt by Siegelaub to democratise art, to place art within reach of a multitude, rather than centring the exhibition in one fixed location. In doing so he sought to undermine the process of the commodification of art by de-materialising the artwork. Writing about conceptual art in her book *Six Years: The Dematerialization of the Art Object* Lucy Lippard argues that,

[5] 'Seth Siegelaub', *Artforum*, 2013 <https://www.artforum.com/passages/primary-information-on-seth-siegelaub-1941-2013-44258> [accessed 7 May 2018].
[6] Michalis Pichler, *Books and Ideas of Seth Siegelaub* (New York: Sternberg Press, 2016), p. 40.

for her, dematerialisation was one of the key factors of the conceptual artwork, and that the material form of the object was secondary to the idea.[7] *The Xerox Book* was a mass-produced work, aesthetically aligned to a culture of administration and bureaucracy, functioning as a means of communicating information. The use of this advanced piece of administrative technology, and the ephemeral nature of the objects it produced, was intended by Siegelaub to negate its aesthetic component. As he explained in an interview shortly after the project,

> I chose Xerox as opposed to off-set or any other process because it's such a bland, shitty reproduction, really just for the exchange of information. That's all a Xerox is about. I mean, it's not even, you know, defined. So, Xerox just cuts down on the visual aspects of looking at information.[8]

It is here the paradoxes in the photocopier are demonstrated, and where I disagree with Siegelaub. He claims that the photocopier is bland and only about the exchange of information, and that its blandness is a means to convey that information. But the paradox is that the photocopier is far from bland, or visually passive, and I would argue that Siegelaub misses that the photocopier's aesthetic imprint on the work carries with it a wide array of

---

[7] Lucy Lippard, *Six Years: The Dematerialization of the Art Object From 1966 to 1972* (United States of America: Praeger Publishers, Inc, 1973), p. vii.

[8] This quote comes from an interview Siegelaub did with a journalist and was printed in Alberro's book *Conceptual Art and the Politics of Publicity*.
Alberro, Alexander. *Conceptual Art and the Politics of Publicity*. (Massachusetts: Massachusetts Institute of Technology, 2003), p. 135.

subtextual meaning, meaning that relies on the perception and experience of the viewer. While the means of production Siegelaub eventually used for the creation of the final material object was cleaner, less prone to leaving unplanned or erratic marks on the page, the individual pieces produced by each artist nonetheless carry the aesthetic markers of the photocopier, marks that would become a visual marker for the subculture material produced by the punk and the Riot Grrrl movements, amongst others. Siegelaub's assertion that the photocopier is only about the exchange of information demonstrates a misunderstanding of the material output of the photocopier and its aesthetic significance.

One of Siegelaub's desires for the *The Xerox Book,* produced using such a seemingly 'cheap and utilitarian technology,' was the production of 'something with an emphasis on the ideas it held.'[9] In this way the exhibition of the work would be 'free of the demands made of the market and […] perhaps through these strategies might bypass commodification.'[10] *The Xerox Book* thus appears, on the surface at least, to be anti-professional. Its physical appearance, the visual consequences of its method of production, appears to support Siegelaub's desire to democratise the artwork, and conceptual art's tendency towards the art's de-materialisation.

This "de-materialised" object is not quite what is appears, however, and the project's attempts to escape the commodification of the art market were less

[9] Pichler, p. 40.
[10] Ibid, p. 40.

than successful. Firstly, and paradoxically, the material cost of using the photocopier (Siegelaub's intended method) proved to be too much: 'printing the first 1,000 copies would have cost over $20,000.'[11] As a result of this, *The Xerox Book* was actually printed using a more standard off-set lithography press. Siegelaub had originally approached Xerox to underwrite the exhibition but he had to turn to friend, art collector, and gallerist Jack Wendler after they turned him down. Secondly, *The Xerox Book* 'entered the market place seamlessly,' despite Siegelaub's wishes, and 'regardless of its material form.'[12] This happened in part because it represented a significant milestone in the production of conceptual art and artists' books, and in part due its limited print run of 1,000 copies, such that *The Xerox Book* has subsequently become an object of art historical importance and collectability. The art market was able to assimilate Siegelaub's idea in that it does have physical form, it is an object that can be bought, sold and collected. Finally, *The Xerox Book* was also 'borne aloft due in most part to its increasingly well-known contributors.'[13] The object exists not as autonomous, separate from outside influence, but part of a complex network of relationships, relying on the author function of those involved and leading to an inevitable return to the conditions of individual authorship, challenging the attempt made by Siegelaub to produce something both anti-

[11] Tiernan Morgan, '7 Artists, 25 Pages Each, 1 Half-Century Later: Revisiting the Xerox Book', Hyperallergic <http://hyperallergic.com/240038/7-artists-25-pages-each-1-half-century-later-revisiting-the-xerox-book/> [accessed 29 August 2016].
[12] Pichler, p. 40.
[13] Ibid, p. 40.

authorial and democratic. In this way 'the aura of artist bel[ied] any attempt to de-mystify art via annulment of the aura of the object.'[14]

Beyond its importance as an example of the photocopier's influence and significance for art history, *The Xerox Book* highlights some of the complexity of the photocopier's use, reflecting the complex substantive nature of the device. The paradoxes that I have outlined were reinforced in a subsequent work that took *The Xerox Book* as both source and subject: *The Xeroxed Book* 2010 by artist Eric Doeringer is a photocopied reproduction of *The Xerox Book*; it is part of an ongoing practice devoted to what Doeringer called 'copycat publication.'[15] Where *The Xerox Book* had to be reproduced using an off-set printing method to make the process more affordable, *The Xeroxed Book* used the photocopier in its production, and in doing so captured many of the elements associated with the use of the machine, while at the same time commenting on the ironic failure of Siegelaub's project. As Pichler writes,

> As a second generation copy, *The Xeroxed Book* displays the limitations of photocopying as a reproductive technology. Dust, pages edges, distortions, and other familiar Xerox artefacts appear on every page, becoming as much a part of the reading experiences as the original artist's projects.[16]

[14] Pichler, p. 40.
[15] Eric Doeringer, 'Eric Doeringer.Com', Eric Doeringer.Com, 2018 <http://www.ericdoeringer.com/index.html> [accessed 22 April 2018].
[16] Pichler, p. 39.

Siegelaub had claimed that the photocopier was bland, a 'shitty reproduction', qualities demonstrated explicitly in Doeringer's *The Xeroxed Book*. As Doering demonstrates the photocopier it is far from bland and his use of it highlights the qualities missing from *The Xerox Book*'s production but present in the creation of the individual works, and forces us to consider the host of historical, cultural, social, and personal associations which make the photocopier a much more heterogeneous cultural object than Siegelaub allows.

In *The Dialogic Imagination: Four Essays*, Mikhail Bakhtin wrote that objects are part of 'the incomplete process of a world-in-the-making, and stamped with the seal of inconclusiveness.'[17] In this way the understanding of an object, and its significance is continually 'renewed and grow[s] as the context continues to unfold.'[18] My thesis is aimed at renewing the context of the photocopier, shaking its obdurate perception as a solely mundane, bureaucratic or corporation device. I will outline a view of the photocopier and its visual legacy that is more complex than previous art historical and visual cultural study has allowed, forging a dialogue that encompasses the photocopier's broader historical and cultural context and the individual's experience. I will argue that a better, fuller awareness of the photocopier can only be achieved by incorporating elements of multiple fields of study such

[17] Mikhail Mikhailovich Bakhtin, *The Dialogic Imagination: Four Essays*, ed. by Michael Holquist, trans. by Caryl Emerson and Michael Holquist (Michigan: University of Texas Press, 1981), p. 30.
[18] Ibid, p. 30.

as business studies, subculture, and art history, to demonstrate the photocopier's complexity.

My belief in the photocopier's complex nature informs the first of my research concerns in this thesis: to explore what associations and factors that go into forming the photocopier's "substance". This idea of substance comes from Bruno Latour's work and is described by him in his book *Pandora's Hope: Essays on the Reality of Science Studies* as 'a thing with clear limits, with a name, with obduracy,' something that is 'more than the sum of its parts.'[19] According to Latour,

> The word "substance" does not designate what "remains beneath," impervious to history, but what gathers together a multiplicity of agents into a stable and coherent whole. A substance is more like the thread that holds the pearls of a necklace together than the rock bed that remains the same no matter what is built on it.[20]

Siegelaub chose the photocopier as a tool because of its association with the corporate sphere, a point proven in his continued reference to the work as *The Xerox Book* despite the alternative method of production that he eventually employed to make it. Because of this, *The Xerox Book* is missing much of that association that Siegelaub had initially intended, whereas

[19] Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies* (Cambridge: Harvard University Press, 2000), p. 151.
[20] Ibid, p. 151.

Doeringer's reproduction seems to capture something of the intention Siegelaub's "original" lost. The photocopier's corporate association is at the core of the second research question that drives this thesis: what is the significance of the photocopier's corporate history on its subsequent use as a creative subcultural and artistic tool? Demonstrated by its use by Siegelaub and Doeringer, the photocopier has continued to be utilised as a method of artistic creation for decades. As well as appearing in experimental art practice, it has played a role in the formation and continuation of subcultures. A further aim in this thesis is to explore the way in which the perception of the photocopier's primary function as an office tool shaped its appropriation and subversion by subcultural groups and artists alike. Finally, what aspects of the photocopier's visual aesthetic are carried over into the meaning of its material creations; in other words, does it matter that Siegelaub's *Xerox Book* was Xeroxed only in name?

The central argument of this thesis is that the photocopier is a socially constructed and constructive piece of technology, in the sense that Peter L. Berger and Thomas Luckmann outlined that model in their book *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*.[21] Therefore, it must be examined by constructing a sociological framework of references, contextualising it within those fields that both background the photocopier's construction and demonstrate its constructive influence upon society. It exists as a piece of technology which sits at the junction of

[21] Peter Berger and Thomas Luckman, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (London: Penguin Books, 1991), p. 211.

industrial capitalist mechanisation, corporate and economic practice, mass production and reproduction, mass media and communication, art and authorship, and subculture and rebellion. I will argue throughout that the photocopier has been used by artists and subculturalists alike as a means of expression and communication, in ways and for purposes contrary to its primary intended purpose. Despite its range of uses by distinct sectors of culture and subculture, in ways that differ vastly, the photocopier has been under-valued and equally under-examined in the scholarly literature of art history and visual culture. While it has received some scrutiny in the history of technology and business studies, each discipline has a tendency to downplay the "other" side of the photocopier's cultural impact. This thesis aims to rectify this lack by undertaking a material-semiotic examination of the photocopier as both a material object and immaterial concept. This approach is loosely based on the methodology of actor-network theory which describes objects as part of a network of relationship between both human and non-human agents. This methodological approach draws again upon the work of Latour and others and aims to treat the photocopier as part of a constantly shifting network of relationships that forms the photocopier's substance.[22] Taking this approach this thesis will cover a broad range of disciplines including business studies, cultural studies, art

[22] For further reading see;
Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford, Oxford University Press, 2005).
John Law & Michael Callon, (1989). "On the Construction of Sociotechnical Networks: Content & Context Revisited." *Knowledge & Society: Studies in the Sociology of Science Past and Present*. Vol.8, pp. 57-83.
John Law and John Hassard's *Actor Network Theory and After* (London, Wiley-Blackwell, 1999).

history and visual culture, and will argue for a reading of the photocopier that rejects the dominant perception of it as a banal and passive technology, in order to propose a multi-faceted framework for this piece of culturally complex technology.

The Broader View

The photocopier is a device with strong associations to twentieth and twenty-first century working life. It is a machine immediately recognisable for what it is, and its purpose assumed. The parameters, functionality and strictures of the photocopiers role and its usage appear well defined, its place in offices, schools, universities, libraries or copy-shops not open to question, at least outwardly. Putting to one side the increasing functionality of the more modern digital copy-machines, photocopiers have historically been responsible for one thing: the creation of paperwork, more specifically the reproduction, or the production of copies. The photocopier sits at the heart of what Alan Dundes and Carl R. Pagter have called a'paperwork empire.'[23] In an age that supposedly offered the promise of a paperless office, according to one report, by 2014 the photocopier had become responsible for the creation of over one billion copies every day.[24] Photocopiers are devices designed with the purpose of making work easier,

[23] Alan Dundes and Carl R. Pagter, *Work Hard and You Shall Be Rewarded: Urban Folklore from the Paperwork Empire* (Bloomington: Indiana University Press, 1975), p. xi.
[24] Author: Greg Milliken, M.-Files Corporation Greg Milliken, and M.-Files Corporation, 'The Paperless Office: 30-Year Old Pipe-Dream?', *WIRED* <https://www.wired.com/insights/2014/01/paperless-office-30-year-old-pipe-dream/> [accessed 14 October 2017].

reproducing paperwork faster and more efficiently, with little effort or input on behalf of the user. Since 1936, the year Chestor Carlson first conceived of the possibility of his electrophotographic process, the photocopier 'has reached […] an essential position in public administration, private enterprise, education, and in many other fields.'[25] We even see the strength of this association and this converging of name and role in the practice of 'verbifying' the Xerox brand name.[26] The Xerox Corporation were the pioneers of the photocopier, the Xerox machine, and they continue to make photocopiers today. But to 'Xerox' something has, at least in the USA, become another way to denote the practice of photocopying something: the brand has become synonymous with the action of copying, something Xerox have fought long and hard against.[27]

The predominant aesthetic of the photocopier is that of a large grey plastic box configured with an assortment of trays, paper feeds, and a prominent user-interface. (figs 3-4). The two devices shown in these images are both current production models (2018), the first a Xerox machine and the second by HP. While both machine are marketed by different companies their design and aesthetic are remarkably similar, and following design principles shared with the first recognisable office photocopier, the Xerox 914. (fig 5).

---

[25] Christian Rigal, *2 Bienal Internacional: Electrografie Y Copy Art* (Valencia: Universidad Politecnica Valencia, 1988), p. 3.
[26] Mike Hoban, Mike Hoban, and Mike Hoban, 'Google This: What It Means When A Brand Becomes A Verb', Fast Company, 2013 <https://www.fastcompany.com/3004901/google-what-it-means-when-brand-becomes-verb> [accessed 14 October 2017].
[27] Noam Cohen, 'The Power of the Brand as Verb', *The New York Times*, 18 July 2009, section Week in Review <https://www.nytimes.com/2009/07/19/weekinreview/19cohen.html> [accessed 14 October 2017].

The design of each machine is pared down, no extraneous or unnecessary adornment. Each machine is predominantly one colour, pasty and pallid, and what little colour deviation there is draws the eye to the user-interface. This choice in the use of colour reinforces the function of the machine, focusing the user's interactions with the machine to the user-interface, seemingly discouraging the user from interfering with the other more technical aspects of the machine. The design aesthetic, and the use of colour also seems to highlight that these machines are not decorative, they are not designed to enhance the visual appearance of the workplace, they are designed to be ignored, to blend into the background. The photocopier has a singular function, and can be ignored until its services are required.

A second type of image involving the photocopier and that is that showing the machine in use, the raised lid seemingly enough to demonstrate the practice of photocopying (figs 6-8). It is notable that in these images the person shown working the machine is female. If you search using a search engine for the words "using a photocopier" the majority of the images returned show women using the photocopier. The present-day assumption that women are the primary users of the photocopier in an office follows an established trend present in the earliest Xerox marketing for the photocopier from the 1960s in both television advertising and posters materials that I will examine in depth in the following section. These images depict both implicitly and explicitly the inherent gendered power structure within work, one that appears to tie women's role in the office to that of the photocopier,

one of support rather than an actively creative or leadership position. Hillel Schwartz writes in *The Culture of the Copy: striking likenesses, unreasonable facsimiles*, that these gendered structures have allotted to women in the office the role of '"thoughtful" copying machines.'[28] In turn, Schwartz adds 'copying machine[s] […] require the presence and gradually took on the personae of women,' because, according to one male writer from a 1985 issue of *Popular Science Monthly*, their "tendency is toward reproduction. While man's is toward production."'[29] Tied into this is another assumed aspect of the use of the photocopier, and again a seemingly gender specific role, is the boredom of using the photocopier. In (fig 9), an image taken from a 2016 BBC magazine article titled 'Some of the World's Most Boring Jobs, the image shows a young woman having fallen asleep over the photocopier.[30] The implied banality and boredom of work appears to find its epitome in the photocopier, and by extension the creation of a seemingly endless cycle of paperwork. Having already highlighted the assumed gender structures within the workplace and the use of the photocopier it should not be surprising that the person in the image who appears to have fallen asleep over the machine is female. If the role of women in more traditional workplace power structures is implicitly believed to be one of support, carrying out more menial tasks, then it is not unsurprising that this image depicts a young woman undertaking such an

[28] Hillel Schwartz, *The Culture of the Copy: Striking Likenesses, Unreasonable Facsimiles* (New York: Zone Books, 1996), p. 226
[29] Ibid, p. 226
[30] 'Some of the World's Most Boring Jobs', BBC News, 2016 <http://www.bbc.co.uk/news/magazine-36902572> [accessed 17 August 2016].

apparently boring, and possibly menial, task; I will return to this image again later on in this thesis. These images depicting the photocopier, its use, and the visual culture associated with it, reflect, reinforce and shape the social assumptions, both historically and in the present day, culminating in the creation of complex, heterogeneous substance.

In the Context of History

The process of electrophotography, the manner by which the photocopier makes copies, was first invented by Chester Carlson in 1938; the first truly recognisable photocopier was created by the Haloid Corporation in 1959. The machine was intended as a labour saving device for the office, designed to facilitate the smooth and efficient running of the workplace through the clean and efficient creation of copies. But beyond its primary intended sphere of the office or workplace, the photocopier's role as a creator of paperwork situates the machine in a broader context within a Western culture that was preconditioned to require methods of efficiently reproducing copies. Both the requirements for copies and the creation of copy machines have a long history, something I will touch upon in Chapter 1, and the photocopier was just the latest in succession of reproductive devices. From the invention of the letter copying press in the mid-seventeenth century copying machines have become a fixture of many offices, going through many iterations and designs. But Chester Carlson's invention was radically different to any process that preceded it and

profoundly altered the culture it entered. David Owen, author of *Copies in Seconds: How a Lone Inventor and an Unknown Company Created the Biggest Communications Breakthrough Since Gutenberg - Chester Carlson and the Birth of the Xerox Machine*, writes that, 'the invention of the Xerox machine was an epochal event in the history of communication and, therefore, in the history of civilization. It gave ordinary people an extraordinary means of preserving and sharing information.'[31] Owen suggests that the photocopier, beyond the preserve of the office, of business or bureaucratic uses, offers the possibility of something more, a democratisation of a productive force, something that would allow anyone to copy and share information. He goes on to write that 'it placed the rapid exchange of complicated ideas within the reach of almost anyone – a potent and, indeed, subversive capability, whose reach and ease of use have been exceeded only relatively recently, by the world wide web and e-mail.'[32] This democratisation is something that I will return to throughout this thesis, particularly in connection with the subcultural uses of the device.

The photocopier was positioned primarily as an office machine, and would become predominantly perceptually tied to that sphere, a status that remained distinctly unchanged over the course of its history. Its function was initially intended to be the simplification and increased efficiency of the office and its daily routines. Its creation was such a stark departure from

[31] David Owen, *Copies in Seconds: How a Lone Inventor and an Unknown Company Created the Biggest Communications Breakthrough since Gutenberg - Chester Carlson and the Birth of the Xerox Machine* (New York, Simon Schuster, 2004), p. 13.
[32] Owen, p. 13.

earlier copying machines, such as the spirit duplicator, that it was hailed by one journalist in 1962 as a piece of 'space age technology.'[33] In another article from 1964 it was described as 'fast, easy,' and above all 'economical.'[34] These two articles highlight the tension embodied by the device as something both high-tech and at the same time involved in the mundanity of the everyday. The arrival of this contrary device would increase company efficiency, reduce the possibility of human error and most importantly, save money. In this same article from 1964 the author writes that by pushing a button a secretary, a role dominated by women, can make an 'exact copy of almost anything' noting that the machine required 'so little effort and skill that a company taught a chimpanzee to operate one,' before concluding that 'most important of all, stenographers are freed from time-consuming chores.'[35] Setting aside for a moment the degrading comparison between the skill set of a secretary and that of a chimpanzee, and the condescending description of a stenographer's work as 'chores,' we see implicit in these assertions the assumed connection between the photocopier and the office, which is demonstrated in Owen's book *Copies in Second* when he describes them as 'office copiers.'[36] In another newspaper article in *The Guardian* in 1966 columnist C. Northcote Parkinson writes that the photocopier,

[33] Ritchie Calder, "The Space Age Revolution Called Xerography." *The Guardian*, November 6, 1962, p.3.
[34] "The Xerography Boom Echoes Across Globe." *The Washington Post*, December 28, 1964.
[35] Ibid.
[36] Owen, p. 223.

> Offers a new way of cutting out delays in office procedures, cutting down the possibility of error [...] and consequently saving time by making re-checking unnecessary. Why tie up expensive office staff doing chores which can be handled much more quickly and efficiently by machines?[37]

As we can see from the poster for the Xerox 914 (fig 10) the setting for this first advert is the office, and in more contemporary images (fig 11) this office location is still assumed. Even in those instances when the photocopier is being used for less official purposes, demonstrated by the image of a man photocopying his face (fig 12), the office relationship is its principle association. Nearly twenty years after Northcote's article Andre Danzin could write the 1983 edition of *New Office Technology,* a publication of the Inter-Institutional Integrated Services Information Systems, that the photocopier was an indispensable piece of office technology.[38] Both Parkinson and Danzin, although writing nearly twenty years apart, demonstrate a presumed understanding of the photocopier's office connection.

Despite the general understanding of the photocopier's place and purpose, however, there are important differences between Calder's, Owen's, Parkinson's and Danzin's analyses of the photocopier. In Calder's 1962

[37] C. Northcote Parkinson, "Parkinson's Law of Delay", *The Guardian,* 21 September 1966, p. 11.
[38] Andre Danzin, 'The Nature of New Office Technology: Human and Orgnaizational Aspects', in *New Office Technology,* ed. by Harry J. Otway and Malcolm Peltu (London: Frances Pinter Publishers, 1983), p. 19.

newspaper article he may have described the photocopier as a piece of 'space age technology,' but he associated this futuristic device primarily with 'industry and commerce.' [39] By 1966 Parkinson narrowed the focus and seemed content to ascribe the photocopier's full influence to the office. By 1983 Danzin downplayed the photocopier's significance by claiming that the photocopier was unlikely to 'make fundamental changes in working conditions or human ways of thinking,' a claim he somewhat short-sightedly also made about the personal computer.[40] These three examples show, first, that the association between the photocopier and the office, well established by Haloid, underpinned much of the writing and thinking about the machine. But it also shows that in just over twenty years those same discussions about the photocopier could shift from considering it a futuristic, space-age technology, to something that had little impact even on those interacting with it in the office. On the other hand, in *Copies in Seconds,* Owen argues that 'the invention of the Xerox machine was an epochal event in the history of communication and, therefore, in the history of civilization.' [41] His contention is that the photocopier, even in 2004 when he was writing, should still be considered a momentous invention, not just for industry, commerce, or the office, but for civilisation more broadly. Calder, Parkinson, and Danzin seemed willing to restrict the photocopier's use to business or bureaucratic concerns, seemingly overlooking its use by frustrated office workers, disenchanted youths, or experimental artists. But Owen seems to argue for a much wider examination of the photocopier's

[39] Calder, p. 3.
[40] Danzin, p. 19.
[41] Owen, p. 13.

influence, even if he does not take on that task in himself. Disputing this singular association, and challenging the downplaying of the photocopier wider cultural influence will form the substantial part of this thesis.

The photocopier's historical significance crosses disciplinary boundaries, influencing a wide cross-section of Western culture, having a hand in shaping and affecting culture and individuals, both in connection to the office and beyond, enabling different areas of counterculture and subculture. It not only changed the life of Chester Carlson; it also changed the fortune of the Haloid company, which in the 1950s was a comparatively small enterprise overshadowed by the likes of Kodak and IBM. By 1967 its annual revenue had risen to in excess of $1 billon, and beyond the immediate effect on Haloid and Carlson the photocopier had created an entirely new market of duplicating machines, within nearly one hundred manufacturers of Xerographic devices, worth hundreds of millions of dollars.[42] By the time Danzin was writing in 1983 Haloid's profits had soared to $8 billion; thanks to the photocopier the now rebranded Xerox Corporation would eventually step out of the shadow of Kodak and was able to challenge the dominance of IBM, the company who had rejected Carlson's original idea.[43]

Running parallel to the success the photocopier brought to the world of business, however, it also (inadvertently) played a substantial role in

[42] "Earnings of Xerox Soar to New Highs", New York Times, 18 July 1962, p. 35.
[43] Danzin, p. 19.

facilitating the creation and advancement of numerous areas of Western cultural, countercultural and subcultural history. This includes being responsible for spawning what became known as Xerox or Photocopy Lore, a subset of folklore concerned with subversive office activity, and first discussed by folklorists in the 1970s.[44] This in-office activity is often an outlet for office workers, who use the photocopier as a means of giving voice to their frustrations and communicating something of themselves in a depersonalised space. But beyond the office, as early as 1968 the photocopier was being used by artists, particularly those conceptual artists who were interested in the democratisation and dematerialisation of the artwork and the exhibition space, as demonstrated in Sieglaub's *The Xerox Book*. In the 1970s, the photocopier also facilitated the creation of much DIY culture and helped the establishment and definition of distinct subcultural groups, including having a hand in shaping the legacy of the early British punk scene and, later, the American Riot Grrrl movement of the 1990s.[45] This DIY legacy, which sought to challenge mainstream culture and enunciate a message not supported by the discourse of the dominant mass media, carried on through the 1980s and into 1990s with social and political activist involved US-based gay rights and AIDS activism.[46] The photocopier is also still the basis of much current countercultural and

[44] Dundes and. Pagter.
[45] For more detailed analysis of this phenomenon, see;
Amy Spencer, *DIY: The Rise of Lo-Fi Culture* (Great Britain: Marion Boyers Publishing, 2008).
Jon Savage, *Punk: No One Is Innocent* (Nurnberg: Kunsthalle Wien, 2008).
Stephen Duncombe, *Zines: Notes from Underground and the Politics of Alternative Culture* (London: Verso, 1997).
[46] It is worth noting that George Soros, on setting up a foundation in Hungary in 1984 donated photocopiers to a number of activist groups in an attempt to break up the Communist Party's grip on the means of communication.

subcultural production: in 2014 the Library of Congress began the ongoing process of assembling an archive of materials collected from an Expo of independent and self-publishers held each year in Washington DC.[47] In this way the photocopier has had a hand in shaping cultures through its ability to facilitate the spread of communication, enabling a wider dialogue between individuals and promoting countercultural and subcultural ideas.

Xeroxlore

Beyond the immediate enabling of wider cultural dialogue, however, the photocopier has equally enriched our visual landscape through these same reproductive facilities. By means of its association with the office and the processes and routines of office practice, we are aware of the photocopier's role in the creation of paperwork and in the construction of a set of discourses associated with that site. But in that same environment the photocopier has, as I have already mentioned, been utilised by urban folklorists, creators of Xeroxlore (fig 13), who have employed the photocopier for the creation of objects that are a material response to experienced feelings of futility and frustration common to those employees whose output is often less tactile. These physical creations also act as methods of personalising depersonalised spaces and as visual responses to

[47] Small Press Expo collection. [Between 2000 and 2011], https://www.loc.gov/item/2011660357/

the banality of paid employment. In a similar way the visual materials created by the punk and Riot Grrrl movements (figs 14-15) often adumbrated similar feelings of frustration and dissatisfaction with their situation, enabling a diversification of cultural messages and aesthetic styles. In part due to the photocopier's own aesthetic quirks, coupled with its utilisation by each alternative community, the photocopier concurrently fostered and influenced the visual language of those same cultures, and has been subsequently responsible for the development of recognisable visual aesthetic. Equally the photocopier has facilitated much artistic output, including, as I have already discussed, being the inspiration for Seth Siegelaub's *The Xerox Book*. The photocopier underpinned the Copy Art and Electrographic art movements, was the primary medium for those involved in the long running *International Society of Copier Artists'* journal (fig 17), founded by artist Louise Nederland in 1981 and which ran for 21 years, and the Hungarian-based international art periodical *Árnyékkötők* (fig 18), which ran for twelve years from 1990 – 2002 and formed part of the wider Hungarian Electrographic Art Association. In just these few examples we see that the photocopier's influence and significance cannot be encapsulated by a discussion of just one of those culturally significant fields. The photocopier's impact is interdisciplinary and therefore this thesis will take that same course. Rather than focusing on just one of the areas in which the photocopier has played a role, this thesis will demonstrate how the photocopier has both helped shape and link multiple cultural domains and has in turn been become a complex substance.

Literature Review

There has been very little direct academic study or material written concerning the influence and uses of the photocopier in the visual arts. Barbara Rhodes and William Wells Steeter, authors of *Before Photocopying: The Art and History of Mechanical Copying 1780 – 1938*, believe this is in part due to,

> A tendency to view the technological advances of earlier times as quaint and perhaps a little silly, and often to forget them altogether as the novelties of the present occupy its attention. This is true especially of everyday items, such as the materials and equipment used for copying documents.[48]

Beyond the role of the photocopier in facilitating efficiency in the workplace the photocopier has offered individuals the opportunity to physically create, and for those who seek to challenge the dominant culture it offers the possibility of a situational alterity within a homogenised space. As Judy Wajman writes in *New Connections: Social Studies of Science and Technology and Studies of Work*,

[48] Barbara Rhodes and William Wells Steeter, *Before Photocopying: The Art and History of Mechanical Copying 1780 – 1938* (Delaware, Oak Knoll Press & Heraldry Bindery, 1999), p. 4.

> Technologies not only change the nature and meaning of jobs and work activities, but they also reconfigure relationships between people and the spaces they occupy.[49]

There has been little attention in the scholarly literature given to the role of the photocopier in the visual arts. As a device, as a medium, the photocopier has been largely overlooked. As I have previously highlighted, artists began exploring uses of the photocopier almost as soon as it entered the culture, and in the USA from the 1960s experimented with its productive facility. But even during those early days there was little academic interest in the photocopier and that inconsiderable interest has since waned considerably. Even Siegelaub himself seemed apathetic to the photocopier, he claims the photocopier is just for the 'exchange of information. That's all a Xerox is about. I mean, it's not even, you know, defined.'[50] Alexander Alberro writes that, 'whether or not an actual copying machine was used for the [*Xerox Book*] was irrelevant to [Siegelaub]; what mattered was the issue of what could transpire using technology.'[51] At the time of writing this thesis the only book currently in print that explores the photocopier as its primary focus and actively engages with it as an artistic tool is Kate Eichhorn's book, *Adjusted Margin: Xeroxgraphy, Art, and Activism in the Late Twentieth Century*, published in February 2016. Unsurprisingly, this thesis shares much of same bibliographical material as Eichhorn's book but they

[49] Judy Wajcman, "New Connections: Social Studies of Science and Technology and Studies of Work." *Work, Employment and Society* 20, no. 4 (2006), p. 773.
[50] Alexander Alberro, *Conceptual Art and the Politics of Publicity* (Massachusetts: Massachusetts Institute of Technology, 2003), p. 135.
[51] Alberro, p. 148.

differ in their intent. The concern of Eichhorn's book is the examining of adjusted margins, and the photocopier's ability to transgress borders, to redefine and reshape spaces, fostering new networks and communities, particularly in the context of those groups and individuals who exist in the 'margins'. This thesis on the other hand is concerned with redefining our understanding of the photocopier, reshaping our perception of the photocopier, and demonstrating its complex substance by examining its use as a tool for business, subculture, counterculture and the arts. The dearth of books, monographs or catalogues that have sought to assess the influence and effects of the photocopier on art and visual culture is similarly mirrored by the shortage of academic articles that cite the device as their primary focus, and few of those have concerned themselves with its corporate and economic origins.[52] The majority of those academic works that do discuss the photocopier at all predominantly allude to it in passing, cataloguing its use as an artistic medium, noting its use as a means to an end and little more.

[52] For examples see;
Frances Valesco and Suzanne Fried, 'Combining Color Xerography with the Techniques of Silkscreen and Intaglio', *Leonardo*, 17.1 (1984), 27–32 <https://doi.org/10.2307/1574854>.
Marisa Gonzalez, 'Copiers, Motion and Metamorphosis', *Leonardo*, 23.2/3 (1990), 295–300 <https://doi.org/10.2307/1578627>.
John A. Walker, 'Copy This! A Historical Perspective On the Use of the Photocopier in Art', *Plagiary: Cross-Disciplinary Studies in Plagiarism, Fabrication, and Falsification*, 2006 <http://hdl.handle.net/2027/spo.5240451.0001.003>.
R.W Gundlach and G.E Gundlach, 'Electrostatic Landscape', *Leonardo*, 23.2/3, 241–44.
Sonia Landy Sheridan, 'Generative Systems versus Copy Art: A Clarification of Terms and Ideas', *Leonardo*, 16.2 (1983), 103–8 <https://doi.org/10.2307/1574794>.
Sonia Landy Sheridan, 'Image Generation Survey: Electrostatics', *Leonardo*, 23.2/3 (1990), 251–53 <https://doi.org/10.2307/1578616>.
Sarah Jackson, 'Reflections Behind the Mirror: Copier Art as Metaphor', *Leonardo*, 28.4 (1995), 245–46.

Although there has been little academic interest in the photocopier as an artistic tool, there is one feature of much of that limited discourse that stands out, and that is the attempt made to shed it of its administrative roots. Christian Rigal, author and president of the International of Electrography and Copy Art biennial demonstrates this in his writings for the exhibition catalogue of the 1988 *Bienal Internacional: Electrografie Y Copy Art*. His writings demonstrate a desire to downplay the primary significance of the photocopier as he describes the artistic practice of diverting the machine. He writes that, 'eight years ago I had defined electrography as the diverting of the copying machine from its primary function in order to create original works of art.'[53] He implicitly acknowledges the photocopier's primary function as a copying machine, as something that makes copies, but argues that the artist changes that function, and repurposes it to become creative rather than reproductive. He goes on to write that 'electrography', the process of copying and reproducing using electrostatics, 'has to do with creation as opposed to reproduction: it is, in fact, the very antithesis of the copy.'[54] He attempts to strongly disassociate the photocopier from its designation as a copying machine, and as a producer of copies.

> Nevertheless, some electrographers have been misled by their tool being a copier and their art having been mislabelled as copy art into thinking that they produced copies when actually they created original works. As a result, they felt the need, at

[53] Christian Rigal, *2 Bienal Internacional: Electrografie y Copy Art* (Valencia: Universidad Politecnica Valencia, 1988), p. 13.
[54] Ibid, p. 10.

> times, to publish statements or essays that tried, by semantic acrobatics, to defend the conjectural value of the copy as a purported artform. Such attempts proved not only futile but unnecessary as, once again, in electrography the copier is not used to make copies.[55]

In this way Rigal makes an attempt to simplify our perception of the photocopier, claiming that once it has been 'diverted,' or repurposed that it no longer creates copies, but is now the creator of originals. I would argue that this approach does a disservice to the device that Rigal is so obviously passionate about, and oversimplifies our understanding of the subsequent artworks for which it is responsible. Rigal even goes some way to acknowledging this when he seeks to account for the photocopier's technical and aesthetic qualities. He writes that

> Any technological tool…will contribute its characteristic noise. The elaboration of an organised language […] a language which will demand […] a necessary symbioses between the characteristics of the tool used and particular [artistic] conception.[56]

He seeks to factor in the aesthetic ticks and the visual quirks that result from the technical function of the photocopier, yet in his attempt to disassociate

[55] Rigal, p. 11.
[56] Ibid, p. 15.

the photocopier from its roots he undermines the possible and ongoing readings of subsequent artworks as those quirks are used and read by the viewer. A fuller, more nuanced understanding of these works will only be possible when all aspects of the device and its history are taken into account.

Because of these perceived failings to read the photocopier as a complex cross-disciplinary substance, my intention in this thesis is to argue for an interdisciplinary analysis of the device, one that draws on histories of art and visual culture and histories of technology to inform each other. R L. Rutsky, in *High Tech: Art and Technology from the Machine Aesthetic to the Posthuman*, argues that technology is 'not a static conceptual category or ideal, but a dynamic, on-going process or movement.'[57] Any consideration of the photocopier that fails to deal with machine's role in each of its cultural settings will therefore result in an incomplete picture and inaccurate understanding of the machine and its role in society. A reading of the corporate role of the photocopier, of its influence on labour or economics, that does not also consider its personal influence upon the individual will lack any real understanding of the individual experience of the workplace. Maybe most interesting in this context is the relationship between the corporate realm and the practice of folklore. Folklore, or Xeroxlore. The term Xeroxlore was first used by Michael J. Preston in his essay *Xerox-lore* which appeared in *Keystone Folklore*, a publication of the

[57] R L Rutsky, *High Tech: Art and Technology from the Machine Aesthetic to the Posthuman*. (Minneapolis: University of Minnesota Press, 1999), p. 6.

Pennsylvania Folklore Society in 1974. Xeroxlore is a subset of folklore concerned with the creation of often, humorous material by those working in an office, using the photocopier as the means of production. In *Photocopy Lore and the Naturalization of the Corporate Body,* author Danielle Roemer describes Xeroxlore as a 'folkloric mode of cultural production alternative to and subversive of that produced by official corporate culture.'[58] Xeroxlore has not sought to deracinate the photocopier, but has endeavoured to engage with the photocopier on its own terms and within the location with which it has primarily been associated: the office. In this way Xeroxlore has sought to understand the photocopier's influence or role in enabling the individual, not in terms of their corporate or bureaucratic worth, but as individuals expressing their identity and attempting to personalise depersonalised working environments. Widening the discourse surrounding the photocopier in order to include a more nuanced discussion about individual experience will lead us, rightly, to a discussion of the role of the photocopier in counterculture and subculture, both fields of study that explore the role and importance of individual expression, a means of communication, and individual identity.

[58] Danielle M. Roemer, 'Photocopy Lore and the Naturalization of the Corporate Body', *The Journal of American Folklore*, 107.423 (1994), p. 121.

Methodological Approach

As I have highlighted, the photocopier has received scant scrutiny from the perspective of the visual arts. In order to address this lack, my research aims to reconnect our understanding of the corporate and economic history of the photocopier to our understanding of its visual output. Walter Benjamin argued that 'every idea contains an image of the whole world.'[59] This thesis will follow this line of thinking, examining the inception and corporate legacy of the photocopier, before then engaging with Xeroxlore, counterculture, and then art history, engaging with an interdisciplinary network of critical voices to build a more complete picture. This thesis, while predominantly a visual cultural study, will draw heavily from Science Studies and its use of Actor-Network Theory (ANT), as advocated by Bruno Latour, in particularly his ideas about substances, which I will discuss in more detail in the next section. ANT treats objects as components of social networks, believing that objects are not passive but are parts in a complex pattern of influence and interaction. To paraphrase Latour, the only reasonable, realistic way for us to speak about the visual arts is to reconnect through as many relations and vessels as possible.[60]

Latour's work will form the basis for my discussion about the nature of the photocopier as a substance, and, I will argue, as a substance it demonstrates that our singularly simplistic view of the photocopier is inadequate. Latour explains that 'we are sociotechnical animals, and each human interaction is

[59] Walter Benjamin, *The Origin of German Tragic Drama* (New York, Verso, 1998), p. 48.
[60] Latour, *Pandora's Hope*, p. 97.

sociotechnical.'[61] The prevalence of technology, electronic, mechanical, or hand-cranked, is pervasive, and so Latour claims that, 'we are never limited to social ties. We are never faced only with objects,' we are confronted with both their use by individuals and their history, construction and purpose.[62] Latour, like Heidegger, believes that the mediation of the individual is key. Latour puts 'humanity right where we belong – in the crossover, the central column, the articulation, the possibility of mediating between mediators.'[63] It is humanity's facilitative powers that enable this mediation between mediators, whereby technology's function is arbitrated by the consideration of its operator. Latour's model implies that the use of a machine, in this case one which seems to be securely part of the office and economic realm, will never be simply dominated by corporate aims, but must be mediated by its user. According to Latour, however, the mediation of technology by the individual is only part of the whole. In truth, it is this falsely simplistic reading of technology and its existence that forms the central part of his argument. Latour's endeavours are aimed at attempting to stop this 'downward spiral,' of 'abandoning science to its destiny by limiting it to human intention.'[64] He presents a much more chaotic, tumultuous picture, but one with far greater honesty about the complexity of the historical and relational processes involved in scientific and cultural development. He expresses his hope that we might be able to 'retrace our steps, retaining both the history of humans' involvement in the making of scientific facts and the

[61] Latour, p. 214.
[62] Ibid, p. 214.
[63] Ibid.
[64] Ibid, p. 10.

sciences' involvement in the making of human history.'[65] The true significance of his claim lies in his case study of Pasteur. In Pasteur's experiments in the fermentation of lactic acid yeast cultures, Latour claims that the object becomes 'more than the sum of its parts.'[66] This substance, the sum of its parts is not defined solely within the confines of the laboratory and is not, as Latour says 'impervious to history,' but 'gathers together a multiplicity of agents into a stable and coherent whole;' the person of Pasteur included in those agents.[67] In describing the construction of a speed bump Latour says that,

> The speed bump is ultimately not made of matter; it is full of engineers and chancellors and lawmakers, commingling their wills and their story lines with those of gravel, concrete, point, and standard calculations.[68]

The development, construction and use of any object is the confluence of social, historical, political, and scientific factors which are themselves part of wider cultural and historical factors. This concept of a substance, a gathering of historical, social, and a multiplicity of other agents is best described, so claims Latour, as an 'institution.'[69] His description of a substance-institution is significant because its flexibility allows an operation well beyond the confines of Latour's own area of study. This hypothesis can

[65] Latour, p. 10.
[66] Ibid, p. 190
[67] Ibid.
[68] Ibid.
[69] Ibid, p. 151

easily be applied to any 'institution,' with obvious implications for our analysis of the photocopier, and bypasses simplistic discussions and explanations of the object under investigation.

Drawing upon Latour's work and others I have settled upon a definition of an institution as an object or entity that is socially identifiable, which has a discernible social significance that goes beyond its immediate physical or material presence, and exists independently of those individuals who recognise its status. As Howard Kaplin writes in *The Concept of Institution: A Review, Evaluation, and Suggested Research Procedure*, 'the institution has continuity over time although specific manifestations of the institution may be ephemeral.'[70] He gives as an example the idea of a 'specific corporation' that 'may cease to operate but the corporation continues as an institution.'[71] An institution is a socially recognised status, framed by interdependent relationships within a social system and significant within a particular social sphere; it is important to note that social systems are not fixed, meaning that an institution is not fixed. I am at no point arguing for or advocating the idea of a universal institution, socially fixed and recognised by all. Because an institution is socially recognised then it is not an obdurate absolute; one social group may recognise or have institutionalised something, but to another group that 'thing' is meaningless. For those old enough or well versed in the history of computer games the arcade game Space Invaders will hold a special significance for them, but for those less

[70] Howard B. Kaplan, 'The Concept of Institution: A Review, Evaluation, and Suggested Research Procedure', *Social Forces*, 39.2 (1960), p. 179.
[71] Kaplan, p. 179.

well versed the mention of this early example of a computer game may well be meaningless. For Liverpool Football Club supporters, the Kop end has become an Anfield institution; to those whose interest in football is less fervent the Kop will probably hold little to no meaning. To paraphrase Trevor Pinch in *Technology and Institutions: Living in a Material World*, the construction of something's meaning is acquired within social groups; this social meaning is the foundation upon which an institution is built, meaning that 'institutions themselves are made from things as well as people.'[72]

What is significant about Latour's claims for the substance is that he applies the characteristics of a substance not just to the yeast but to Pasteur also. In his study of Pasteur's experiments and the construction of the yeast culture as an 'institution', Latour points out that 'in the course of the experiment Pasteur and the ferment mutually exchange and enhance their properties.' As Pasteur's experiments show the factuality of this particular yeast culture, we also see 'the ferment "helping" Pasteur win one of his many medals.'[73] For Latour the experiment is 'an event and not a discovery,' it is not a one-way discourse, but one in which both science and 'Pasteur [are] also modified and grow through the experiment.'[74] This assessment is a significant step away from Marx's view of technology as either master or servant, and presents us with a situation where both subject and object,

[72] Trevor Pinch, 'Technology and Institutions: Living in a Material World', *Theory and Society*, 37.5 (2008), p. 479.
[73] Latour, p. 124
[74] Ibid. p. 126

human and machine, are subject to the influence of the other. Using the example of a firearm, Latour insists that,

> You are different with a gun in your hand; the gun is different with you holding it. You are another subject because you hold a gun; the gun is another object because it has entered into relationship with you.[75]

While I will be drawing heavily upon Latour's notion of the substance as the primary means by which I will discuss the historical and social factors that brought about the creation of the photocopier and its continued use, where this thesis will differ from Latour is in its approach to the examination of the substance beyond its formation. Latour writes that a substance is

> A thing with clear limits, with a name, with obduracy, which was more than the sum of its parts. The word "substance" does not designate what "remains beneath," impervious to history, but what gathers together a multiplicity of agents into a stable and coherent whole.[76]

It is here that I disagree with Latour. He seems to suggest that once a number of factors have come together that a substance is finished, a complete and unchanging institution. I would argue that a substance is not a stable, obdurate, thing but is rather always open to the possibility of change

[75] Latour, p. 179
[76] Ibid, p. 151.

and re-evaluation. I will argue that the photocopier is an ongoing event, one that changes with the changing perceptions and uses it is put to. In this sense I am adopting Heidegger's position, which, according to Kochan, is that we ought to 'disclose and describe the essence of technology' and continually 'question it.'[77] The point at which Latour deviates from this is his position on the mediation of technology. Both Heidegger and Latour are seeking to answer the question, how do artefacts, 'once introduced, affect and inform our actions and experiences in the world.'[78] Here Heidegger is concerned with its technology's 'critical deconstruction.'[79] According to Kochan he,

> Seeks not only to disclose and describe the essence of technology, but also to question it. For him, the attainment of a free relation to technology is possible only once the essence of technology becomes an object of critical scrutiny.[80]

Here is where Latour deviates from Heidegger, and the approach of this thesis. Latour aims to distinguish between mediation and purification; the scientific distinction between subject and object. His intent is that 'mediation, as the processural essence of technology, might then be slowed

[77] Jeff Kochan, 'Latour's Heidegger', *Social Studies of Science*, 40.4 (2010), p. 584.
[78] Kochan, p. 583.
[79] Ibid, p. 584
[80] Ibid.

down and better regulated rather than subjected to critical deconstruction.'[81] For Latour the moment of mediation is the point where the human and nonhuman intersect and a third agent appears, rather than a change or development of the technology's substance. Using the example he gives of the person using a gun, the mediation between the two bring into being a third actor, the 'the citizen weapon' or 'the weapon-citizen.'[82] According to Riis Soren, author of *The Symmetry between Bruno Latour and Martin Heidegger: The Technique of Turning a Police Officer into a Speed Bump*, Latour 'holds that it is only within a field of interference between 'humans' and 'non-humans' that life unfolds in relation to technology.'[83] My claim throughout this thesis will be that the photocopier is a complex substance made up of a host of historical, scientific, social and individual perceptions. I would argue that its substance is not fixed, but is rather open to constant change. Therefore, to phrase this in terms of the field of visual culture, the defining field of this study for this thesis, and to paraphrase Arthur Danto, we can work out new theories for the photocopier and the visual arts as we employ what we need of the other theories and disciplines, and combine those together with new ideas.[84]

The resources I have sought to include in the discussion of this thesis are therefore varied, covering different academic disciplines including art

[81] Soren Riis, 'The Symmetry between Bruno Latour and Martin Heidegger: The Technique of Turning a Police Officer into a Speed Bump', *Social Studies of Science*, 38.2 (2008), p. 286.
[82] Riis, p. 286.
[83] Ibid, p. 286.
[84] Arthur Danto, 'The Artworld', *The Journal of Philosophy*, 61.19 (1964), p. 573.

history, business studies, cultural studies, science studies, and visual culture. I was fortunate, due to an Arts and Humanities Research Council Fellowship award, to be able to spend six months in the United States at the Library of Congress, and was therefore able to undertake archival research without which this thesis would have been significantly poorer. I was also able to visit the University of Iowa who currently hold the collections of copy artist and founder of the International Society of Copier Artists, Louise Neaderland. In both cases the material that I was able to gather, which included artworks, exhibition catalogues, and subcultural artefacts such as zines, were invaluable to this thesis. both as primary sources and as objects of study. But even with these additions the quantity of written material directly related to the photocopier is sparse, because, as I have already argued and will argue throughout, we tend to forget earlier technological advances, and the photocopier's perception as banal office technology reinforces that tendency. Therefore, the contextual material upon which this study of the photocopier is based will function as a material-semiotic study covering a broad range of academic fields.

Chapter Outlines

This thesis will be divided in to four chapters, each of which will demonstrate a different aspect of the photocopier's influence upon contemporary western culture. My aim is to demonstrate that each of those seemingly separate spheres are actually connected, affecting perceptions,

practices and understanding. This cross-disciplinary engagement is vital if we are to construct a truly representative picture of the photocopier, one which will help us understand the machine, its influence upon the society, and its visual legacy. Throughout I will reject a view of the photocopier that holds to its neutrality and passivity, and will argue for an understanding of the photocopier that demonstrates both its societal construction, and its influence upon the construction of our society. To do justice to the photocopier as a complex technology we must, as David Kaplin writes,

> Take a broad view of things that [will] show how technologies are inextricably bound to human interests, social practices, natural laws, and a very long list of other constitutive factors. Humanity and technology are situated in a circular relationship, each shaping and affecting the other.[85]

In *Chapter One: Electrophotography and Xerox* I will chart the history of copying machines in the west and our western notion of the copy before discussing Chester Carlson's invention of electrophotography in 1938. I will discuss capitalism's dependence upon technological reproduction. This will lead to a consideration of the photocopier's eventual creation, the resulting impact upon the growth and direction of the Haloid Corporation, and the establishment of a capitalist market for electrophotographic devices. I will argue, first, that the history and understanding of copying machines is the

[85] *Readings in the Philosophy of Technology*, ed. by David M. Kaplan (Lanham: Rowman & Littlefield Publishers, Inc, 2004), p. xv.

first facet of the photocopier's substance, in the sense that each copying machine prior to the photocopier has altered our cultural perception of copying and copying machines, and therefore established a foundation for our understanding of the photocopier. I will argue that it does not stand separate from history, but is rather part of a system of values, and exists within an historical framework that expresses the changes that have taken place in the perception and employment of mechanical methods of reproduction. Second, I will propose that we must establish an understanding of the Haloid Corporation as a capitalistic enterprise with the more specific purpose of broadening the historical and theoretical framework for our understanding of the photocopier as a product of capitalism. In this way I will contend that the photocopier and our perception of it, and its substance, must firstly be informed by our conscious and subconscious awareness of it as a product of capitalism. I will assert that this awareness not only affects our perception of the photocopier, but will also influence our perception of the materials it creates. If we fail to examine the corporate associations and beginnings of the photocopier we will miss much of the significance and subtext associated with its use in areas of our culture which fall outside the scope of the office.

In *Chapter Two: The Office*, I will apply a Marxian interpretation of capitalism, its use of technological mass production, and its effects upon labour and the individual, to analyse in brief the historical development of

the office, visual depictions of it, our perception of office work, and its use of labour-saving machines. This final section of this chapter will examine a use of the photocopier that challenges the dominant cultural perception of it as a functionally banal, corporate, technology: Xeroxlore, which is the visual practice of office-based urban folklorists who utilise the photocopier in the production of visual materials. In focusing on the office I will argue that, although our initial understanding of the photocopier is as a product of capitalism, its primary association is the office. Throughout the twentieth century America became increasingly industrialised and the quantity of administrative work increased.[86] In this way the office came to represent both the direction of American capitalism and a significant proportion of American workers. In this setting office machines, and the pattern of office work would increasingly come to mimic the factory, and the photocopier would appear to encapsulate both a producer and device. In terms of its associated location and functionality I will argue that the photocopier, bound by these points of reference, would come to be tarnished by association to the banality of necessary employment, and subsequently become the primary western perception of the machine. Furthermore, from the perception of the individual forced to operate in a space that is not their own, I will argue that through Xeroxlore, which appropriated the photocopier, the individual is able to relieve the strain of their incorporated existence. Xeroxlore offers the individual the possibility of regaining something of their individuality through a form of urban protest. I will argue

[86] For a detailed discussion of see: Harry Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth* Century (New York: Monthly Review Press, 1998).

that the photocopier allows the individual to momentarily create a physical, visual object, an individualistic reassertion amidst corporate control. These visual creations can be seen as challenges or protests against the corporate environment, and through *détournement* the photocopier is diverted from its primary intended purpose to become a tool of protest. I will argue that the photocopier, as the foundation for this subversive activity, adds to its substance, becoming more complex, and so forcing us to re-evaluate our perception of it.

In *Chapter Three: Debord, the Spectacular, and the Spectacular Subverted*, I will continue that examination of the alternative uses of the photocopier via the examples of the 1970s British punk movement and the 1990s Riot Grrrl movement in America; both movements, though over twenty years apart, appropriated the photocopier from its primary intended purpose, and with it created a recognisable aesthetic that aided in the fostering of their subcultural communities. I will begin the chapter by discussing Debord's ideas concerning the spectacle, its use of commodities, and the influence of mass media. I will then examine the subversive roots of subculture, before focusing more closely on uses of the photocopier at the hands of both punk and Riot Grrrl. I will firstly add to my previous argument, using Debord's theory of the spectacle, that the capitalist system is ultimately self-referential, facilitating its own existence, and that at the core of this system is the commodity, an important consideration for both capitalists and

Marxists. I will discuss how our perception of the commodity will influence our opinion of the photocopier, establishing another aspect of the photocopier's substance, and will examine how the photocopier is both a product of, and facilitator of the spectacle. This will be an important foundation to establish before I discuss the place the photocopier occupies within subculture as both a commodity and creator of commodities. As I will have already outlined in Chapter Two's section on Xeroxlore, I will then discuss how, in the midst of this system, the photocopier can become an instrument of production for the individual in the midst of the spectacular system. A singularly corporate review of the photocopier will miss its multifaceted nature, but I will argue that the use of the photocopier by subcultural communities has facilitated the growth of subcultures and the creation of a recognisable subcultural aesthetic. In this way I will argue that the photocopier, and the individual's use of it, both acts as a critique of, and seeks to subvert, spectacular cultural system of power, access, and morality. Through *détournement* the use of the photocopier for purposes other than those perceived to be its primary purpose demonstrate that the photocopier can represent different things to different sections of the society. I will argue that it is conditionally different depending upon the situation of the individual.

In *Chapter Four: Art and the Machine,* I will conclude the thesis by examining McLuhan's idea of our media environment and the photocopier's

place in it, our cultural institutionalisation and beliefs concerning art, and both art and the photocopier's nature as Latourian substances. I will then discuss Benjamin's notion of the aura of art, the centrality of artistic intention, before examining the alternative perspective of the use of the photocopier in art in Electrography and Copy Art. I will argue in this chapter, as I have throughout, that the individual's interaction with the photocopier is not passive, but a complex system of exchange and interchange. I will continue to demonstrate that it is in the interaction between the machine and the individual that the heterogeneous nature of the photocopier can be most clearly seen. Using McLuhan and his discussion of environment I will argue that the complex interchange between individuals mediated by machines is not passive, and that the mediation of the photocopier is not without agency. As McLuhan wrote, I will argue that our environment, media, and in this instance the photocopier alters the way we think. I will argue that this is why any examination of the photocopier must be more than a one-dimensional reading of the technology. The photocopier has imprinted itself upon the individual and upon the wider western culture; the photocopier is not functionally passive.

I will then argue that the institution of art acts as both a facet of the spectacle, as a mediator or facilitator of tradition, but that it can offer the power to critique the spectacular system. I will argue that art, like the photocopier, is a complex unity, not just comprising its own parts and artistic intentions, but also broader cultural perceptions and traditions. It is

within this framework that I will then argue for a more complex understanding of the photocopier when used as a tool of artistic creation. I will argue that the photocopier and the artwork exchange influences, they both have an agency that affects the other. Any time it is used as an artistic tool it will by necessity imbue that work with a set of preconceived cultural perceptions. In this way, our perception of the aesthetic nature of the artwork will be both cultural and personal, intertwining the perspective of the culture, the author and the viewer. I will argue that the use of the photocopier as a means of artistic production will communicate a host of references that may have little to do with the institutional nature of our understanding of art and more to do with the individual's experience of work and employment.

A more interdisciplinary examination of the photocopier, which takes into consideration those multiple cultural reference points, such as the office, and the individual user's experience, will not only help us understand its complex nature, but will also allow us to engage with its influence more fully. If we fail to engage with the perception of the photocopier as a tool of capitalistic employment then we will misunderstand its appropriation and repurposing as a tool of subcultural enabling. Equally if we do not acknowledge the photocopier's use by those artists who have sought to engage with the photocopier's creative function then our understanding of those artworks will be lacking. In engaging with the photocopier in this way, through the host of different references and relationships, my aim is in

part to argue for a more connected study of art history and visual culture, to paraphrase Arthur Danto, create a new theory, which is worked out by borrowing what it can of the old theory's competence, and combine it together with other facts, which may reveal us to ourselves as well as anything might.[87]

[87] Danto, p. 572.

Chapter One:

Electrophotography and Xerox

Section 1 - Beginnings

Part One: Before Electrophotography

One of the consequences of the cultural saturation of a technology is often the cultural relegation or depreciation of the objects that preceded them. In *Before Photocopying,* Barbara Rhodes and William Wells Steeter write that,

> every age has a tendency to view the technological advances of earlier times as quaint and perhaps a little silly, and often to forget them altogether as the novelties of the present occupy its attention.[1]

A view that perceives older technologies as passé can, argue Rhodes and Steeter, also result in the subsequent devaluing of those technologies and their cultural importance. This tendency to excise the memory of earlier technologies risks detaching us from the impact those objects have had on the conscious and subconscious attitudes and actions of our society. In *Materiality: an Introduction*, the author Daniel Miller writes that,

[1] Rhodes and Steeter, p. 4.

> the surprising conclusion is that objects are important not because they are evident and physically constrain or enable, but often precisely because we do not see them. The less we are aware of them, the more powerfully they can determine our behaviour, without being open to challenge.[2]

According to Miller, objects that have become obscured and seemingly inconsequential can still have a powerful influence upon our perceptions and behaviour; to paraphrase Miller, we both produce material culture and are the products of it.[3] The material culture that surrounds us, claims Miller, shapes and alters our actions and attitudes in ways we may be unaware of. He argues that 'where material forms have consequences for people that are autonomous from human agency, they may be said to possess the agency that causes those effects.'[4] He gives the example of a computer crashing, or a car breaking down, I might add to that list a photocopier jamming, or adding marks to the copied page.[5] By applying Miller's argument to a technological device such as the photocopier we can infer that these objects are not just mechanisms we use, things we employ to facilitate our daily routines, but that they may have a measure of agency in shaping our patterns of thought and practice as we interact with them. This corresponds to the claims that I raised in the introduction made by Bruno Latour concerning

[2] Daniel Miller, 'Introduction', in *Materiality* (Durham: Duke University Press, 2005), p. 5.
[3] Ibid, p. 9.
[4] Ibid, p. 11.
[5] Ibid.
Miller makes an important distinction at this point, that while he is willing to ascribe agency to something such as the photocopier he refrains from going one step further and naming them agents; he does not infer intentionality.

the agency of a substance and forms a central tenet of this thesis. My argument throughout will be that technology, specifically the photocopier, has agency, that it is and has been as Miller claims a determiner of our behaviour and identity.[6]

In light of the claims made by Miller and Latour I would argue that historical developments in printing and copying technologies have causally fostered behaviours and expectancies that have contributed to an environment more predisposed to the creation and cultural saturation of the photocopier. This first section will be given over to a brief historical overview of the advances in reproductive technologies, arguing that their social acceptance has helped shape both consciously and subconsciously the attitudes of the culture and cultivated an environment receptive to the possibility of the photocopier. At this point I would also argue that these historical developments in printing and copying machines and their influence upon Western culture also function as the first facet of the photocopier's substance. When describing a substance, Latour writes that,

> the word "substance" does not designate what "remains beneath," impervious to history, but what gathers together a multiplicity of agents into a stable and coherent whole. A substance is more like the thread that holds the pearls of a

[6] Miller, p. 11.

> necklace together than the rock bed that remains the same no matter what is built on it.[7]

I would argue in as much as the scope of this thesis will allow that the history of printing and copying technologies is one aspect of the substance of the photocopier. The photocopier does not exist as an isolated unit, an unconnected moment free from the trends and developments of history, but is, as Latour might argue, 'a thread that hold the pearls of a necklace together.'[8] Similarly, because the photocopier is the result of advances made in reproductive technologies I would also argue that it has an agency of its own, added to that history, further reinforcing already established conditions for its existence, and adding to the likelihood of future advances in copying and reproductive technology.

The photocopier's development took place during a period when copying already occupied an important place in Western culture. The role of copying and of the copy was a well-established concept long before the photocopier, and even before the invention of the first true mechanical methods of reproduction. As the author of *Copies in Seconds* David Owen writes 'the first office copiers, [were] as is well known, monks.'[9] Early copies were the results of the painstaking labours of scribes and monks methodically copying material by hand. This monastic monopoly, one particularly concerned with the production of books, 'stretched from the beginning of

[7] Latour, p. 151.
[8] Ibid, p. 151.
[9] Owen, p. 9.

the sixth century to the end of the twelfth,' a period of seven hundred years where manuscripts were meticulously copied by hand for the select few who could afford such luxuries.[10] The longevity of this endeavour speaks to something of the western cultural importance of the practice and the value placed upon the items created. This custom continued well beyond the twelfth century by which time monasteries were not the only source of copied material. The growth in population in European cities, and the creation and expansion of the middle classes was bound up with the developments in industrial technologies, technologies that also bought greater wealth to those self-same people. This new class demanded an education which in turn led to the rise of the European university.

> Evolving in many cases from urban schools, schools at Bologna, Paris, and Oxford achieved university status in the last half of the twelfth century, as did schools at Cambridge, Montpellier, Toulouse, Angers, Padua, Naples, Salamanca, and Valladolid in the first third of the thirteenth.'[11]

The demand for educational materials required not only by the students but also by the professors saw the universities themselves becoming sources for the copied material they demanded. Many universities established 'guilds of stationers, under the control of the universities […] they would […] provide and sell books copied from "exemplars," master copies that had to be

[10] Frederick G. Kilgour, *Evolution of the Book* (USA, Oxford University Press, 1998), p. 69.
[11] Kilgour, p. 74.

approved by the faculty, who also controlled prices.'[12] A by-product of this rise in demand for books and other written materials resulted in what is possibly the first example of 'non-mechanised mass production with interchangeable parts.'[13] Quires were sent out to copyists and illustrators and assembled, the standardised nature of quires meant that any quire could fit into any copy of a book.[14] During the thirteenth and fourteenth centuries this increasing demand for educational material meant that hundreds of new previously unknown books 'became available and were rapidly circulated to the universities, dramatically increasing the demand for ever more copying.'[15]

I stated at the outset of this thesis that the photocopier exists because of a largely preconditioned Western cultural environment, one increasingly accustomed to efficient methods of reproduction. It is not surprising then that with the increasing demand for more educational material during the thirteenth and fourteenth centuries, with the rise in levels of education, and with an increasing cultural awareness of the possibility of printed and copied material, that the first significant example of a Western printing press was created in the 1400s. Although the copying and distribution of books was an ever-growing trend, the development of the printing press was still an epochal moment, and with it came the re-evaluation of the copy. Written works were no longer restricted to laboriously hand copied items

[12] Kilgour, p. 74.
[13] Ibid.
[14] Ibid.
[15] Ibid.

but could now be reproduced in their hundreds, if not thousands. The printing press, although dissimilar to later methods of appropriative copying, can be considered the first mechanical method of producing copies whose technology achieved an almost universal Western cultural saturation.[16] The printing press changed very little in the period between its creation and the industrial revolution, and in those three and a half centuries it developed a complicated cultural identity, to quote writer Gabriel Harvey, 'the presse, the most-honorable presse, the most-villainous presse.'[17] It found favour with the establishment and agitators alike, was both vilified and lionised, demonised as a dangerously revolutionary device, and lauded as God's gift. The impact of the printing press on Western culture has been endlessly debated, and has seen an ocean of ink spent in the construction of its history. Elizabeth Eisenstein's book *Divine Art, Infernal Machine: The Reception of Printing in the West From First Impressions to the Sense of an Ending* is a superb treatise on the influence and history of the printing press and does not require wholesale replication in these pages. To encapsulate its influence before I move on I will paraphrase Eisenstein: the printing press altered the conduct of nations and altered the perceptions of its citizens.[18]

The next significant development in copying technology, and one that further established our Western cultural reliance upon copying machines, was the invention of the letterpress copier in the mid-1700s. In 1750

[16] Elizabeth L. Eisenstein, *Divine Art, Infernal Machine: The Reception of Printing in the West from First Impressions to the Sense of an Ending* (Philadelphia, University of Philadelphia Press, 2011), p. 15.
[17] Ibid, p. 1.
[18] Ibid, p. 99.

'inventor James Watt obtained a British patent for letter copying presses,' a technology that became ubiquitous throughout the 1800s and was still being used as a means of copying documents into the early twentieth century. [19] (fig 19). The process of creating a copy using a letterpress copier required the letter or document to be written using special water-soluble ink. The letter was positioned beneath a dampened sheet of tissue paper and inserted between two oiled sheets and placed into a copybook. The book was then placed between the two metal or wooden plates that were hand cranked to achieve the sufficient pressure necessary to transfer the ink from the letter to the dampened tissue. The quality of the copies and the limited numbers that could be made were two of the biggest detractions of this method of printing, and it was not until aniline inks were introduced that the number of copies that could be made and the quality of those copies improved.[20] Another significant issue with the press was that it was only possible to make copies for 24 hours following the creation of the original. Although the quality of the letterpress copier left much to be desired, the ability to make multiple copies on a small scale without the financial investment needed to run a printing press meant that the letterpress became common in workplaces and offices.[21] The practice of letterpress copying grew throughout the early decades of the nineteenth century, until advances in

[19] 'Antique Copying Machines', Early Office Museum, 2000 <http://www.officemuseum.com/copy_machines.html> [accessed 24 February 2015] Ian Batterham, *The Office Copying Revolution: History, Identification and Preservation* (Australia, National Archive of Australia, 2008), p. 5.
[20] 'Antique Copying Machines', Early Office Museum, 2000 <http://www.officemuseum.com/copy_machines.html> [accessed 24 February 2015]
[21] Another significant aspect of the device was that each part of the correspondence could now be retained, a ground-breaking business practice, but also notable as part of the growth of paperwork and significant for the role of the office clerk.

chemistry and manufacturing processes, coupled with the growth of commerce, transportation, and government bureaucracy made its use practically ubiquitous.[22]

Several significant practical and perceptual shifts took place with the invention and widespread acceptance of the letterpress and are worth briefly highlighting here as they set precedents for almost all office copying machines. First, the letterpress was a comparatively affordable technique for copying compared to the cost of establishing a printing press. Second, this relative affordability and its comparatively small size meant that it existed in greater numbers than the printing press and could become a fixture of office and work environments. Third, it would also become the first widely used method of mechanical reproduction to appropriate a complete image rather than the using the s/t/r/o/k/e/-/b/y/-/s/t/r/o/k/e re-enactment employed by the printing press, requiring a much lower skill set. Each one of these changes altered Western cultural perception of machine made copies and mechanical methods of copying, particularly in the realm of business. The letter copying press's affordability, size, and widespread use exposed increasing numbers of people to the idea of mechanical copying as a plausible method of creating copies. One writer in an edition of *Scientific America* from 1890, more than one hundred years after Watt invented the letter copying press, wrote that 'no one could attempt to estimate the value to the world of this

[22] Rhodes and Steeter, p. 7.

single invention.'[23] I am aware that the letterpress and the printing press were used to fabricate significantly different items, but it is important to consider nonetheless how the function of creating copies was becoming an increasingly commonplace idea. I would also note that I have devoted much less space to these epochal technologies than they might warrant, but while I could spend the bulk of this thesis giving a fuller account of these developments and their influence that is not the purpose of this thesis. I am only concerned at this stage with highlighting the general historical shift and progression in reproductive technologies and how as time moves on the desire for faster and more efficient methods of reproduction would create an environment that allowed Chester Carlson to create his electrophotographic process.

The letter copy press was used widely throughout the 1800s and into the early twentieth century, but its use dwindled as newer methods of copying were invented. The widespread use of the letter copy press gave rise to a proliferation of other office copying techniques during the early part of the nineteenth century including stencil copying, hectography and lithography. Stencil copying required the creation of a stencil through which ink was forced onto the flat surface of a printing plate, or onto rollers as in later models. The hectography process used special ink to transfer an image or text onto a pan of gelatine which absorbed the ink, a sheet of paper was then placed on the gelatine that then transferred the print back again. Lithography

[23] 'James Watt the Inventor of the Letter Copying Press', *Scientific America*, 62.9 (1890), p. 131.

similarly required a master image or text that was created on a stone surface that would attract and repel ink in parts that allowed an image to be transferred. I pass very briefly over these methods of printing because although they are evidence of the culture's increasingly ingrained requirement for new and more efficient ways of making copies, in essence they all employ the same idea for creating an image – the physical transfer of ink from one surface to another. Whether applying ink to the printer's metal type, transferring water-soluble inks from one surface to another, or forcing ink in through a stencil, each of these methods used the physical transfer of ink to make a duplicate image.

There is one method of image reproduction that never featured prominently as a fixture of the average workplace but is still one of the most culturally significant methods of making copies: photography. Photography differs from the methods of copying I have so far mentioned in that it does not involve the physical transfer of ink to make an image, but it is still one of the key reproductive technologies of the twentieth century. It also shares some technical similarities with electrophotography, the technical process by which a photocopy is made, in that the medium used to create the image in both instances is light. In both cases a potential image is created without the need for a physical transfer of inks; light becomes the method of imprinting an image onto a surface. In pre-digital versions of both processes each subsequently required the application of a second process to reveal what light had created. Both processes exemplify the claim made by

Marshall McLuhan that 'we have already extended our senses and our nerves by the various media.'[24] Both photography and electrophotography extend the eye's visual capacity and replicate its function. In *Photography: the Key Concepts,* the author David Bates writes that photography extends that 'human capacity for sight.'[25] Schwartz writes that copying is part of who we are, and that through copying mechanisms we are extending our own human facility for copying, but I will look at this in more depth in the following section.[26] Through photography, a method for wholesale appropriative copying became possible, it placed in the hands of ordinary people the ability to create copies, to appropriate an image, to record any scene. Bates writes that photography was bound up with mass democracy and mass media, that this increasingly mass-produced media, concurrent with cinema, was 'the new technology of the twentieth century, a technology for the masses.' [27] The ability for anyone to capture an image and create copies of that image placed the idea of the copy at the centre of Western culture. The reproduction of a photographed image, the mass creation of images, has become an everyday reality, and with the rise of digital technologies we have become a culture increasingly obsessed with the reproduced image.

Throughout this thesis I will be arguing that the photocopier is a substance, the formation of a multitude of cultural trends, practices and functions. As I

[24] Marshall McLuhan, *Understanding Media* (London, Routledge, 2009), p. 4.
[25] David Bates, *Photography: The Key Concepts* (Oxford, Berg Publishers, 2009), p. 9.
[26] Schwartz, p. 211.
[27] Bates, p. 9.

have begun to elucidate in this first section, the photocopier exists a part of a cultural and historical framework. These briefly mentioned advances in reproductive technology are just part of the substance of the photocopier, which includes a host of relations I will not have space to touch upon. The printing press, the letter copying press, lithography and photography, each of these devices and technologies and many more have altered our cultural perception of copying and copying machines, and go some way to forming the substance of the photocopier. As a machine, the photocopier does not stand isolated from history it exists as part of a historical framework of developments in methods of technological reproduction.

Part Two: The Notion of the Copy

Having briefly examined the broader historical developments in reproductive and copying technologies in the previous section I will now give a summary description of our cultural perception of copying and of the copy. My intention in this section is to show that not only is the copy the product most associated with the photocopier, despite most modern machines now having a range of functions, but also that our perception of the copy augments our interpellation of the photocopier and adds to its substance. In *Pandora's Hope* Latour discusses the work of Louis Pasteur and his experimentation with yeast fermentation; he writes that 'Pasteur authorises the yeast to authorise him to speak in its name.'[1] The copy, which is a complex cultural substance all of its own, might be said to authorise, through association, the photocopier, our perception of the copy and its properties altering our assessment of the machine. But equally the photocopier and the individual's awareness of its attributes will affect their perception of the copy; the photocopier and copy develop a more complex cultural identity, and as Latour writes 'offer [...] one another new possibilities, new goals, new functions.'[2]

In the previous section I dealt with different modes of mechanical reproduction, but did not touch upon the mode or method of copying involved in each. It is worth taking a moment to establish two methods of copying or producing copies as they represent different facets of the copy.

[1] Latour, p. 132.
[2] Ibid, p. 151.

In the printing press we have a device that creates copies, but does not itself copy. When we consider the process of printing we generally think of the physical transfer of ink onto a surface. But although this act creates a copy it is not itself the act of copying. Author of *What is a Book? The Study of Early Printed Books,* Joseph A. Dane, argues that the difference between the book and its representative copy 'can be thought of as a function of the institution of printing.'[3] Although the author is dealing specifically with books I would argue that the general principle can be applied to all copied materials. The copy of an object can be thought of as a function of the method of reproduction, but is not the same as the act of copying. Printing is the act of physical creation, the imprinting of an image or text. Whereas the act of copying is the moment the perceived original material is appropriated. In terms of the printing press copying can be seen to have taken place the moment the book or other material is typeset, the act of replicating a sentence structure or pattern. But even this definition may need further clarification. A second division may be helpful as we consider the nature of the copy and copying. In *The Culture of the Copy,* Schwartz makes a distinction between two different types of copying; he categorises them as 's/t/r/o/k/e/-/b/y/-/s/t/r/o/k/e re-enactment' and 'the taking of an entirety.'[4] The difference he suggests lies between 're-enacting the original process,' describing it as 'painting on a second canvas, or engraving, or resetting type in facsimile.'[5] This is opposed to an appropriation of a 'complete image,'

[3] Joseph A. Dane, *What Is a Book? The Study of Early Printed Books* (Notre Dame, University of Notre Dame Press, 2012), p. 10.
[4] Schwartz, p. 224.
[5] Ibid.

capturing and recreating an image without having to reproduce each stage of the production.[6] Methods of reproduction akin to the printing press have used this s/t/r/o/k/e/-/b/y/-/s/t/r/o/k/e method of reproduction, whereas later methods such as lithography, photography, and eventually photocopying function using a process which appropriates an image in its entirety. The printing press made copies, but the typesetter was the agent of copying; the typesetter created a s/t/r/o/k/e/-/b/y/-/s/t/r/o/k/e re-enactment and the press created the copy. This is an important distinction to make as there is a culturally perceived difference between s/t/r/o/k/e/-/b/y/-/s/t/r/o/k/e and appropriative copy making. Schwartz writes that the

> choice between the two modes were choices between two philosophies of copying. Copying s/t/r/o/k/e-/b/y/-/s/t/r/o/k/e/ as one went along approximated the actions that produced the original […] Copying an ENTIRETY all-at-once scarcely resembled the original process, one arrived at the result not step by step but through a fluid, seamless, and invisible act of twinning.[7]

[6] Schwartz, p. 224..
[7] Ibid.

According to Schwartz 's/t/r/o/k/e/-/b/y/-/s/t/r/o/k/e re-enactment implied subordination,' and the 'taking of an ENTIRETY implied appropriation.'[8] It is also worth noting that according to Schwartz the 'two modes of copying' also 'became gender-specific in the late 1800s.'[9] Schwartz writes that, 'women in offices had become "thoughtful" copying machines,' arguing that women were seen in the workplace as objects not people.[10] He goes on to write that 'copying machines in turn require the presence and gradually took on the personae of women,' demonstrating a devaluation of the machines resulting from a disparaging attitude toward their female users.[11] When advertising the ease of use of a pantograph, Hawkins-Peale, manufacturers of pantographs, chose to advertise their product saying that the process 'was so easy that "on the first trial the feeblest female hand, to her astonishment, produces two original copies."'[12] In this way Schwartz outlines a general awareness of the process of creating copies within the culture and more specifically how women, copying machines and copies may be viewed within a workplace. In this way he offers a possible interpretation, or way reading of copies; they are reproductions, objects made using a feminised device, by the 'feeble' hand of an objectified female worker. Through these associations I would argue we can demonstrate a cheapening in the value of the copy, which consequently further devalues the hand, and the device by which these objects are created. This denigrating of women, their role in the workplace, and the association made

[8] Schwartz, p. 224.
[9] Ibid.
[10] Schwartz. p. 225.
[11] Ibid.
[12] Ibid.

with copying machines is summed up with a quote I have previously used in the introduction drawn from a 1985 edition of *Popular Science Monthly*. The author writes that women's "tendency is toward reproduction. While man's is toward production."[13]

Schwartz demonstrates that copying and the idea of copies are both complex and multifaceted, with extensive resulting cultural agency. But any examination of the copy will suffer if its focus is solely the associations it garners from the workplace. As Schwartz writes,

> together we will go at striking likeness anew. The driving historical question is this: how has it come to be that the most perplexing moral dilemmas of this era are dilemmas posed by our skill at the creation of likenesses of ourselves, our world, our times?[14]

The copy, the creation of likenesses, is a practice not restricted to the printed word or image reproduction, but permeates each facet of our culture, and its function is questioned and assumed in equal measure. The diverse uses of the copy, and the cultural saturation of copying pervade almost all subsets of Western society. They can be taken for granted or cause outrage, be completely ignored or hotly contested. The author of *In Praise of Copying*, Marcus Boon, observes 'that copying is pervasive in contemporary culture,

[13] Schwartz, p. 226.
[14] Ibid. p. 11.

yet at the same time subject to laws, restrictions, and attitudes that suggest that it is wrong, and shouldn't be happening.'[15] The existence of the copy questions what is real, what is original. The copy may adumbrate the thing it mimics, but if it is too convincing it can actually challenge the authenticity or uniqueness of the original. Schwartz writes that 'the more adroit we are at carbon copies, the more confused we are about the unique, the original, the Real McCoy.'[16] At their most banal, copies are used in every moment of everyday life from the digital reproduction of a forwarded or cc'd email, to the daily newspapers that appear each day only to be disregarded once the information has been exhausted by its reader. Copies, likenesses, or reproductions may be taken for granted, assumed to be part of our daily need for, and intrinsic to, the dissemination of information. Every day we receive spam emails, takeaway menus and leaflets pushed through our doors, agendas for meetings, photos uploaded to Facebook, Twitter and Instagram. Copies facilitate modern Western living, from the mass-produced bookcase, the clothes we wear, to the computer I'm using to write these words. Each of these items is a copy, a mechanically reproduced multiple, the notion of which, as a copy, we tend to give little or no thought to, something that can have both limited monetary value, and unacknowledged significant cultural importance. In this sense the copy is something both heterogeneous and ubiquitous in its banality. Yet the existence of a copy can also have significant cultural repercussions, causing outrage and even conflict. Take for example a legal battle between Apple

[15] Marcus Boon, *In Praise of Copying* (Cambridge Massachusetts: Harvard University Press, 2010), p. 4.
[16] Schwartz, p. 11.

and Samsung concerning patent infringement. In 2012 Apple sued Samsung for $2.5 billion after it claimed that the South Korean firm had copied its mobile device software.[17] The eventual verdict resulted in the jury awarding Apple $1.05 billion in damages, labelling Samsung's actions wilful,[18] and resulting in a $12 billion stock market reduction in the company's value.[19] As Ronan Deazley writes in *Rethinking Copyright: History, Theory, Language*, there can be 'staggering commercial and cultural consequences that depend on how the boundary between that which is copyright protected and that which is public domain is drawn.'[20] From images to brands, slogans, and technical patents, copies when made unlawfully are disputed and contested. The forger or the faker is deemed to be a villain, the copier a thief who purloins the intellectual property or creative concept of another and passes it off as their own. Schwartz describes this as the 'extreme of copying,' a practice of imitation, a 'fabrication passed off in the name or style of another person.'[21] In this situation the copy is something not ignored, not overlooked, it is something to be contested. The copy in this instance is a usurper, a charlatan, its existence is something to be ever vigilant for as its very nature can be a threat to the original. Boon writes,

[17] US jury hears Apple Samsung patent row, <http://www.bbc.co.uk/news/19043377> [accessed 16 July 2016]
[18] Apple-Samsung patent verdict: Expert opinions, <http://www.bbc.co.uk/news/technology-19391235> [accessed 16 July 2016]
[19] Google reacts to Apple's US patent victory over Samsung, <http://www.bbc.co.uk/news/technology-19389732> [accessed 16 July 2016]
[20] Ronan Deazley, *Rethinking Copyright: HIstory, Language, Theory* (Cheltenham: Edward Elgar Publishing House, 2006), p. 177.
[21] Schwartz, p. 219.

> one of the principal arguments made against copying is that it involves an act of deception. Something is presented in the guise of something else. This something is produced so that its outward appearance corresponds to something else, to something that it is not.[22]

In these terms the copy is not a thing unto itself; it is held up in comparison to an original, it can be venerated or vilified depending on its status as a copy. As Schwartz writes, the original is 'under perpetual siege, valued less for itself than for the struggle to prevent its being copied.'[23]

This further demonstrates that the copy is not easily categorised, and the relationship between the copy and the original is not easily qualified. There are occasions when the original owes its vaunted status to the existence of the copy. The copy can be in part responsible for our commendation of originality. Schwartz writes that 'we use copies to certify originals, originals to certify copies, then we stand bewildered.'[24] In this instance it would seem that as we have become more skilled, more adept at the creation of copies, the more we have exalted the original, the more have come to laud the notion of uniqueness 'it is within an exuberant world of copies that we arrive at our experience of originality.'[25] This is a notion vividly seen in relation to works of art. Walter Benjamin argued in 'The Work of Art in the

[22] Boon, p. 108.
[23] Schwartz. p. 212.
[24] Ibid.
[25] Ibid.

Age of Mechanical Reproduction' that 'we can say: what shrinks in an age where the work of art can be reproduced by technological means is its aura.'[26] But as the editors of *Mapping Benjamin: the Work of Art in the Digital Age* write 'Aura has definitely not disappeared as Benjamin anticipated; rather, it has actually conquered the field of art's technical reproduction.'[27] They go on to write that 'the almost inevitable reappearance of aura [is] the result of communication [...] irrespective of the technology deployed.'[28] Through communication, through the dissemination of copies of an original artwork the aura of the piece appears to grow. A copy of the Mona Lisa does not detract from the aura of the original, rather it appears to heighten our concept and perception of the original. The copy is a vastly complex substance with a considerable number of facets and a multitude of cultural associations. But I want to add one final pearl to the copy's thread. Our demand for copies has long been a recognised necessity predicated upon our spoken and written language, evidenced even by my brief examination of early methods of copying. But at an even more basic level copying is a biological imperative, copying is something we do without machine, without technology, even without our conscious physical input. Schwartz writes that copying is a biological function, as 'our bodies take shape from transcription of protein templates,' and that 'copying makes us

[26] Walter Benjamin, *The Work of Art in the Age of Mechanical Reproduction* (London: Penguin, 2008), p. 7.
[27] 'Editor's Preface', in *Mapping Benjamin: the Work of Art in the Digital* Age, ed. by Hans Ulrich Gumbrecht and Michael Marrinan (Stanford, Stanford University Press, 2003), p. xiv.
[28] Dirk Baecker, 'Aura: The Unique Appearance of Distance', in *Mapping Benjamin: the Work of Art in the Digital Age*, ed. by Hans Ulrich Gumbrecht and Michael Marrinan (Stanford, Stanford University Press, 2003), p. 9.

what we are.'[29] He goes on to write that 'our language' is based on 'the mimicry of privileged sounds,' our 'crafts from the repetition of prototypes,' and that our culture functions as a 'faithful transmission of rituals and rules of conduct.'[30] Our culture, our way of life functions through repetition, through the reproduction of established patterns, through copying, all of which are natural patterns established by our own biology. Boon asks the question, 'what if copying, rather than being an aberration or a mistake or a crime, is a fundamental condition or requirement for anything, human or not, to exist at all?'[31]

There are many more facets to the copy and the making of copies, some of which I will discuss in successive sections. But to close this section I will pose a question, a question which seems to me to sit at the centre of our opinion and view of the copying; the word copying itself my make a statement about our perception of it, the question is do we view the act of creating a likeness, the production of a copy as 'making or taking.' In copying do we create something new or do we plagiarise the existence of something else? Boon argues writes that,

> copying is a particular kind of transformation […] Consider the following: if the copy of the book you are reading is a "hard copy," its matter was once a tree. If you are reading an electronic copy, then the matter and forces that make up the

[29] Schwartz, p. 11.
[30] Ibid.
[31] Boon, p. 3.

> pixels of the screen have gone through even more radical processes of transport and transformation.[32]

I would argue and will argue in later sections that the photocopier does both, its takes and makes, it plagiarises, it copies an original, it appropriates and forges something, an action that has been used with deliberate political and social ends by those seeking to challenge dominant cultural mores. But is also creates, it produces an object with its own material history and aesthetic qualities, it transforms paper and ink into something new. I will examine this in more detail in the final chapter, but I will close this subsection by arguing that the creative uses to which the photocopier has been put have been employed many time by artists, counter-culturalists and subculturalists alike to speak, to create, and fashion works and material that could not have existed without it.

[32] Boon, p. 79.

Part Three: The Beginnings of the Photocopier

In Part 1 of this section I sought to outline the general advances in methods of copying. As noted above, I argued that the photocopier was made possible because of the on-going advances in copying technology. I also continued to argue for the examination of the photocopier as a Latourian substance, and that any examination of the photocopier needs to continually demonstrate that the photocopier is an object of history. I argued in Part 2 that the substance of the photocopier is developed further by examining the notion of the copy, partly as a product of the photocopier, but also that we must understand the copy's reciprocal influence on our perception of the photocopier. Each stage of this thesis is intentionally seeking to render different facets of the photocopier, arguing for an analysis of the photocopier as an object of social history. In this subsection I will be giving an historical overview of the events that led to the creation of the electrophotographic process and Carlson's subsequent licencing agreement with the Haloid Corporation.

Each time a new copying or reproductive technology reaches a point of cultural saturation it further establishes the cultural perception of the usefulness of such technologies. When a need, or even a perceived need has been established the creation or refinement of devices to meet that need often follows, and this pattern holds true with the development of the photocopier. But while devices such as the printing press and the letter copying press were revolutionary technologies that sought to fill an actual or

perceived necessity they were all also flawed and limited in their functionality. The printing press only has a certain range of usefulness; its high cost, physical size and the expertise needed to operate put its use beyond the everyday amateur. The letter copying press could only make copies 24 hours following the creation of the original, and the copies themselves were of low quality even after the development of better inks. The stencil duplicator required the preparation of an original stencil that would often mean the purchase of a second machine with which to make the stencil, and it was also a notoriously messy and smelly process. Each method of mechanical reproduction, particularly those more readily suited to an office or workplace environment, was flawed; something that must also be said about the photocopier. The perceived flaws or limits of a technology, or in some cases such as the photocopier, the perceived lack of an appropriate technology to fill a need, would often provide the spur for their invention. Writing in *Before Photocopying* Rhodes and Steeter offer up the idea that a flawed technology impels advancements with the aim of correcting those flaws; they write 'that form follows failure. That is, new inventions are developed largely to overcome the perceived defects of those which came before.'[1] They suggest that the perceived defects of a technology, which result in certain frustrations on the part of the user, will prompt and drive further experimentation and development.

[1] Rhodes and Steeter, p. 5.

When considering what drove Chester Carlson to invent the process that would lead to the first photocopiers it is worth noting that the chief limitation he saw in the available machines was not a limitation restricted to a single device. What he saw was a limitation that was endemic to almost all forms of reproductive technology. I have already pointed out the inherent limitations of the letter copy press and it was those same restraints that were dominant amongst almost all other available office copying technologies. Almost every method of copying required significant preparation for the creation of a copy; the printing press required typesetting, the letter copy press needed a specially created master, the stencil duplicator a stencil. None of the methods available to Chester Carlson could copy from an unprepared original, each required the creation of a special master-copy for a copy to be made. The one method that did exist in the early to mid twentieth century was expensive, complicated and unsuitable for day-to-day copying use. Photography *was* able to create a copy from an original with little preparation, but the cost of the materials and the laborious processes involved in developing a photographic image meant it was not a practical option for the daily needs of those who wanted to copy documents. It was these limitations that drove Chester Carlson to create the photocopier. I previously quoted Rhodes and Steeter's adage that form followed failure, and for Carlson this was reinforced by the more familiar adage that 'necessity is the mother of invention.' It is these two sayings that neatly encapsulate the motivation that drove Chester Carlson to invent the photocopier, something he would do 'decades before anyone else developed

a similar technology.'[2] The result was the creation of a process that has remained largely unchanged in its 70-year history, and which underpins almost all our office and workplace copying.

The scientific foundations of the photocopier were a series of experiments conducted by Hungarian scientist Pal Selényi. Selényi was responsible for the first scientific experimentation in electrostatic image creation. When writing about the history of PARC, the research and development company founded by the Xerox corporation, Dev Gaultieri writes that 'Selényi had printed images [...] using an ion beam to charge regions of an insulator that he subsequently dusted with a powder.'[3] But this method of image creation was not a method of copying, Sélenyi's creation was purely an experiment in electrostatic image creation. Author of *The Myth of the Sole Inventor*, Mark A. Lemley writes that,

> Carlson's first step was to conduct "an extensive literature search" of relevant reports and patents; he discovered that over 150 years prior to his invention, many phenomena and devices had been explored in (usually) isolated experiments, often involving electrostatic effects. Some of those old

[2] Mark A. Lemley, 'The Myth of the Sole Inventor', *Michigan Law Review*, 110.5 (2012), p. 734.
[3] Dev Gualtieri, 'PARC Turns Forty', Tikalon Blog, 2010 <http://tikalon.com/blog/blog.php?article=PARC> [accessed 24 February 2015]

> physics experiments set out the science behind the technology that became Xerography.[4]

These experiments would become the basis of Carlson's invention and his inspiration as he sought to create a method for copying pre-existing text. In 1936 Carlson was studying to be a lawyer and was forced to copy longhand from books he could not afford to buy. It was during this period that he became convinced that there must be a more efficient method for copying from already printed material.

> The pain and tedium of copying legal texts by hand made him think again about the desirability of inventing a device that, unlike carbon paper or a stencil duplicator, could be used to reproduce text that already existed.[5]

Carlson's desire for a more efficient method of copying was motivated further by the increasing pain he experienced when copying longhand from the books he was studying. He had begun to notice in himself the tell-tale signs of the same arthritis of the spine that had crippled his father and which made hours bent over books increasingly painful. These experiences convinced him there must be a better way to make copies. It was his discovery of an article about Selényi's experiments with electrostatics that proved to be the final spark needed for him to begin developing his idea.

[4] Lemley, p. 734.
[5] Owen, p. 74.

Carlson had what one writer claimed was often needed for the development of new scientific and technological breakthroughs,

> the coordination of creativity, collective understandings and sometimes luck with an ability to conceptualize and orchestrate diverse technical capabilities to meet real or perceived needs.[6]

Selényi's work contained the seed of an idea that Carlson saw huge potential in, although he was alone in this belief. Carlson saw the need for more efficient methods of copying but others thought of the possibility as little more than a novelty. In *The Anatomy of Xerography: its Invention and Evolution* the author J. Mort writes that,

> the need for improved or more efficient ways of making copies of documents was originally perceived, except perhaps by Carlson, as more of a convenience than a necessity […] There was no obvious major market opportunity recognized or stimulating force to create one except, as events proved, the invention itself.[7]

In light of these beliefs Carlson was truly alone in his development of electrostatic copying, or what he would come to call electrophotography. In *Copies in Seconds* author Owen writes that,

---

[6] J Mort, *The Anatomy of Xerography: Its Invention and Evolution* (North Carolina, McFarland and Company, 1989), p. ix.
[7] Mort, p. xii.

> few big inventions truly have a single inventor; most technological revolutions are essentially collective efforts, arising in several minds and in several places at more or less the same time, generated as much by cultural pressures as by spontaneous individual insight. [...] Carlson was genuinely alone.[8]

No one else has conceived of a process that would allow the user to copy from anything onto a piece of plain paper, and subsequent technologies that did almost always built upon what Carlson had started. Speaking about Carlson's invention, Dr Harold Clarke, a Xerox physicist, said 'Chet [Carlson] put together a rather odd lot of phenomena, each of which was obscure in itself and none of which had previously been related in anyone's thinking.'[9] No one else saw the need and no one else saw the possibilities inherent in electrostatics. Lemley writes that 'the photocopier seems […] the rare case in which a single inventor working alone developed a wholly new product that no one else achieved at roughly the same time.'[10] Carlson's first patent application came in 1937 and was later expanded in 1942.

[8] Owen, p. 89.
[9] Ibid.
[10] Lemley, p. 735.

> In just a dozen pages and a few simple drawings, he lucidly anticipated and described virtually every aspect of what would ultimately become known as Xerography.[11]

In 1938 Carlson's assistant Otto Kornei made the first electrophotographic copy using India ink and a glass microscope slide. Kornei took the slide and, applying the ink, wrote '10-22-38 ASTORIA'. The slide had previously been charged using static electricity and was then dusted with lycopodium powder. Later repeating the process, Carlson took a small piece of waxed paper and pressed it against the slide, heating the slide so that the powder became embedded into the paper, Carlson was now holding the world's first electrophotographic print.[12] (fig 20). The *10-22-38 ASTORIA* copy, although comparatively crude when compared to ensuing iterations of the electrophotographic process, still bears the hallmarks of successive photocopier made copies. This primitive version, while proving the possibility of Carlson's invention, also foregrounds its shortcomings and the aesthetic quirks that mark something out as photocopied; something which has become harder and harder to do with each new version of the photocopier. The paper, though a uniform shade, bears the unintended marks of the electrophotographic process, the stray powder, the underdeveloped lettering where the ink has not fully adhered to the paper, and the gradual gradation of tone which bleeds away to reveal the original colour of the paper around the edges. Although this was the most primitive

[11] Owen, p. 91.
[12] Ibid, p. 98.

form of the process, each new development still struggled to overcome these markers; even the most modern machines occasionally reveal the difficulty of the process. Each of these monikers is repeated in varying degrees in each of the photocopied images I will discuss in this thesis, demonstrating its lineage back to this original copy. Although Carlson was elated at the success of creating this first electrophotographic print, few others would share his enthusiasm for the technology. As I alluded to previously the prevailing opinion was that Carlson's new process was nothing but a novelty, at most a convenience, and that most peoples' copying needs were already well catered for with the current processes available. This prevailing opinion was borne out as Carlson, realising that the technical challenges inherent in creating a fully functional electrophotographic machine were beyond his capabilities, sought to licence his technique to already established technology companies such as IBM and Kodak. Owen writes that,

> the process Carlson had conceived was too complex to be fully developed by any lone inventor; the fact that he needed help did not discredit his idea. Someone at IBM needed to make an imaginative leap – yet no one did.[13]

One instance saw Carlson giving a demonstration to a group of executives from IBM. When the demonstration was completed each and every one of

[13] Owen. p. 107.

them left the room without saying a word to the downhearted Carlson.[14] It would be six years after Carlson's initial success before anyone showed any interest. The Battelle Memorial Institute, a non-profit research and development organisation, now the worlds' largest, agreed to act as Carlson's agent for his patents, pay for further research and help develop the idea.[15] But even with this new backing a partner was still needed in the form of a technology company. Refusing to give up, and now with the backing of Battelle, Carlson sought to licence his idea again to the likes of IBM and Kodak, but his invention was rejected. The real breakthrough finally came when electrophotography was put before Joe Wilson, President and CEO of the Haloid Corporation, a manufacturer of photographic paper and equipment. Haloid was based in Rochester, New York and lived in the shadow of Kodak, and Wilson liked the idea of turning 'electrophotography into a viable product [...] and establishing [Haloid] in an industry that was not already dominated by the neighbourhood giant.'[16] A deal was made with Haloid in 1946 and they agreed to a 'nonexclusive licence to manufacture electrophotographic-based copying machines intended to produce fewer than twenty copies of an original.'[17]

The process of electrophotography arose from one man's belief in the need for a more efficient method of copying, an appropriative method of copying. Electrophotography was, as I have already stated, a radically different

[14] Owen, p. 103.
[15] 'About Us', Battelle: The Business of Innovation, 2015 <http://www.battelle.org/about-us> [access 24 February 2015]
[16] Owen, p. 125.
[17] Ibid. p. 127.

method of copying unlike anything that preceded it. Lemley notes that had Carlson listen to the prevail excepted wisdom he might have been tempted to drop the idea 'of electrostatic glass, since the rest of the world seemed focused on the use of crystals.'[18] Unlike the printing press, lithography, stencil or spirit duplicators, it was not only able to create copies but also copy. Unlike the letter copier press it could make copies without prior preparation of a master copy, no special processes required. Electrophotography may have shared some relation to photography in its ability to create copies of an image using light but did not require a lengthy process to develop those images. As Owen writes 'it gave ordinary people an extraordinary means of preserving and sharing information [...] whose reach and ease of use have been exceeded only relatively recently, by the world wide web and e-mail.'[19]

I am concerned at each stage of this thesis with presenting an outline of the photocopier's substance, demonstrating the photocopier's heterogeneity. Consequently, I am concluding this section prior to the creation of the first mass produced photocopier with the intention of establishing an additional historical context within which to frame the creation of the photocopier before I deal with the creation of the first recognisable office electrophotographic machine. To that end the next section will examine the function of capitalism, the place of mechanical reproduction in corporate capitalism, and the products of capitalism. Following this I will then give an

[18] Lemley, p. 735.
[19] Owen, p. 13.

overview of the development of the photocopier and the subsequent growth and effect this had on the future of the Haloid Corporation. I have argued that our dominant cultural perception of the photocopier is of a device that is banal and without a functional agency; I will argue in the next section that this dominant perception is partly formed by the photocopier's material nature as a product of historical capitalist industry.

Section 2 – Capitalism and the Machine

Part One: Capitalist Theory and Mechanical Reproduction

In this section, my intention is to give space to a brief examination of the theory of capitalism and its historical dependence upon, and developments in, methods of technological reproduction. I intend for this to be a framework for an examination of the Haloid Corporation as a capitalistic, commercial entity. I will then use this to demonstrate the photocopier's facets as products of that environment.

In their book *How the West Came to Rule: The Geopolitical Origins of Capitalism* authors Alexander Anievas and Kerem Nisancioglu write that any discussion of capitalism,

> Begs a historicisation of the developments of capitalism not as a fixed entity, but as one that morphs and reconfigures social relations according to certain historical problems, challenges, struggles, contradictions, limits and opportunities.[1]

[1] Alexander Anievas and Kerem Nisancioglu, *How the West Came to Rule: The Geopolitical Origins of Capitalism* (London, Pluto Press, 2015), p. 8.

This approach to examining the history of capitalism, not believing it to be a fixed historical certainty, but something that constitutes an ever-changing series of relationships and social developments, echoes my own methodological framework for this discussion of the photocopier. Capitalism is, to use Latour's descriptive terms, a substance, a complex set of institutions, a multifaceted phenomenon. The subject of capitalist history, its roots, and trends is far too vast and complex a subject to deal with in this thesis, but I believe that focusing on those aspects of capitalism relating to technological mass production will serve to focus my discussion and enable me to cover the most salient points in this thesis.

In *Modernity, Capitalism and Critique*, author Peter Wagner writes that 'Capitalism [...] can be seen [...] as a novel way of socially dealing with needs,' needs, he writes, that were 'until the 18th-century [...] mostly dealt with in 'private', in the house-holds.'[2] Wagner goes on to write that,

> Public ways of dealing with needs were emerging more strongly, in particular with the markets in cities, but they had not yet become the organizing element of social order.[3]

It is significant that Wagner writes that these methods of dealing with public need, 'had not yet become' the 'organizing elements of social order,' indicating that a system that may have started out with the intention of

[2] Peter Wagner, 'Modernity, Capitalism and Critique', *Thesis Eleven*, 66.1 (2001), p. 9.
[3] Ibid, p. 9.

meeting needs did not remain with this focus, an idea that will re-emerge in subsequent chapters; particularly in the second chapter and my examination of the history of the office.[4] Wagner goes on to write that it was this 'emergence of a spirit of capitalism' that would give rise to the 'importance of economic activities' and 'provided a justification for this increased importance for collectivity, thus beyond individual salvation.'[5] The individual would give way to the collective, and in doing so would give rise to the importance of collective economic activity, which, to borrow from Guy Debord, would become the foundation for the 'the model of socially dominant life.'[6] The basis for this new economic collectivity is pinpointed by Elhanan Helpman in the *Mystery of Economic Growth* when he writes that 'numerous economic historians have […] placed the evolution of technology at the centre of modern economic growth.'[7] Technology reproduction or assembly line mass-production, claims Helpman, has become central to modern economic growth, central to enabling modern life, central to the place of the collective over the individual. As I have previously discussed in Section One of this chapter, the first such non-mechanised form of mass production was scribes. The individual scribe gave way to an increasingly collective process by which illustrators and bookbinders sought to meet the needs of the increasing number of European universities, professors and educators, through the use of quires. Quires were sent out to be illustrated and constructed by a number of individuals

[4] Wagner, p. 9.
[5] Ibid. p. 9.
[6] Guy Debord, *Society of the Spectacle* (Detroit, Black and Red, 2010), p. 6.
[7] Elhanan Helpman, *Mystery of Economic Growth* (Cambridge, Harvard University Press, 2004), p. 35.

specialising in a particular stage of production. At each stage of the assembly line an individual was responsible for a particular task, the individual specialised, they develop a particular skill set which, through repetition, enabled them to carry out their task with a high level of speed and skill. But these methods of production were not restricted solely to centres of education. Increasingly, throughout both urban and rural locations, the purchase of improved tools or machinery enabled the overall increase in the productivity of labour.[8]

> These processes not only involved replacing labour with existing tools and machine, they also led to quite widespread instances of technological innovation [...] chiefly of this reason, Herlihy notes, the middle ages was a period of impressive technological achievement.[9]

These historical developments in the process of production, increasingly involving the use of machines, gave rise to 'the historical phenomenon known as the 'rise of capitalism.'[10] This rise in capitalism had a 'long gestation period but emerged forcefully in 18th-century England and somewhat later on the European continent and in North America.'[11] With the arrival of the industrial revolution in mid the eighteenth century dramatic changes and advances in mass production and manufacturing took

[8] Anievas and Nisancioglu, p. 86.
[9] Ibid.
[10] Wagner, p. 8.
[11] Ibid.

place. The industrial revolution introduced such concepts as mechanised conveyor belts, greater division of labour and specialisation. Adam Smith described this process in the *Wealth of Nations*. The first chapter is titled, *Of the Division of Labour*; in it Smith describes the manufacture of pins. Smith writes that 'one man draws out the wire; another straightens it; a third cuts it; a fourth points it; a fifth grinds it at the top for receiving the head,' and so on.[12] He calls this 'the greatest improvement in the production of powers of labour.' This division of labour and specialisation meant that vast numbers of objects could be manufactured with increasing efficiency and at a decreasing cost.[13] This increased efficiency equated, according to Smith, to 'about twelve pounds of pins in a day,' and in one particular factory visited by Smith this resulted in ten men producing upward of forty-eight thousand pins in a day, something 'had [they] all wrought separately and independently […they] could not have made.'[14]

This drive towards increased efficiency in production is, says Smith, founded upon 'the propensity to truck, barter, and exchange one thing for another,'[15] or as another author put it, the 'primacy of the market.'[16] According to Smith this cycle is the foundation of capitalism, money in exchange for goods and services. He goes on to the say that 'it is the power

[12] Adam Smith, *The Wealth of Nations* (USA, Electric Book Company, 2001), p. 8.
[13] Ibid. p. 7.
[14] Ibid. p. 9.
[15] Ibid. p. 15.
[16] Johann P. Arnason, 'Theorizing Capitalism: Classical Foundations and Contemporary Innovations', *European Journal of Social Theory*, 18.4 (2015), 351–67. (p.362).

of exchanging that gives occasion to the division of labour.'[17] He claims that the existence of a market will always give occasion to the production of goods; as long as there is someone to buy them, the goods will continue to be made. Or as Marx claimed 'production thus produces not only the object but also the manner of consumption.'[18] In the method of production is the shape of the product's consumption; but equally the shape consumption takes configures the practice of production. Smith's claim is that we have a propensity to create new markets; our 'propensity' feeds the creation of the market. In *Theorizing Capitalism: Classical Foundations and Contemporary Innovations*, author Johann P. Arnason writes that 'modern capitalism is rooted in the distinctively modern civilizational vision of autonomy,' linking 'individualism and capitalist forms of economic life.'[19] It is this view of individual need, of the individual propensity to purchase and exchange that sustains economic growth. But the consequence of this form of economic endeavour is that for its own self-perpetuation it requires the constant creation of new markets, new things for which we can 'truck and barter.' This drive not only facilitates the creation of new markets and new things; it also drives the development of new and more efficient methods by which to make new products This reinforces something I discussed in the previous section. The invention of electrophotography and the creation of the first photocopiers while driven by Chester Carlson's desire to create a process of copying that would making copying from original materials possible, was truly fostered by Joe Wilson, Haloid's CEO,

[17] Smith, p. 29.
[18] Marx '*Grundrisse'*, p. 33.
[19] Arnason, p. 361.

whose primary aim was the creation of a new market that Haloid could dominate.

The turn of the twentieth century saw the dawn of the mechanical assembly line, such as the one installed by Henry Ford in 1913, a mechanised moving assembly line that could mass produce objects in a fraction of the time previously possible.

> This combination of accuracy, continuity and speed introduced mass production to the world. At Highland Park, Model T production reached record levels, with a complete car leaving the line every 10 seconds of every working day. Ford was able to cut prices, double the minimum daily wage to $5, produce a superior product and still make a profit.[20]

The introduction of increasingly efficient methods of production drastically altered both our social perception and practice, something I have already discussed with the invention of new methods of copying, and is something I will touch upon again in subsequent sections. One important factor in the development of the assembly line was the obvious employment of mechanised means of creation. Due to this, the involvement of the human agent in production was increasingly one of operation rather than creation, the operation of the machine; reflecting something we have already seen in

[20] 'History & Heritage' <https://www.ford.co.uk/experience-ford/history-and-heritage> [accessed 1 May 2018].

Schwartz's discussion of the use of office copying equipment. A consequence of the method of production that sees the manufacturing of objects increasingly completed by machine rather than by human hand is a distinct distancing of the human hand from the act of creation. As Marx writes, 'the division of labour […] gradually transforms the workers' operations into more and more mechanical ones [and] what was the living worker's activity becomes the activity of the machine.'[21] Before the invention of computers, and the computer automated production line and eventual distance that brought, it was becoming increasingly apparent that the person had become integral to the machine, as operator, as technician, seemingly becoming part of the machine itself; again reflecting Schwartz's description of women in the office as thoughtful machines. In Marx's view, as modern industry expanded, the individual increasingly loses their freedom. The individual worker loses the power of production and becomes an operator, rather than the motive force behind the act of creation; the 'labourer becomes a mere appendage to an already existing material condition of production.'[22] The operation of machines means, according to Marx, 'the suppression of the isolated, by the collective',[23] in which the worker appears to be accidental. Machinery would 'operate only by means of associated labour, or labour in common. Hence the co-operative character of the labour-process is, in the latter case, a technical necessity dictated by

[21] Marx 'Grundrisse', p. 636.
[22] Ibid, p. 264.
[23] Karl Marx, *Capital: A Critique of Political Economy*, ed. by Frederick Engles, trans. by Samuel Moore and Edward Aveling (Moscow, Progress Publishing, 2010), p. 264.

the instrument of labour itself.'[24] Marx feared that this meant an assimilation of the individual's freedom by a model of industrialised production which makes the individual little more than an 'automation.' This is described by Marx as a 'motive force that moves of its own accord. The automation' which 'consists of a number of mechanical and intellectual organs' seems to prefigure descriptions of cybernetic entities, as 'the workers themselves' become 'the conscious limbs of the automation.'[25] Marx argued that the outcome of this was that 'individuals are subsumed under social production; social production exists outside them as their fate; but social production is not subsumed under individuals.'[26] This amalgamation of human and mechanical involvement in the production line and in the processes of mechanical reproduction has continued to evolve as ever newer markets and technologies have been created and our need to 'truck' has increased to keep pace with the developments. Because of this, Marx argued that production pushed ever further away from crafting by human hands to the function of the individual as machinist, human input moved from creation to operation, and 'modern industry had therefore itself to take in hand the machine, its characteristic instrument of production, and to construct machines by machines.'[27] The facilitation, the input of the person was increasingly about facilitating something else to create. The machine itself now appears to be the creator. I highlight this here for two reasons: first, because as we deal with the photocopier and the human hand

[24] Marx '*Capital'*. p. 264.
[25] Karl Marx, *Selected Writings: The Economics: 1857 - 1867* (Oxford, Oxford University Press, 1977), p. 373.
[26] Marx '*Selected Writings'*, p. 97.
[27] Marx Ibid, p. 263.

seems to be divorced from the act of creation, the photocopier itself may appear to be the agent responsible for creation. But second, in the act of using the photocopier contrary to its primary intended purpose, the photocopier can actually be seen to enable the individual in the act of creation, to act as a tool of individual expression in the midst of a homogenising culture; something I will look at more closely in the following chapters. This view of mechanical reproduction also has consequences for our perception of the objects it creates, something I will deal with in more depth in subsequent sections. But it is important to highlight here that mechanical reproduction, when controlled for the corporate or collective economic benefit, appears to distance the human hand from production and give greater agency to the machine.

The continued push to open new markets and create ever more efficient methods of production has resulted in many instances of increased corporate financial growth and the acceptance of these mass-produced items at part of everyday life; something we will see in the growth of the Haloid Corporation in subsequent sections. The development and mass production of the first office copiers would change the course of Haloids fortunes and create a new market that became worth hundreds of millions of dollars. By 1968 the Haloid Corporation alone, which by then had been rebranded the Xerox Corporation, would have a turnover of nearly one $1 billion a year.[28]

[28] 'Chester F. Carlson Dead at 62; Invented Xerography Process', *New York Times* (New York, N.Y., United States, 20 September 1968) <http://search.proquest.com/artbibliographies/docview/118349713/citation/141D01D050254E0BECC/3?accountid=8018> [accessed 18 November 2013].

Chester Carlson's process and the Haloid Corporation's development of the invention would open a new market, would convince people that here was something they needed, and the photocopier would continue this ever present cycle of 'truck, barter and exchange.' The result was a machine that would continue to replicate this pattern through the endless companies that leased and operated these machines, becoming a device indigenous to countless workplaces and offices.

Part Two: The Outcome of the Corporate Machine

It would not be to state the claim too strongly to argue that the one overriding purpose or activity of any capitalist endeavour, enabled by mechanical reproduction, is the facilitation of its own existence. As author Joel Bakan writes in *The Corporation*, a corporation 'remains, as it was at the time of its origin [...] a modern business institution [...] legally designated "person" designed to valorise self-interest.'[1] The corporate strives to maintain its own self-interest, its own continued survival through developing new markets and increasing current market share. The cornerstone of this practice has long been the development, implementation, and operation of mechanical methods of reproduction. By the mid-nineteenth century 10% of the population 'worked in factories, where production was almost entirely mechanised.'[2] The result of which had been a stream of products marketed and sold to an unbroken flow of consumers all aimed at maintaining the necessary level of required income to warrant the corporation's continued existence. Capitalism is, as Harry Magdoff and John Bellamy Foster argue, 'by its very nature a globally expanding system geared to accumulation on a world scale.'[3] Mechanical forms of reproduction have become central to continued commercial practice, and equally central to the furtherance of consumerist culture. Or to quote the author of *Jean Baudrillard: Selected Writings*, Mark Poster, 'consumption

[1] Joel Bakan, *The Corporation: The Pathological Pursuit of Profit and Power* (London, Constable, 2005), p. 23.
[2] Anievas and Nisancioglu, p. 167.
[3] Harry Magdoff and John Bellamy Foster, 'The Failure of Empire', *Monthly Review*, 56.8 (2005) <https://monthlyreview.org/2005/01/01/the-failure-of-empire/> [accessed 5 January 2018].

has become the chief basis of the social order'[4] for both corporation and consumer.

This sustained drive for financial viability not only resulted in a dependence upon mechanical reproduction for both corporation and consumer but also resulted in unintended social changes. In *The Office Copying Revolution* the author Ian Batterham writes that,

> It hardly needs to be stated that the nineteenth and twentieth centuries were a time of immense technological and social change. These changes were inextricably linked: developments in technology drove social change and changes in society drove technological change.[5]

The nineteenth and twentieth centuries witnessed vast upheaval in Western culture and cultural practice. The nineteenth century alone saw the tail end of the industrial revolution and rapid changes in communications, medicine, warfare and much more. The 1800s saw the creation of the passenger railway, the telegram, antiseptics, the internal combustion engine, and Cinématographe, to name a few of the century's creations, and if anything, the twentieth century saw even more drastic change than the nineteenth.[6]

---

[4] Poster, p. 2.
[5] Batterham, p. 3.
[6] 'George Stephenson | British Inventor', Encyclopedia Britannica <https://www.britannica.com/biography/George-Stephenson> [accessed 1 May 2018].
'Samuel F.B. Morse | American Artist and Inventor', Encyclopedia Britannica <https://www.britannica.com/biography/Samuel-F-B-Morse> [accessed 1 May 2018].

The beginning of the century saw the Wright brothers invent the first gas powered and manned aeroplane, and within 60 years we had sent a man into space.[7] Mechanical devices increasingly intersected with every aspect of modern life, and developments in mass production would be no less dramatic. But as

> Marx believed, the most significant complex of technical changes of his time, the coming of large-scale mechanized production, social relations moulded technology, rather than vice versa.[8]

For example, the First World War would accelerate developments in reproductive technology to the point that during the 1920s with the automation of factories, 'economic output increased by a staggering 50%.'[9] Social change, changing attitudes, the capitalist drive for ever increasing markets, and a host of other factors resulted in an even greater dependence upon, and a continued growth in, technology and technological development.

'Puerperal Fever | Infection', Encyclopedia Britannica <https://www.britannica.com/science/puerperal-fever> [accessed 1 May 2018].
'Internal-Combustion Engine | Definition & Facts', Encyclopedia Britannica <https://www.britannica.com/technology/internal-combustion-engine> [accessed 1 May 2018].
'Cinématographe | Film Technology', Encyclopedia Britannica <https://www.britannica.com/technology/Cinematographe> [accessed 1 May 2018].
[7] '19th – 20th Century Timeline', about.com, 2015 <http://inventors.about.com/library/weekly/aa121599a.htm> [accessed 25 February 2015]
[8] Donald MacKenzie, 'Marx and the Machine', *Technology and Culture*, 25 (1984), 473–502 <http://dx.doi.org/10.2307/3104202>.
[9] Bitesize, BBC, 2015 <http://www.bbc.co.uk/bitesize/higher/history/usa/boombust/revision/1/> [accessed 25 February 2015]

The consequence of these drastic changes in mass reproductive technology were not only restricted to the corporate landscape, but as I have already touched upon the aftereffects would consequently result in far-reaching changes in social patterns and practices. In *Pandora's Hope* Latour argues that technological change is not a one-way process, but that changes in technology have profound influences upon the user, and that both user and machine have an agency which influences the other. When describing the use of a gun Latour writes that,

> You are different with a gun in your hand; the gun is different with you holding it. You are another subject because you hold a gun; the gun is another object because it has entered into relationship with you.[10]

I would argue that this effect can be seen more broadly then a single individual and a single object or machine. Latour goes on to argue that 'if we study the gun and the citizen as propositions, however, we realize that neither subject nor object (nor their goals) is fixed.'[11] I would argue that is equally true for culture as a whole, to paraphrase Latour, when the culture as proposition is articulated, it becomes a new proposition, it becomes 'someone, something else.'[12] I will come back to Latour again in a later chapter. But reasoning for the moment from the claims made by Marx

[10] Latour, p. 179.
[11] Ibid, p. 180.
[12] Ibid.

concerning the social influence upon developments in technology, Batterham and Latour's arguments that developments in technology result in new 'propositions', and Smith's belief in the human propensity to truck, barter and exchange, we begin to create a system of co-dependence. A system where our need to shop feeds the capitalist system, and where the advances in the capitalist system feeds our need to shop. A consequence of this general principle may well be that creations born of that system of co-dependence begin to embody that system of co-dependence; they are shaped and constructed to reflect both systems of need. Products, and processes of mechanical reproduction may be seen as a result of, and expression of, the changes that have taken place in both mechanical reproduction and in social perceptions and practices. This is why Baudrillard can write that 'need is therefore already embedded in commodities on the market. And preferences are manipulated by the arrangement of products already offered on the market.'[13] This means that productive, and consumerist,

> choices are not made randomly. They are socially controlled, and reflect the cultural model from which they are produced. We neither produce nor consume just any product: the product must have some meaning in relation to a system of values.[14]

The function of mechanical reproduction has been to reduce the cost of mass-produced products, a consequence of which has been the ready

[13] Poster, p. 36.
[14] Ibid.

acceptance of the availability and use of those products. This in turn has altered the cultural perception of need and the value of products, most noticeably the disposability of products that can now be easily and cheaply replaced. This increase in the purchase of cheap mass-produced products has in turn resulted in corporate investment in, and development of, more effective methods of mass production, which has in turn increased the volume of products produced and lowered the cost of those products. Or to return again to Baudrillard, both producer and consumer 'are socially controlled, and reflect the cultural model from which they are produced.'[15] In a seemingly endless cycle of production, purchase and modification of the method of production, the products produced may be seen to personify that change in both mechanical reproduction and social practice. Again, we come back to that thing Latour calls a substance.

Because I have argued that the product, producer and consumer are all socially controlled, substances with complex inter-active agencies, I want to highlight one factor concerning the mass-produced objects created by the capitalist system that will influence any discussion of them, and that is that mass-produced products need to be understood as copies. This might appear to be stating the obvious, but the very nature of mass production is founded upon the idea of the copy, the use of a mechanised system of techniques to create a large number of seemingly endless copies of an object. This is an

[15] Poster, p. 36.

important point to reiterate because of our perception of copies, of the copy. I have already dwelt briefly on the cultural concept of the copy, but I want to reiterate my earlier discussion briefly here, by pointing out that copying is, to return to Schwartz's earlier assertion,

> pedestrian, copying is peculiar. [But] on the other hand, copying makes us what we are. Our bodies take shape from transcription of protein templates, our language from the mimicry of privileged sounds, our crafts from the repetition of prototypes. Cultures cohere in the faithful transmission of rituals and rules of conduct. To copy cell for cell, word for word, image for image, is to make the known world our own. [16]

According to Schwartz copying is something that exists at the very core of the human experience; it is not only something we actively partake in, but it is something necessary for our continued existence. Like the necessity of copying for the continued existence of the corporate body, we require continued copying for our existence, copying functions to reproduce us. In these terms the human experience is one of copying and thus, as Schwartz claims, 'our history [...] is a history of being copied.'[17] The copy, the product of mechanical reproduction can be read as a symbol of our history; it is an object that both reflects and signposts trends and development in our Western culture. Therefore, as we are surrounded by copies, those copies

[16] Schwartz, p. 257.
[17] Ibid.

can function as reminders of our cultural development and progress. Mechanical reproduction becomes a tool, creating in each copy a representation, a representation of that co-dependant system of humanity and machine.

Part Three: Xerox and Xerography

I have noted in the previous two subsections of this chapter I have sought to discuss in outline a general Western understanding of corporate capitalism, its dependence upon mechanical reproduction, and the resultant social changes. An important aspect of that discussion was the argument that any change capitalism affected to Western culture was of a mutually reciprocal nature. Those effects were mediated through the lenses of culture, altered and fed back, shaping on-going developments in capitalistic technological reproduction, which in turn influenced the culture. The immediate purpose in beginning the section in this way is to establish a better understanding of the Haloid Corporation as a corporation rooted in historical capitalism. But as ever it has the more specific purpose of broadening the historical and theoretical framework for our understanding of the photocopier. I would argue that the photocopier, our cultural perception of it, and its status as a substance, are initially informed by our conscious and subconscious awareness of it as a product of capitalism. This awareness not only affects our perception of it, but also our perception of the materials it creates. I will deal with this corporate perception in greater detail in the following subsections, including the photocopier's presence as an object of the work place. But first I am giving this subsection over to an examination of the Haloid Corporation. It will be important to establish Haloid as a corporation, first, because it speaks to their primary purpose in creating the photocopier; to create and master a new market. Second, because this resulted in Haloid's decision to market the photocopier as an office

technology, which has significant ramifications for our perception of the device and its ensuing appropriation and subversion. Third, the nature of Haloid, later rebranding as the Xerox Corporation, as a corporate entity feeds into the photocopier substance and influences our understanding of it as a corporate creation. In this section I will also discuss the development of the electrophotographic process, and the resulting effects its development had upon the future and direction of the company.

In *Before Photocopying* Rhodes and Steeter write 'as the A.R. Shaw Company expressed in 1914, "a new office mechanism is a new business opportunity."'[1] This claim ties the development of such new mechanisms to Smith's belief that cultures have a propensity to truck, barter and exchange. New office technologies become multifaceted commodities, objects whose purchase are not only aimed at improving working environments, but equally aimed at improving both seller and purchaser's financial situations. This predisposition is exactly what Haloid sought to capitalise on, and what Haloid's CEO, Joe Wilson, believed the process of electrophotography could do for Haloid. Wilson believed that this new method for reproducing documents could be the way for Haloid to step out of the shadow of its neighbouring rival, Kodak. With electrophotography Wilson sought new markets, and new opportunities for his company.

[1] Rhodes and Steeter, p. 123.

> If Haloid could turn electrophotography into a viable product, the company would have a chance to establish itself in an industry that was not already dominated by the neighbourhood giant.[2]

Both Carlson and Wilson believed that electrophotography could and would be more than a novelty, and Wilson in particular believed it could become a viable, marketable method of copying and reproducing documents. The new partnership with Haloid was an encouraging step forward for Carlson after so many rejections, but the process of bringing an electrophotographic machine to production would be a long and tortuous one. Electrostatics turned out to be a challenging science to master and an inherently temperamental one that was affected by a host of environmental factors including light, temperature, and humidity. Although Haloid had invested heavily, over 10% of the company turnover in 1945, that figure would increase with each passing year.[3] The challenge of developing an electrophotographic device would prove to be beyond the scope of Haloid's finances and so they sought out further sources of funding. It was another year before Haloid found a new partner willing to invest in the technology, and their reasons for investing were darkly unanticipated. Haloid had a history of supplying photographic copying equipment and materials to the US Signal Corps and the company had maintained links it was now able to capitalise on. Three years after the US had dropped an A-bomb on Hiroshima, the US military had come to the conclusion that 'battlefields in

[2] Owen, p. 125.
[3] Ibid, p. 127.

the future were likely to be contaminated by thermonuclear radiation.' This meant that the 'current reconnaissance techniques […] would be useless.' The upshot of this was that the 'Signal Corps wanted an A-bomb-proof substitute.'[4] The devastation wrought by the atomic bomb and the continued fallout from the use of such devices meant that Haloid was able secure funding through US military contracts in the hope of creating devices not affected by radioactive fallout. Consequently,

> These contracts gave Battelle and Haloid the funds they needed to address technological issues [...] including the sensitivity of photoconductors, the rendering of continuous tones (rather than just black and white), and more efficient developing of images.[5]

This further investment finally enabled Haloid to create its first electrophotographic machine, the Xerox Model A Copier. It had taken 3 years of research and development and tens of thousands of dollars to create, and in every sense the future of the company depended on it being a success. But when it finally appeared the Model A 'would turn out to be a failure in every aspect but one.'[6] The Ox Box as it became known was clunky, clumsy, and difficult to operate. Haloid had shipped a number of Model A's to different companies for testing, but it was returned by all of them, and the principal feedback received was that it was just 'too complicated.'[7] The

[4] Owen, p. 136.
[5] Ibid.
[6] Ibid. p. 198.
[7] Ibid. p. 151.

machine's flaws would outweigh any possible consideration of its function as a new method of creating copies. The process involved multiple stages and required extremely delicate handling as the selenium plate designed to transfer the image to the paper was easily damaged. Another mark against the Ox Box was that the selenium plate itself cost $100, had to be cleaned after every 50 copies, and was only expected to make several hundred copies before needing to be replaced.[8] The Ox Box may well have been a financial disaster had it not turned out to be useable for one thing other than making the copies. That something was creating paper masters for offset lithographic printing presses.[9] This was not the outcome the company had expected but it financially sustained Haloid enough to continue developing the technology. It would take them another ten years later before they finally had a viable product.

The confidence Wilson had in Carlson's process, which they renamed Xerography, was exceptionally high. So much so that Haloid changed its name to Haloid Xerox in 1958, the first of two name changes that would cement the company's connection to Xerography. Wilson had attached Haloid Xerox's future to Carlson's invention and it would result in either the company's success or failure. Wilson's confidence in Carlson's original vision for electrophotography was eventually, spectacularly, repaid. In March 1960 Haloid Xerox leased the first truly recognisable photocopiers to its customers, and the response was overwhelmingly positive. When Haloid

[8] Owen. p. 150.
[9] Ibid. p. 151.

Xerox initially field-tested the prototype, conducting its own market research into usage levels, they estimated that ten thousand copies a month was an optimistic benchmark. But what they discovered was that almost immediately the machines were being used at a rate they hadn't conceived. Haloid Xerox found that some 'customers were using their machines at four, five and ten times the benchmark they had set. At some companies, machines were being run around the clock, with (frequent) breaks only for maintenance and repairs.'[10] The machine, which had been in development in 1958 when the company changed its name, was called the 914, so named because that was the size of the paper the machine could hold. (fig 05). The 914, in a manner reflecting Carlson's first copy, bears the hallmarks of the successive generations of photocopiers. It has the required functional elements of all photocopiers, those particularly visible to the causal user, the paper tray, the lens on which the images are scanned, the user interface, the paper output feed, and the service hatch. The maintenance hatch opens to reveal the complicated chemical mechanical workings that make copying possible, and hints to the user the expertise needed to maintain and if necessary fix the machine.[11] The 914 is also an archetype for the aesthetic design of each new generation of photocopier. The machine is a succession of straight lines, machined and manufactured in a way which suggests a distance of the human hand in its creation; a design aesthetic which may

[10] Owen, p. 239.

[11] The 914 needed regular maintenance, but its popularity and frequency of use meant that companies who leased them from Haloid ordered extra machines to take up the slack of those machines that were undergoing maintenance. It is also worth noting one thing that the pictures of the 914 don't show you, and that is something that came with each photocopier and what Haloid chose to call the scorch eliminator, an object colloquially known as a fire extinguisher. The 914 had a habit of overheating and catching fire, but even this did little to dampen people's enthusiasm for the device.

equally emphasise the distance of the human hand in the creation of the copies. The 914's simple solidity is free from embellishment, lacking softer or more organic shapes, and belies the complexity of the mechanisms within. This construction also reflected the increasing trend in office design, a move towards an increased modular arrangement of office space, and the neatly defined regimentation of the worker and their working environment. The 914 would change the fortunes of Carlson, Battelle, and Haloid Xerox, all of whom had seen the possibilities inherent in Carlson's invention. It would also radically affect the copying industry and alter the world that adopted it. The 914 changed the playing field with a copying process that was fundamentally different from anything else available, it could make permanent copies on plain untreated paper with just the press of a button, and did so in a fraction of the time of any other process. One of the engineers at Haloid Xerox described the 914's ability as 'a narcotic,' it was 'seductively easy, since all you had to do was push a button – and the copy itself provided positive reinforcement, since it didn't smell bad, curl up, or turn brown,'[12] something you could not expect from other methods of copying.

The concept that copying a document might be perceived as seductive is something generations arising after the 914 may find hard to comprehend. For those who have only known a world that contains the photocopier, we take for granted the function and ease with which copying can be achieved.

[12] Owen, p. 239.

In the 1960s this was not the case. (fig 21). This image is a still from the first advert Haloid Xerox aired for the 914, and is striking to our modern sensibilities in the features it highlights. The advert begins with a man sat at his desk, he turns to and asks a woman off screen, who we assume is going to be his secretary, to join him. But rather than being joined by a grown woman he is joined by his young daughter, probably no more than 7 or 8 years old, and he asks her to make him a copy of a paper he holds out to her. As she leaves he smilingly calls her his secretary. We assume as the advert progresses that the little girl's presence is to emphasis the simplicity of making copies, but it also suggests a possible deprecation for the role of the secretary, and an attitude which hints at the desired youthfulness of the, we presume, female secretary the boss would actually like. Her youthfulness is emphasised as she skips off to the new copy machine, doll in hand. Within a minute she has copied the sheet of paper, and also copied her doll (fig 22). On returning to her father she is asked which is the copy and which is the original, she can not remember, and her father seemingly can not tell the difference (fig 23).[13] The simplicity of the advert in a way belies the revolutionary nature of the product on display but equally highlights its revolutionary status. A subsequent advert claimed that 'anything you want copied, place face down.'[14] None of this was intuitive in 1960, users needed to be told in effect what the machine was for.[15] It was now possible, claimed Haloid Xerox, to make 7 copies in a minute with no special training, with no

[13] First Xerox Commercial Ever, 1959 <https://www.youtube.com/watch?v=ZBt6gSGRZ-Y> [accessed 15 September 2016].
[14] Xerox 914 - The World's First Plain Paper Copier, 1959 <https://www.youtube.com/watch?v=9xZYcWsh8t0> [accessed 15 September 2016].
[15] Owen, p. 238.

complicated or messy processes involved and on plain ordinary paper. This was so unbelievable that when the advert first went to air Haloid Xerox were investigated by the US Trading Standards Authority who did not believe it was possible to produce copies as cleanly, quickly, and as easily as Haloid Xerox claimed.

All of this was new to a world that had only known smelly, messy and complicated processes for making copies. Even Haloid Xerox was astonished at the 914's success. It had been predicted by Wilson that the,

> Machine might enable Haloid Xerox to double its annual revenues by 1965. The doubling did come, but four years ahead of schedule, and annual sales in 1965 amounted to Wilson's prediction, or nearly $400 million. The next year, revenues reached $500 million, and two years later $1 billion.[16]

This drastic change in fortunes for Haloid Xerox meant that by 1966 the, now renamed 'Xerox Corporation, was the fifteenth largest publically owned corporation in America [...] bigger than [...] Chrysler, bigger than US Steel [and] gaining ground on IBM,'[17] the company that had previously rejected Carlson's invention as little more than a novelty. The success of the 914 and the Xerox Corporation's subsequent Xerographic machines changed the direction of the company. Xerox increasingly began to focus on supplying

[16] Owen, p. 253.
[17] Ibid.

mechanisms for the office, later founding Xerox PARC, 'an institution originally founded to study, invent and design "the Office of the Future."'[18] The Xerox Corporation would become increasingly associated with the market it sought to define and cater for. It would provide for, and influence, the nature of what an office was, and how an office functioned. This emphasis on the office market would create a cycle of association through which the photocopier was influenced and was increasingly associated with the market it had gone some way towards creating.

While the photocopier would radically alter the course of Haloid's future its influence was not to be limited to a single corporation. Three years after the introduction of the 914 in 1962 the market for office copying machines was worth more than $250,000,000 a year in the USA alone.[19] Wilson's desire to create a product that would enable it to step out from Kodak's shadow was realised with a product that created an entirely new market. With the 914 Haloid created a market that grew from the product of a single company to one with nearly one hundred manufacturers involved in the production of Xerographic equipment.[20] This increase in Xerographic machine manufacturing only added to the cultural saturation of these machines. As I have already mentioned, the photocopier was designed and intended as an office machine, designed to replace the older methods of office copying. With the invention of the photocopier almost all other methods of office

[18] Craig Harris, *Art and Innovation: the Xerox PARC artist in residence program* (Cambridge, The MIT Press, 1999), p. 13.
[19] 'Earnings of Xerox Soar to New Highs', *New York Times*, 18 July 1962, p. 35.
[20] Ibid, p. 35.

copying became redundant, and with the Xerox Corporation and others involved in manufacturing these machines the market expanded exponentially, changing the landscape of the corporate world. The Xerox Corporation and its competitors increasingly sought to improve efficiency and reduce costs with their machine, thereby increasing profits for themselves and their buyers. The photocopier was becoming a progressively corporate beast, enabling commercial enterprise on multiple fronts. By 1966 one newspaper columnist wrote that,

> Xeroduplicating offers a new way of cutting out delays in office procedures, cutting down the possibility of error […] and consequently saving time by making re-checking unnecessary. Why tie up expensive office staff doing chores which can be handled much more quickly and efficiently by machines?[21]

I come back again to Helpman's claim that 'economic historians have [...] placed the evolution of technology at the centre of modern economic growth.'[22] The photocopier would become the financial future of the Haloid Corporation, would create a market for nearly one hundred other corporations worth hundreds of millions of dollars a year, and would shape a dominant portion of office practice for decades. The photocopier is a

[21] C. Northcote Parkinson, 'Parkinson's Law of Delay', *The Guardian*, 21 September 1966, p. 11.
[22] Helpman, p. 35.

representative example of Helpman's claim as it has enabled and facilitated both corporate efficiency and economic growth.

In 1936 the philosopher and critic Walter Benjamin penned his much-quoted essay 'The Work of Art in the Age of Mechanical Reproduction'. In it, and subsequent writings, he sought to tackle the issue of technology and its impact upon society. As one writer put it Benjamin was concerned with, 'examin[ing] the historical variables of human perception,'[23] attempting to, 'prognosticate the future development of art only against the background of its position vis-à-vis the conditions of production.'[24] The concerns Benjamin elucidates in 'The Work of Art in the Age of Mechanical Reproduction' are easily applicable to this study of the photocopier. He wrote that 'history [...is…] substantially determined by its industrialization. The contemporary convulsion of capitalist industry.'[25] He believed that 'the astounding growth that our resources have undergone in terms of their precision and adaptability will in the near future confront us with very radical changes indeed.'[26] I chose to briefly introduce Benjamin here because although he is concerned with the consequences of methods of mechanical reproduction upon art such as photography, these concerns do, as Benjamin himself wrote, 'confront us with very radical changes indeed.' [27] The use of photography has had significant bearing on a broad cross-section of our culture and society, and our propensity to reproduce images is conspicuous in every area

[23] Steiner, p. 117.
[24] Ibid, p. 117.
[25] Ibid.
[26] Benjamin 'The Work of Art in the Age of Mechanical Reproduction', p. 1.
[27] Ibid.

of life. The influence of photography, wrote Benjamin, would be considerable and would add to a history 'substantially determined by industrialization.'[28] We are in danger of misrepresenting and misunderstanding both our culture and the mechanisms which make it possible, if we examine them without taking into account each area of influence. In dealing with the photocopier we are seemingly presented with a machine which has one function, the mass production of cheap paper facsimiles, and is tied only to its corporate existence. But to stop any examination of the photocopier there would be to misunderstand the photocopier and its influence upon our culture. Equally, if we fail to examine the corporate beginnings and influences of the photocopier we might miss much of the significance and subtext associated with its use in areas of our culture which fall outside the scope of the office. To give no thought to the less understood aspects of the photocopier's use and influence would be to ignore Benjamin's petition to 'prepare for such profound changes to alter the entire technological aspects of the arts,'[29] and our wider culture.

[28] Ibid, p. 1.
[29] Ibid.

Chapter Two:

The Office

Section One – The Foundations of the Modern Office

Part One: Business Growth and Administration

In the closing section of the previous chapter I outlined a capitalist framework for the Haloid Corporation and the photocopier. I discussed capitalism, exploring its use and reliance upon means of mechanical reproduction, and summarised the function and role of the commodity. My objective was to argue that capitalism, represented by the Haloid Corporation, is one of the primary components of the photocopier's substance, and that this subsequently influences our perception of the device. This allowed me to further develop the idea that our perception of the photocopier is shaped, positively or negatively, by a host of factors – the first of which is capitalism and corporate mechanical production. In this second chapter I will narrow the field of discussion from the broader examination of corporate capitalism to one of general office and workplace culture. This is intended to move the focus away from broader capitalist consideration and social concern, and to begin to narrow the focus to the point of individual experiences and perception. While I would argue that any examination of the photocopier's substance must begin with its capitalist origins I would also assert that the most abiding perception, the most enduring facet of its substance, is shaped not by a broad understanding

of the capitalist system through which it came about, but is rather formed through the individual's interaction with the machine. It is in each individual's contact with the photocopier that the predominant perception of the device is formed, and the dominant facet of its substance is established. In this section I will examine the foundations for the establishment of the modern office, including the historical shift towards multiunit business enterprises, the increasing need for larger administrative bodies, and the change in office design.

In the second section of this chapter I will look at the pattern of work within the office, the clerk and white-collar worker, the creation of management hierarchies, and the so-called feminisation of office work. In the third section I will examine the use of labour saving office machines. Each section will build towards underlining the primacy of the individual's perception of the photocopier as formed through an understanding of the office, its function, and the interactions of the individual with the photocopier in the office space, demonstrating that it is in this sphere that the predominant Western cultural attitude of the machine is formed. This will be of particular importance for the final section of this chapter as I look at Xeroxlore and the subversive uses of the photocopier in the office itself; and also in the following chapter when I look at the photocopier's appropriation and subversion by subcultural groups.

The office is a mainstay of Western culture. Although its appearance may have changed over the years, its function and role as a locus for paperwork has remained a constant. In *Cubed: A Secret History of the Workplace* the author Nikil Saval writes that

> one can associate the origins [of the office] with the beginning of paperwork itself […] since the invention of writing and the corresponding ability to keep records in a systematic manner, there have always been places that resemble offices.[1]

The office's creation of paperwork also meant that the office would become increasingly associated with the use of 'light machinery' as described in *White Collar* by author C. Wright Mills,

> office operative grind along, loading and emptying the filing systems: there are […] the operators of light machinery, comptometers, Dictaphones [and] addressographs.[2]

Mill's, writing in 1951, missed the release of the Xerox 914 in 1959, but the photocopier's function would facilitate what he saw as 'the minimum

[1] Nikil Saval, *Cubed: A Secret History of the Workplace* (New York, Anchor Books, 2015), p. 12.
[2] C Wright Mills, *White Collar: The American Middle Class* (London, Oxford University Press, 1977), p. x.

function of an office […] to direct and co-ordinate the activities of an enterprise;' I will; return to the use of office machinery in section 3 of this chapter.[3]

The office has been the focus of academic study across many disciplines including history, gender studies, anthropology, and business studies.[4] It has also featured in much popular culture and social satire. It has been depicted by Ricky Gervais in *The Office,* in which the banal tedium of office work is the backdrop against which those moments of anger, sadness and love are seen even more starkly; all overshadowed by the embarrassing figure of David Brent.[5] In Scott Adam's *Dilbert* the office is a soul-destroying setting of pointless activity and management ineptitude.[6] In *The Rise and Fall of Reginald Perrin* we see its main character struggling with the repetitive and banal nature of employment, dealing with the same repetitive activities, and corporate facileness day after day.[7] In Billy Wilder's film, *The Apartment*, its two main characters look for love in the midst of cheating husbands, office gossip and backstabbing work colleagues.[8] Although just a few of the representations of the office over the last century, all of these display the dominant cultural perception of the office, of everyday work, as a banal,

[3] Mills, p. 190.
[4] See for example Anne Phillips' and Barbara Taylor's article 'Sex and Skill: Notes towards a Feminist Economics' in which the authors discuss the disparity in the classification of women's jobs as un-skilled and men's jobs as skilled or semi-skilled. Or Frederick, T. George's 1920 article in the Office Economist. 'Standards for the Office: Applying the Principles of Standardization of Factory Work to the Office.' Or C Wright Mills' book, White Collar: The American Middle Class.
[5] The Office, (London, Entertain Video, 2004).
[6] Scott Adams, *Journal to Cubville: A Dilbert Book* (Great Britain, Boxtree, 1998).
[7] The Rise and Fall of Reginald Perrin, (London, BBC, 1976).
[8] Billy Wilder, The Apartment (USA, Mirisch Corporation, 1960).

repetitive necessity. Bearing this in mind it is worth asking the same question Saval asks in chapter one of *Cubed*: where did the modern office come from? 'When does the office begin?'[9] To answer this question we need to understand what preceded the office, and what factors led to it formation. In *The Visible Hand: The Managerial Revolution in American Business,* Alfred D. Chandler Jr writes that the traditional business firm that existed in the mid 1800s was usually 'a single-unit business enterprise.'[10] He describes these enterprises as controlled by 'an individual or a small number of owners,' operating 'a shop, factory, bank, or transportation line out of a single office.'[11] These businesses did not have the internal administrative and managerial divisions that would become increasingly necessary for the modern multiunit businesses.[12] According to Chandler in the mid-1800s this kind of 'multiunit enterprise administered by a set of salaried middle and top managers' did not exist.[13] The type of business enterprise which dominated in the mid-1850s 'were almost always partnerships.[14] These partnerships were the bedrock of the American

[9] Saval, p. 12.
[10] Alfred D. Chandler Jr., *The Visible Hand: The Managerial Revolution in American Business* (United States of America, The Belknap Press of Harvard University Press, 2002), p. 3.
[11] Chandler, p. 3.
[12] In Labor and Monopoly Capital, Braverman writes that as early industrial enterprises expanded 'the orders, specifications, and uses of the products became more technical and complicated.' The result was that the business then required a 'specially trained sales organization which could work closely with the engineering division.' The increasingly complicated nature of these new products meant that 'the new machines could not be sold without the provision of maintenance, service, and in many cases installation;' he gives as an example the automobile industry. He goes on to write that these enterprises created marketing teams which became the next 'subdivision of the corporation.' He finishes by saying that 'each of these corporate subdivisions also requires, for its own smooth functioning, internal departments which reflect and imitate the subdivisions of the entire corporation.'
[13] Chandler, p. 3.
[14] Ibid, p. 8.

economic system and 'still included elements of […] family capitalism.'[15] In a pattern similar to the early stages of 'industrial capitalism', and the family's central role 'in the productive processes of society,' these traditional firms were dominated by private ownership and family management.[16] These firms, owned and managed by partnerships or families, could remain single-unit endeavours directly managed by the owner/s 'as long as the requirements of banking, commerce, or industry did not exceed the resources of family concerns or small partnerships'.[17] A literary example of this kind of business enterprise appears in one of the most well know examples of English fiction, namely Charles Dickens', *A Christmas Carol*. In the story, although details of the business which Ebenezer Scrooge and his partner Jacob Marley, dead seven years at the beginning of the tale, is kept to a minimum, Dickens gives us enough detail to recognise it as the type of partnership described by Chandler. Each aspect of the business is run directly by Scrooge, dealing with the finances and oversight of his staff, namely his clerk Bob Cratchit,

> Christmas Eve—old Scrooge sat busy in his counting-house […] The door of Scrooge's counting-house was open that he might keep his eye upon his clerk, who in a dismal little cell beyond, a sort of tank, was copying letters.[18]

---

[15] Chandler, p. 491.
[16] Braverman, p. 188
[17] Ibid, p. 203.
[18] Charles Dickens, 'A Christmas Carol: In Prose Being a Ghost Story of Christmas', 2018 <https://www.ibiblio.org/ebooks/Dickens/Carol/Dickens_Carol.pdf>, p. 9. [accessed 11 March 2018]

As the role of clerk is mentioned in Dickens' story I will take a moment to briefly mention another aspect of the office and an individual whose situation would come to epitomise our perception of the office and dominate our modern view of work: the clerk; I will return to the clerk in a future section.

The clerk as position, the responsibilities and role, was born of necessity. Saval argues that the clerk was a creation of paperwork, the complexities of modern industry and the resulting paperwork required a particular person to deal with them, and so was born the clerk. In *"Light Manufacturing": The Feminization of American Office Work, 1900-1930*, author Sharon Hartman Strom writes that 'clerical work emerged as a significant occupation category in the nineteenth century in both England and the United States.' She goes on to write that 'these early clerical jobs were tedious and repetitive; ledger clerks entered figures and did elementary arithmetic, and copyists copied documents all day long.'[19] The clerk became a figure well established in the social consciousness, and began 'to appear with a new regularity in the literature and journalism.'[20] In *A Christmas Carol* Bob Cratchit is portrayed as a figure to be admired and pitied, whose amiable demeanour and struggling family situation is set against the greed, avarice and disagreeable nature of his miserly employer. Before Scrooge's eventual redemption Dickens gives the reader a glimpse of Cratchit's role and

[19] Sharon Hartman Strom, '"Light Manufacturing": The Feminization of American Office Work, 1900-1930', *ILR Review*, 43.1 (1989), p. 54.
[20] Savel, p. 13.

working conditions, which is to copy letters in 'a dismal little cell.'[21] To the modern reader these words appear prescient, seeming to prefigure what would, for many, come to typify the cubicled life of the office worker; particularly in the USA. Through Dickens' work the clerk is portrayed as someone who deals with documents, the boring ephemera of business, never involved in the activity of making money, only ever dealing with the by-product of its creation, paperwork. Dickens was not alone in writing about the clerk. In 1853, Herman Melville wrote one of the first stories in which the clerk was no longer incidental, no longer a supporting character, but took centre stage. In *Bartleby the Scrivener* Meville describes the character of the title as 'pallidly neat, pitiably respectable, incurably forlorn', and his working environment as a

> desk close up to a small side-window in that part of the room, a window which originally had afforded a lateral view of certain grimy back-yards and bricks, but which, owing to subsequent erections, commanded at present no view at all.[22]

It is worth mentioning before I move on that the clerks of Dickens and Melville's day, while they may appear to prefigure the white-collar office worker of later modern business enterprise, were actually closer to office managers. As Braverman writes, the role of the 'clerks in the early industrial

[21] Dickens, p. 9.
[22] Herman Melville, 'Bartleby, the Scrivener: A Story of Wall-Street', The Project Gutenberg EBook of Bartleby, The Scrivener, by Herman Melville, 2004, p. 6. <http://www.gutenberg.org/cache/epub/11231/pg11231-images.html> [accessed 8 August 2016].

enterprise […] was semi managerial in terms of the present distribution of functions.'[23] Between the 1850's and the 1870s in Great Britain and the United States between six and eight-tenths of all 'gainfully occupied' workers were clerks.[24] These 'gainfully employed' workers, understood as 'ancestors of modern procession management', were 'more a family servant than a wage labourer […] a professional and undeniably a member of the middle class.[25] Braverman goes on to writes that

> By in large, in terms of function, authority, pay, tenure of employment (a clerical position was usually a lifetime post), prospects, not to mention status and even dress, the clerks stood much closer to the employer than to factory labor.[26]

This pattern of clerical labour would go unchanged as '*long as* the requirements of banking, commerce, or industry did not exceed the resources of family concerns or small partnerships.'[27] I will give more time to the actual work and place of the clerk/office worker in the next subsection, but through the portraits of these characters, however brief, we are given a glimpse of their working environments, and begin to see the opinions of the writers and the formation of more general social perceptions of the places in which these characters find employment. Melville's own opinion about the pre-modern office is seen in his most famous work, *Moby*

[23] Braverman, p. 203.
[24] Ibid, p. 204.
[25] Ibid.
[26] Ibid.
[27] Ibid.

Dick. Melville himself 'had worked as a clerk for a merchant', and 'knew from inside the peculiar emptiness that office work could often have, its atmosphere of purposeless labour and dead-endness.'[28] In *Cubed*, Saval, paraphrases *Moby Dick*, he writes that there are 'thousands in Manhattan who idle along the Battery, lost in "sea-reverie," avoiding returning to their working lives "pent up in lath and plaster – tied to counters, nailed to benches, clinched to desks."'[29] These brief descriptions show us something of the perceived working conditions and nature of the clerk's lot, and that the office was, as Savel argues, beginning to make its mark upon the social consciousness.

Although the business enterprise of the mid-1800s was dominated by the single ownerships, or small partnerships, this pattern of control was beginning to transition into something more complex, demanding a new type of management and new spaces to work from. This transformation was underpinned by many factors, but was becoming increasingly necessary because of three interconnected developments. First, the increasing mechanisation of industrial production, second, mechanised industries subsequent growth, and third, the expansion of commercial markets. At this point in history a growing proportion of the populations of both the United States and Great Britain worked in increasingly mechanised factories. In Great Britain in 1840, production of cotton, or 'textiles, accounted for 75 percent of industrial employment in England, with cotton mills accounting

[28] Savel, p. 10.
[29] Ibid.

for half of this total.'[30] In, *How the West Came to Rule: The Geopolitical Origins of Capitalism,* the authors write that by '1850, British cotton production employed 374,000 people, of who 89 per cent worked in factories, where production was almost entirely mechanised.'[31] This increasing mechanisation resulted in explosive rates of expansion for industrial production and was key to the beginnings of the Western modern business. With 'the increasing complexity and scale of machinery,' and an increasing numbers of factory workers, came the necessity for centralised and concentrated sites of production, 'capable of employing thousands in small areas.'[32] Alongside these newer factories also came new working methods, increasingly 'labour [was] standardised and deskilled, strict regulations were imposed on working hours, expected productivity, breaks and conduct;' it is worth noting that these methods would later be repurposed to manage increasingly large and complex administrative structures.[33] It was at this point in history that, according to Chandler, 'modern business enterprise appeared for the first time.'[34] New technologies increased the size and scale of production, and the volume of economic activities increased, therefore resulting in the expansion of global markets. According to Chandler, modern business enterprise was able to grow, and flourish 'in those sectors and industries charactarised by new and

[30] Alexander Anievas and Kerem Nisancioglu, *How the West Came to Rule: The Geopolitical Origins of Capitalism* (London: Pluto Press, 2015), p. 167.
[31] Ibid, p. 167.
[32] Anievas and Nisancioglu, p. 167.
[33] Ibid.
[34] Chandler, p. 8.

advancing technology and by expanding markets.'[35] This meant, according Braverman, that in the ever increasingly mechanised Western capitalism, 'the development of capital' was transforming 'the operating function of the capitalist from a personal activity into a work of a mass of people.'[36] This growth in mechanisation, capitalistic production, and expanding markets would lead to dramatic changes is employment beyond those experiences by factory workers. Saval writes,

> Industrialization in Britain and America was producing more and more administrative work, and alongside it a need for a rational approach to managing accounts, bills, ledgers; in short, paperwork.[37]

Or as Mills writes,

> As far-flung and intricate markets come into being, and as the need to find and create even more markets becomes urgent, 'middle men' who move, store, finance, promote, and sell goods are knit into a vast network of enterprises and occupations.[38]

The growth and expansion of production, and the development of new technologies resulted in an 'unprecedented output and movement of

[35] Chandler, p. 8.
[36] Braverman, p. 208.
[37] Saval, p. 13.
[38] Mills, p. 67.

goods.'[39] This gave rise to a significant increase in the volume of economic activities, and for the first time a level was reached that 'made administrative coordination more efficient and more profitable,' and necessary.[40]

In North America its railroads increasingly became one of the primary means of transporting the growing number of goods that resulted from increased mechanisation and growing markets, and, according to Chandler, the railroads were to become the 'nation's first modern business enterprise.'[41] In the 1840s the railroad expanded dramatically, and between the 1850 and 1916 the miles of track in North America grew from 30,000 miles to 250,000.[42] The cost of these new railroads was extensive, and private investors became increasingly important in funding its expansion.[43] This partly demonstrates Chandler's assertion that the new modern business enterprise would increasing move away from family or small partnerships, to ownership by investors. As Chandler writes

> The capital required to build a railroad was far more than that required to purchase a plantation, a textile mill, or even a fleet

[39] Chandler, p. 8.
[40] Ibid.
[41] Chandler, p. 145.
[42] Mansel Blackford, 'American Manufacturing, 1850-1930: A Business History Approach', *OAH Magazine of History*, 24.1 (2010), p. 18.
[43] George Rogers Taylor, *The Transportation Revolution: 1815-1860, The Economic History of the United States* (London, Routledge, 2015), p. 97.

> of ships. Therefore, a single entrepreneur, family, or small group of associates was rarely able to own a railroad.[44]

The railroads success was the result of 'organizational as well as technological innovation,' making it possible for the faster, safer, and increasingly 'regular, reliable movement of goods and passengers.'[45] These burgeoning businesses, the increasing traffic they handled, and the growing complexity of managing and overseeing a host of equipment and property resulted in the need for 'the creation of a sizable administrative organization'.[46] These adminstrative organisations were facilitated by growing numbers of office machines, devices such as the letter copy press invented by James Watt in the mid-1700s, which saw use into the early twentieth century before being supersceeded by processes including stencil copying, hectography and lithography. The organisation of these businesses, the growing complexity of administrative tasks, and the ever expanding amount of paperwork became 'too numerous, too varied, and too complex' for the more tradition pattern of business enterprise.[47] This would lead the founders of these growing enterprises to recruit managers 'whose activities were organised through centralised, functionally departmentalised

[44] Chandler, p. 87.
[45] Ibid.
[46] Ibid.
[47] Ibid.

administrative structures.'[48] This new innovation would lead to the creation of 'the first group of modern business administrators in the United States.'[49]

[48] Alfred D. Chandler Jr., 'A Framework for Analyzing the Modern Multiunit Enterprise and Its Competitive Advantage', *Business and Economic History*, 16 (1987), p. 5.
[49] Chandler '*The Visible Hand'*, p. 87.

Part Two: A Change in Management

As these railroad companies grew they began to require sub-departments for engineering, marketing, accounting, construction, and more. The coordination of such enterprises 'demanded the constant attention of a managerial team or hierarchy.'[1] Also, according to Mills
as machines, including office copying devices, spread, they began to prompt newer divisions of labour to add to those they had originally merely implemented. The new machines' resulted in the increased 'central control of offices.'[2] This new system of management and administration became 'fundamental to the management of the railroads.'[3] According to Chandler 'without the design of internal administrative structures and procedures,' and without an efficient method of 'communicating internal information, a high volume of traffic could not be carried safely and efficiently.'[4] The scale and complexity of the railroads meant that,

> No other business enterprise, or for that matter few other nonbusiness institutions, had ever required the coordination and control of so many different types of units carrying out so great a variety of tasks that demanded such a close scheduling.[5]

[1] Chandler '*A Framework for Analyzing the Modern Multiunit Enterprise and Its Competitive Advantage'*, p. 6.
[2] Mills, p. 195.
[3] Chandler '*The Visible Hand'*, p. 94.
[4] Ibid.
[5] Ibid.

The railroad were the 'first modern, carefully defined, internal organization structure used by an American business enterprise.'[6] It is worth noting here, as I did in the previous chapter, that these new enterprises arose at a time of immense change, both technologically and socially, and their complexity would increasingly result in the individual giving way to the collective, to increased oversite and the routinization of work. These new enterprises were driven by 'the primacy of the market,' a system of exchange, money for goods and serivces, which according to Smith gave occasion to the increasing 'division of labour.'[7]

The office would become ever more important in the control and direction of these increasingly complex business enterprises, One company created an organisational manual that, although aimed at delineating the role and responsibilities of the managers in this new administrative system, does give us some understand of what these growing administrative hubs were responsible for. The manual 'described the manager as "an officer of general duties […] who besides the duties peculiar to himself is charged with the supervision and control of the whole system […] Into his office flowed a series of reports' and monthly expense statements.[8] This new administrative structure, with new managers, administrators and staff would be responsible for the growing mountain of paperwork and for the administration of people, or as Mills put it, 'their characteristic skills

[6] Chandler, p. 97.
[7] Arnason, p. 362.
Smith, p. 29.
[8] Ibid, p. 101.

involve the handling of paper and money and people.'[9] One railroad superintendent wrote a document defining six principles for this new system of general administration, and despite the somewhat archaic language these descriptors set the groundwork for office practice and procedure.

1) A proper division of responsibilities.
2) Sufficient power conferred to enable the same to be fully carried out, that such responsibilities may be real in their character (this is, authority to be commensurate with responsibility.)
3) The means of know whether such responsibilities are faithfully executed.
4) Great promptness in the report of all derelictions of duty, that evils may at once be corrected.
5) Such information, to be obtained through a system of daily reports and checks, that will not embarrass principle officers nor lessen their influence with their subordinates.
6) The adoption of a system, as a whole, which will not only enable the General superintendent to detect errors immediately, but will also point out the delinquent.[10]

It is interesting to note in this list that the authors gives only two points to the structure or division of responsibility and the conferred authority to

[9] Mills, p. 65.
[10] Chandler '*The Visible Hand'* p. 102.

carry assigned duties, while the final four are steps by which the manager may maintain authority and punish those perceived to be in error. This highlights the growing role and authority of the manager or overseer within the expanding administrative structure, and their relationship to their subordinates. Braverman writes that as the modern business enterprise grows 'each corporate [sub]division' of the enterprise 'takes on the characteristics of a separate enterprise with its own management staff.'[11] Braverman goes on to say that ultimately 'the overall purpose of all administrative controls is […] the elimination of uncertainty and the exercise of constraint to achieve the desired results.[12] The purpose of management in this new era of business was to administer not only the processes and routine of the enterprise, but also the associated clerks who dealt with the daily paperwork, according to Braverman 'management has become administration.'[13] The systematisation of the office management and the growing control over office staff became an increasing need as these administrative centres continued to expand. In traditional offices this work was done in spaces 'which contained only a few desks separated by railing from the proprietor, it was, in effect self-supervising.'[14] But as businesses like the railroads continued to grow

> This situation changed, the intimate associations, the atmosphere of mutual obligation, and the degree of loyalty

[11] Braverman, p. 183.
[12] Ibid, p. 184.
[13] Ibid, p. 186.
[14] Ibid, p. 211.

> which characterized the small office become transformed from a prime desideratum into a positive liability, and management began to cut those ties and substitute the impersonal discipline of a so-called modern organization.[15]

In this way the railroads would establish the pattern of the modern business enterprise, utilizing managerial hierarchies of 'lower and middle managers [who] handled production, distribution, purchasing and other functions' and 'top managers, [who] coordinated and monitored their activities and planned and allocated resources for future production and distribution.'[16] But Chandler also points out that they were also 'the first to have a central office' from which these managers could manage.[17] With the centralisation of these new power structures, and as the numbers of new administrators grew there arose the need for a more purpose-built space for them to work from. Mills wrote, 'however big or little and whatever the shape, the minimum function of an office is to direct and co-ordinate the activities of an enterprise.'[18] The goal of the office was to direct the activities of the business, and to deal with the paperwork that business created. A dedicated office space became a functional necessity, it would be the brain that directed the company, dealing with the information and data needed for the business to function; it was also a place for the army of paper-handlers to. In the 1920s German journalist Siegfried Kracauer commented upon visiting

---

[15] Braverman, p. 211.
[16] Chandler '*A Framework for Analyzing the Modern Multiunit Enterprise and its Competitive Advantage'*, p. 10.
[17] Chandler '*The Visible Hand'*, p. 211.
[18] Mills. p. 190.

Berlin that the 'city seemed to be characterised by an 'employee culture,' now overrun it was by salaried office workers.'[19] He goes on to say that by this point in time, 'the culture of the office has become the dominant workplace culture of the country; the United States is a nation of clerks.'[20]

It is worth taking a moment here to reiterate something Marx wrote,

> When we consider bourgeois society in the long view and as a whole, then the final result of the process of social production always appears as the society itself.[21]

The increased complexity of the industrialised modern business required greater numbers of people to deal with the paperwork it created. The businesses in turn became increasingly dependent upon those self-same clerks to sustain established levels of production and profitability. This cycle of interdependence would, by the 1920s, give rise to the culture of the office, not just a few isolated individuals, but a new class of individuals, the white-collar worker. This new worker was lower paid, with fewer responsibilities and less of a relationship to the traditional role of the clerk. The white-collar workers responsibilities were increasingly 'simplified, routinized, and measured,'[22] their position and pattern of labour closer to the factory worker than the traditional clerical workers. In *Labor and Monopoly*

[19] Saval, p. 8.
[20] Ibid.
[21] Marx '*Grundrisse'*, p. 643.
[22] Braverman, p. 241.

Capital Braverman quotes sociologist Hans Speier who wrote that the social level of the salaried employee sinks with the increasing extent of the group,' a process 'which has been termed "the proleterianization of the white-collar worker."'[23] For modern business to thrive, and for a sustained system of production and consumerism, a new class was born. As Mills writes,

> The organizational reason for the expansion of the white-collar occupations is the rise of big business and big government, and the consequent trend of modern social structure, the steady growth of bureaucracy.[24]

I will deal with the white-collar worker more directly in a subsequent section, but it is worth going back to something I highlighted in the previous chapter with Marx' claim that, 'the process of social production always appears as the society itself.'[25] The growth of these new business enterprises, the expandsion of the administrative workforce, the stricter oversite by a new managerial heiracy, the adoption of new office and labour saving machine was all directed at the creation of new markets, and a drive to develop new and more efficient methods to make money. In the United States in the 1870s only 'six-tenths of 1 percent of all "gainful workers"' were employed in 'in clerical occupations.'[26] But because of this drive by the turn of the twentieth century that number had risen to '3 percent,' and by

[23] Braverman, p. 241.
[24] Mills, p. 68.
[25] Marx '*Grundrisse'*, p. 643.
[26] Braverman, p. 204.

the 1970s those employed in clerical work 'had risen to more than 14 million workers, almost 18 percent of the gainfully occupied.'[27] Such was the growth in American business enterprise, that by the middle of the twentieth century the 'country's businesses controlled 60% of global industrial production.'[28]

[27] Braverman, p. 204.
[28] Saval, p. 144.

Part Three: A New Office Design

In the previous section I examined the rise of new managerial hierarchies as a consequence of the expansion of the administative workforce, which was itself a result of the growth of those same business enterprises. I will show in this section how these increasingly complex organisational requirements led to the foundation of what would become the modern office. This will also lay the groundwork for my future discussion of office machines and how the perception of these office devices would subsequently be shaped by the individual's perception of the office and office work.

As the railroads expanded other industries, such as food shipping, benefited from the expansion of the rail network.

> Special adaptations of the means of transport to food shipping, in the form on insulated and refrigerated compartments (at first iced, later mechanically cooled), made possible the long-distance movement of the most essential commodities. [1]

As a result, 'cities were released from their dependence on local supplies and made part of an international market,' the industrialisation of the food industry providing the 'indispensable basis of the type of urban life that was being created.'[2] It was not just the food industry that adapted to this

[1] Braverman, p. 182.
[2] Ibid.

increasing industrialisation and the growing demands made by the urbanisation of modern America. The steel-frame industry witnessed an expansion in demand as urban centre rapidly expanded and soon replaced the 'railroads as the prime market for steel.[3] America's globally spanning network of business interests increasingly sought to centralise their operation. One of the results of this increased unification of business operations was the creation of a particularly American icon, one that would be adopted and replicated worldwide. The concentration of large numbers of workers, not only in terms of business structures but also in growing urban centres, required more space to house them, and through a combination of necessity and advances in architectural technology, the nation's skylines were forever changed with the rise of the skyscraper. Saval writes that,

> Between 1871 and 1923, New York built about seventy-four million square feet of office space; from the 1920s through the early 1930s, the city added more than thirty-eight million more – thirteen million built from 1930 to 1933.[4]

These monuments to America's financial and industrial prowess would come to epitomise modern American capitalism, and how modern American culture was perceived by the world. Mills writes,

[3] Braverman, p. 182.
[4] Saval, p. 98.

> As skyscrapers replace rows of small shops, so offices replace free markets. Each office within the skyscraper is a segment of the enormous file, a part of the symbol factory that produces the billion slips of paper that gear modern society into its daily shape.[5]

The skyscraper is one of the primary locations in Wilder's *The Apartment*. In the opening scene of the film the camera pans up over the front of the skyscraper where Jack Lemon's character works. In the opening few moments Lemon describes the company and gives a few specifics about his job, including the number of the desk he works at. The preciseness of this detail reflects the precision of the office layout and the routinized nature of the work he carries out. As the camera enters the building we see Lemon's character, C.C Baxter, nod his head along with the rhythmic drumming of the accounting machine he uses. In another scene we watch as a mass of office workers pour into the foyer of the skyscraper and are ferried to their destination by the fleet of elevator girls, whose sole job it is to operate these machines (fig 24). At the end of the day the process is reversed and the building is left empty, devoid of the noise of typewriters and counting machines that had filled its open-plan offices. The skyscraper seems to operate as an enormous filing cabinet, everything in its place, neat and ordered, and the work been done on the inside seemingly as structured as the design of the building itself. This style and the design of the office

[5] Mills, p. 189.

Wilder presents us with, structured and ordered, was also comparatively new and had a distinct purpose behind it. The rise of managerial hierarchies and the expansion of centralised administrative hubs meant 'that all forms of clerical work, not just routine or repetitive ones, could be standardized and "rationalized."'[6] The growing perception was that to manage these new office spaces was needed to a greater level of oversight, and in some cases it was more than just oversight.

> Early in the 20th century, behaviourist thinking, associated with operant conditioning - a type learning in which an individual's behaviour is modified by its consequences […] dominated. Operant conditioning, matched by Fredrick Taylor's scientific management, was manifest in the offices of the time.[7]

To this end **'**office layout was given an inordinate amount of attention.'[8] As one writer wrote, '"the output of one clerk was doubled merely by the re-arrangement of the work of the desks."'[9] Rather than this being the result of a new management technique or scientific design, Braverman writes that 'we many understand this was an effect of close and frightening supervision rather than a miracle of efficiency.'[10] One of the earliest examples was a radical new design by the architect Frank Lloyd Wright. His design was the

[6] Braverman, p. 210.
[7] Colin Beard and Price Ilfryn, 'Room for Improvement', *RSA Journal*, 159.5553 (2013), p. 38.
[8] Braverman, p. 214.
[9] Ibid, p. 210.
[10] Ibid.

first to open the interior space of the office, to allow in light, but also to allow a greater regimentation of the worker as supervisions and surveillance became easier. As Colin Beard and Ilfryn Price write in *Room for Improvement*,

> Frank Lloyd Wright's 1903 Larkin Administration building is often cited as the archetype of this approach with its overtones of the Panopticon and the supervisor gazing down on the rows of workers arranged as manual and stationary automata.[11]

Saval asks the question 'was this a communal team focused environment? Or was it one designed for easy supervision and surveillance, a way to enforce discipline and adherence to unity?'[12] According to Braverman, partially through these new office designs, 'management began to assert in the office its hitherto unused or sporadically exercised right of control over the labor process.'[13] Wright's design shows us the increased thought and deliberateness that was being given to the design and layout of the office and the consideration of how it might affected its occupants. He designed the structure to allow the maximum amount of light into the space, doing away with the earlier era gloom of the office space (fig 25). But the image also shows us the thought that went into the structuring of the interior workspace. The image shows us the calculated arrangement of the workers and their workplace. The long narrow space allowing for a greater

[11] Beard and Price, p. 38.
[12] Saval, p. 68.
[13] Braverman, p. 214.

regimentation and an increased supervision of the staff by managers. Each desk is placed in such a way as to be within eyeline of the managers elevated position. In much the same way as in Wilder's *The Apartment* the desks in Wright's building are neatly arranged in rows, each worker assigned a proportion of the working environment. The building appears to enforce this regimented way of work, the fixed lighting fixtures delineating the space and location of each desk, the narrowness of the space confining the possible spread of workers and office equipment. But this narrowness also adds a sense of confinement to the space, the image suggests that the space of the building and width of the desks was precisely worked out. While the roof does let in a significant amount of light, the height of the building combined with the narrowness of the space suggests an oppressive atmosphere. From the available information that can be gleaned from the image the walls of the room appear to loom over the workers, the solid uncomplicated brickwork reminding us of a prison, with the gaps in between pillars spaces for the cells. But the open-plan office such as the one envisaged by Wright was not the end point of office design. In 1964 the Herman Miller company, a supplier of office furniture, released a new range of office furnishings that they called the Action Office (fig 26). The Action Office was the brainchild of Robert Propst whose intent was to provide a flexible working environment that could be adjusted to fit the needs of the individual workers.[14] Propst's initial design did not have a significant impact on the business community and sales were lacklustre. But Propst

[14] Ralph Caplan, 'Robert Propst', *Design Quarterly*, 98/99 (1975), p. 40.

redesigned the Action Office and the release of Action Office 2 Propst would create something that would, unfortunately, come to haunt him and America's office workers. The first Action Office had been designed to be free-standing units with little to hem the worker in, designed to have a flexibility to suit a variety of needs, but with the second iteration of the Action Office came partitions. These partitions could be moved easily to accommodate the worker and any equipment they had to work with. Saval writes that 'the new Action Office would be a template for any individual to create his or her own ideal work space'.[15] While Propst had a genuinely optimistic view of his design's ability to improve the workplace Saval writes that 'reading through Propst's book is like peering into a mind concerned only with brains and legs, abstractions and motions. It is unencumbered by personalities.'[16] This promotional image from the Herman Miller Company illustrates, with hindsight, where office design was heading (fig 27). There were early concerns about this new design; one critic wrote in a letter to Herman Miller that the Action Office would have a 'dehumanising effect as a working environment', and the Action Office was 'admirable for planners looking for ways of cramming in a maximum number of bodies'.[17] Despite its designer's initial belief that the Action Office would be beneficial to its users,

> Sadly, the approach also allowed for extreme cellularization, standardization, anonymity, and conformity, which ran counter

[15] Saval, p. 211.
[16] Ibid. p. 214.
[17] Ibid. p. 215.

> to its goals. In the years to follow, blanket approaches to literal warehousing of people and universal applications again would ignore the individual in terms of differences and de-emphasize group communication.[18]

This image speaks to the reality of how Propst's design would eventually be used (fig 28). In each example of the actions office I have used there are elements which occur throughout. Each image shows a series of free standing furniture that can be moved and rearranged to suit the need and space available. Each image also shows a complete lack or ornamentation, or embellishment. I mentioned previously that the Xerox 914's design appeared to reflect the increasing simplicity and modular nature of office design. In the Action Office we see this design aesthetic becoming increasingly apparent as the pieces can be arranged into the most appropriate and efficient layout. Another thing we seen present in each image is that each arrangement of objects, understandably, is centred around the individual, they appear to be the focal point around which each item rotates. But as is noted with the progression of images the freedom of this arrangement begins to become more and more ridged. The first image shows the furniture free standing, not connected to anything else, suggesting the possibility of rearranging the pieces should the need arise. But by the second and third images those pieces are now fixed in place by dint of their

[18] Christopher Budd, 'The Office: 1950 to the Present', MoMA <https://www.moma.org/interactives/exhibitions/2001/workspheres/swfs/theOffice.pdf> [accessed 12 June 2018].

connection to other units of the same type. Another aspect that has now been added is the space dividers. The illustration in (fig 27), shows the walls which now anchor each part, and in (fig 28) we see the disconnecting nature of the design, within their own space the individuals sight line is cut, the rest of the office hidden behind beige walls. Another aspect that would eventually come to define this type of office space is notable in the progression of the images and that is the increasing regimentation of the space that the space begins to take. When Propst was interviewed about his design in 1998 he noted that, 'its design proved irrepressibly popular: forty million employees in America alone work in – by his own count' one of his creations.[19] What he did not mention in the interview was that 'by that point they were all known by the same name: the cubicle'.[20] The pervasiveness of the cubicle means that it would become an American staple, and the bane of millions of employees' working lives. An excellent example is its continued use throughout the *Dilbert* comic strip. In (fig 29) the cubicle bisects the frame, rising above Dilbert's head it frames the character and suggests that while he is in the cubicle it is the totality of his visible environment. For Dilbert his working day, and everything that follows is largely defined and encapsulated by the walls of his cubicle. The colour pallet of the image reinforces the banality and mundanity of his daily activity, and which by extension also seems to represent the perceived pointlessness of the work he carries out. This suggested atmosphere of pointlessness which *Dilbert* expresses is made all the more clear by the absurdity of the action he then

[19] Saval, p. 220.
[20] Ibid.

carries out in an attempt to elevate the perceived mundanity of his daily routine above the ridiculous. The comic strip seems to encapsulate the feelings the authors has about the daily routine and reality of office life and work. The character of Dilbert is placed in front of a computer day after day, seemingly detached from the outside world and from the labour of his own hands. The cubicle represented in the *Dilbert* comic strip characterises the assumptions made about the enforced conformity of the American worker, hemmed in and cut off from other individuals to carry on their specialised form of repetitious work. With each new stage, with each new design or idea, it seemed that this would be the abiding perception of the office, a regimented space, isolated individual carrying out tasks unencumbered by the distractions of others, and managed by an ever watching set of managers and supervisors. With that image in mind we can return to that initial scene described by Dickens in *A Christmas Carol*, 'the clerk', the office white-collar worker condemned to work 'in a dismal little cell beyond, a sort of tank'.[21] This would appear to be where the office begins and would continue to reside. Despite the myriad changes in the nature of capitalistic business, and the growth and advances in both administrative structures and management systems, our Western cultural perception of the office appears to have come full circle. And with this assessment comes the associated perceptions of those office machines that occupy the space along with those office workers.

[21] Dickens, p. 9.

Section Two – Office Workers

Part One: The Clerk

I have argued that it is the photocopier's primary function as an office machine that is the lens which shapes our perception of it, and which serves as the primary facet of its substance. Consequently, I will argue that both our Western cultural and individual perception of office work and the role of the office worker is central in shaping our perception of the photocopier. Therefore, in this section I will discuss the situation and role of the clerk and then the white-collar worker, examining the Western cultural perception of office work and those who carry it out. I will argue that the perception of office work, and the perception of those who are employed to do it, consequently has an influence on how we perceive the photocopier. I will also discuss how the individual's perception of their own situation as an officer worker may shape how they may perceive the photocopier as they interact with it within the sphere of necessary employment. My reason for this, as ever, is to continue to establish a framework for our perception of the photocopier and to help better define its wider cultural significance.

In the mid-1800s the position of clerk was one that was still comparatively rare. According to Savel, the clerk 'was a curious creature, an unfamiliar figure, an inexplicable phenomenon.'[1] The scope and scale of the Western business enterprises was such that 'even by 1880, less than 5 per cent of the total workforce, or 186,000 people [in the United States], was in the clerical profession,' although in one location, the city, 'clerks [had] become the fastest-growing population.'[2] In the 1856 poem, *New York Dissected*, Walt Whitman describes this growing crowd of city dwellers in less than flattering terms, he calls them a,

> jaunty crew of the down-town clerks—a slender and round-shouldered generation, of minute leg, chalky face, and hollow chest—but trig and prim in great glow of shiny boots, clean shirts—sometimes, just now, of extraordinary patterns, as if overrun with bugs![3]

Whitman's description depicts them as weak, delicate, and subservient, to Whitman, having, sensibilities seemingly less than masculine. Increasingly the clerk was to become a fixture of Western cultural life, and with them the association of paperwork and mundane administrative tasks. One of the earliest examples can be found in one of English literatures most well-

[1] Savel, p. 13.
[2] Ibid.
[3] Walt Whitman, 'New York Dissected', The Walt Whitman Archive, 2018 <https://whitmanarchive.org/published/periodical/journalism/tei/per.00272.html> [accessed 21 March 2018].

known works, Charles Dickens' *A Chrismas Carol*. In it Dickens gives us a description of Ebenezer Scrooge's business enterprise, and a brief introduction to his employee Bob Cratchit and his lot..

> The door of Scrooge's counting-house was open that he might keep his eye upon his clerk, who in a dismal little cell beyond, a sort of tank, was copying letters.[4]

In this brief vignette we are given a glimpse of Scrooge's character, but we also see in Cratchit a figure, who at this point in the story, is solely defined by his role. Subsequently we see that Cratchit is a man of two worlds. In the first he is oppressed by the greed and miserly attitude of his employer, and in the second we see him surrounded by a loving family beset by problems arising from financial hardship. In this way the clerk in Dickens' story is presented, initially, as someone bound by privation to a miserly employer, driven by the need to provide for his family. This feature of the clerk as one who was subserviant to another would become a significant factor in the eventual perception of office work, and the photocopier as unrewarding and banal, something I have touched upon previously and will come back to in a subsequent seciton. But despite these unfavourable representations of the nineteenth century clerk their position was actually one of privilege and comparatively elevated social status. Savel writes that,

[4] Dickens, p. 9.

> a small shift in power had begun to take place. If people who "worked with their hands" still assumed their possession of the world of things, clerical workers, those working "with their heads," were now at the heart of capitalism's growing world of administration and direction – close to power, if not exactly in control of it.[5]

As I have previously mentioned the number of clerks working in the United States during the latter part of the nineteenth century was comparatively small; the position of clerk was a privileged one, highly sought after. According to Braverman 'the clerk was more a family servant than a wage labourer […] a professional and undeniably a member of the middle class.'[6] This comparison to the waged labourer, particularly in terms of financial renumeration, is one of the keys factors that made the position of clerk so prestigious. At the time of Dickens' writing 'manual workers received hourly or piece-rate-wage,' while the clerk would have earned an annual salary.[7] This afforded the clerk 'a measure of stability that manual workers never enjoyed,' and conferred a certain social status upon the recipient.[8] The role of the clerk was a coveted position, offering 'good job security,' elevated social standing, and greater financial wherewithal.[9] This meant that in terms of 'prospects, not to mention status and even dress, the clerks stood

[5] Savel, p. 21.
[6] Bravermen, p. 204.
[7] Savel, p. 21.
[8] Ibid.
[9] Kim England and Kate Boyer, 'Women's Work: The Feminization and Shifting Meanings of Clerical Work', *Journal of Social History*, 43.2 (2009), p. 310.

much closer to the employer than to factory labor.'[10] Therefore, writes Braverman, we are mistaken if we think of the clerks of the early nineteenth century as the ancestors of the modern white-collar worker.[11] But rather, according to the authors of *Women's Work: The Feminization and Shifting Meanings of Clerical Work*, the role of clerk was a position we might more right 'associate with middle management today.'[12] In the previous section I discussed the single unit pattern of Western business enterprise of the mid-nineteenth century. It was this pattern of management and ownership that resulted in the clerk having greater responsibility and authority than the modern white-collar worker. Braverman writes that 'in the early industrial enterprise […] there was generally fewer than a half-dozen [clerks] in even the largest firms,' and due to the structure and day-to-day operations of these enterprises the clerk 'was semi managerial in terms of the present distribution of functions.'[13] Prior to the modern multiunit enterprise in 'its most general aspects,' the work of the clerk might entail 'accounting and record keeping, planning and scheduling, correspondence and interviewing, filing and copying, and the like.'[14] He goes on to write that,

> as long as the requirements of banking, commerce, or industry did not exceed the resources of family concerns or small

[10] Braverman, p. 204.
[11] Ibid, p. 203.
[12] England and Boyer, p. 310.
[13] Braverman, p. 203.
[14] Ibid.

> partnerships there could not be an extensive development of clerical labor.[15]

This meant that 'clerical work in its earlier stages [was] liken to a craft, and the clerk to craftsmen' [16] Modern day white-collar work has been compared to factory labour, the roles and responsibilities of the average office workers deskilled and specialised, and the wageworker alienated from the product of their endeavours. Whereas, according to Braverman, the role of the clerk 'represented a total occupation.'[17] In a seemingly more haptic age, before computers, before the majority of office machines, the tools of the clerk were pen and ink, paper and envelopes, and financial ledgers. In *A Christmas Carol* we see, briefly, Dickens' description of Bob Cratchit's job, which appears to be copying letters. Ten years later in *Bartleby the Scrivener*, Herman Melville depicts the daily routine of the story's protagonist, the eponymous Bartleby. He is described as someone for whom the practice or activity of paperwork appear to be not just a necessary part of his job but something of a calling. Melville writes,

> as if long famished for something to copy, he seemed to gorge himself on my documents. There was no pause for digestion. He ran a day and night line, copying by sun-light and by candle-light. I should have been quite delighted with his

[15] Braverman, p. 203.
[16] Ibid, p. 206.
[17] Ibid.

> application, had he been cheerfully industrious. But he wrote on, silently, palely, mechanically.[18]

In these descriptions the mid-nineteenth century clerk appears, to the eyes of the writer at least, to share a closer relationship to the ancient scribes and monks who copied out religious texts than to the office workers of today. Yet, despite the prestigious nature of the clerk's position, there is in these descriptions an assumed banality to the work being carried out. The work appears repetitive, monotonous, involving endless piles of paperwork which appear to be the clerk's only output; correspondence, ledgers, these appear to be the clerk's sphere of significance. Equally the setting in which these clerks operate, to our eyes at least, appear dismal. Bob Cratchit is described as working in a 'sort of tank.'[19] Melville's narrator describes the views from the office in which Bartleby work as,

> at one end [...] look[ing] upon the white wall of the interior of a spacious skylight shaft [...] this view [...] considered rather tame. The view from the other end [...] offered, at least, a contrast, if nothing more [...] an unobstructed view of a lofty brick wall, black by age and everlasting shade [...] the interval between this wall and mine not a little resembled a huge square cistern.[20]

[18] Melville, p. 6.
[19] Dickens, p. 9.
[20] Melville, p. 2.

From our contemporary view point these men seem worthy of our pity. They appear, through necessity, tied to their employers. This is particularly evident in Bartleby's case when his stubborn candour ultimately sees him dismissed from his position and eventually imprisoned; we are shown what happens when this cultural hierarchy of master and servant, employer, employee bond is broken.[21] The clerk is not his own man, in these stories he is dependent upon the financial and business acumen of an employer, in a role of banal and repetitious labour. Reading these materials, we see that even at the time the role or position of clerk was one that gave rise to conflicting perceptions and opinions. The position of clerk was seen as a prestigious one, lauded and aspired to due in part due to its 'close[ness] to power' and its liberation from the factory.[22] Simultaneously, Dickens and Melville depict some of the perceived downsides of office work, its banality, and the subservience required of the clerk, an opinion echoed by Whitman who thought of the clerk as a 'slender and round-shouldered generation, of minute leg, chalky face, and hollow chest.'[23]

[21] Melville, p. 26.
[22] Savel, p. 21.
[23] Whitman, https://whitmanarchive.org/published/periodical/journalism/tei/per.00272.html

Part Two: Administration and Management

In the period leading up and proceeding the turn of the twentieth century the contradictory figure of the clerk would begin to undergo dramatic changes. The role and responsibility of the clerk would begin to be transformed and would eventually give way to the more familiar figure of the white-collar worker. As I have previously discussed, the growth of the railways resulted in the establishment of a distinctly new way of managing and administering these expanded business enterprises. Railways were managed by some of the first large corporations to establish multiunit business enterprises. With subdivisions responsible for the management and administration of maintenance, planning, finance, staff, and more, the railways needed to create 'a sizable administrative organization.'[1] This resulted in the hiring of more office staff and the employment of a new 'set of managers to supervise these functional activities over an extensive geographical area.'[2] As Chandler writes, a consequence of this was the

> formulation of brand new types of internal administrative procedures and accounting and statistical controls. Hence, the operational requirements of the railroads demanded the creation of the first administrative hierarchies in American business.[3]

[1] Chandler, p. 87.
[2] Ibid.
[3] Ibid.

This pattern of administrative hierarchy would result in a change in the pattern of clerical work. Each of these new corporation subdivisions required 'for its own smooth functioning, internal departments.'[4] These internal department would specialise to deal with the specific requirements of their designated role. At the same time these new department organisational structures would come to 'reflect and imitate the subdivisions of the entire corporation;' for example each department would come to 'requires its own accounting section.[5] So according to Braverman 'each corporate division takes on the characteristics of a separate enterprise with its own management staff,' while at the same time reflecting the wider corporation departmental divisions.[6] For the railways and other corporation organisations who began to operate in this way the direct control of management over the business and over staff became increasingly important. William H. Starbuck argues in *Organization Growth and Development* that 'administrators, [managers], have sought to lessen the uncertainty of their prospects.'[7] To bring permanence to both these new administrative structures and the organisations themselves these administrators have sought to 'control[e] more and more of the factors which determine the [success] of their plants and firms.'[8] To achieve this 'they have attempted to control, in ever greater detail, production costs,

[4] Braverman, p. 183.
[5] Ibid.
[6] Ibid.
[7] William H. Starbuck, 'Organization Growth and Development', in *Handbook of Organizations* (Abingdon, Routledge, 2013), p. 506.
[8] Starbuck, p. 506.

intensity of work,' and most importantly 'market demands for products.'[9] The years between 1850 and 1900 for the railways, and many other corporations, were 'years of system-building.'[10] Seeking to perfect the internal organisational structure and control the market meant that,

> what new enterprises did do was take over from the market the coordination and integration of the flow of goods and services from the production of the raw materials through the several processes of production to the sale to the ultimate consumer...managerial hierarchies were able to monitor and coordinate the activities of a number of business units efficiently than did market mechanisms.[11]

Is it for this reason that, according to Chandler, 'American capitalism became managerial capitalism.'[12] Consequently, clerical work was increasingly transformed from the occupation of a few individuals into a 'mass occupation, more appropriately categorized as "working class" than as "middle class."'[13] The increase in numbers of administrative staff would mean that increasing levels of control were needed, office work went from something 'merely incidental to management into a labor process in its own right' and 'the need to systematize and control it began to be felt.'[14] As long

[9] Starbuck, p. 506.
[10] Chandler, p. 11.
[11] Ibid.
[12] Ibid.
[13] England and Boyer, p. 311.
[14] Braverman, p. 210.

as the nature of any business enterprise did not exceed the capability of family control or small partnership then the work carried on in offices 'was, in effect self-supervising, and require only the usual prudent safeguards against embezzlement.'[15] This did not mean that the clerk was autonomous individual, in these small firms the office space would have often 'contained only a few desks separated by railing from the proprietor.'[16] But the numbers of clerks employed meant that 'clerical expenses were small and incidental to production expenses.'[17] The overall financial outlay on clerical staff, and the success of failure of the business, was not 'significantly dependent upon the efficiency of the clerical labor process.'[18] Therefore, the clerk was allowed some measure of freedom, and given a certain amount of individual responsibility for the product of their labour. But as this situation changed, as firms like those that managed the railways expanded their operations, and consequently their administrative structures, then,

> the atmosphere of mutual obligation, and the degree of loyalty which characterized the small office become transformed from a prime desideratum into a positive liability, and management began to cut those ties and substitute the impersonal discipline of a so-called modern organization.[19]

[15] Braverman, p. 211.
[16] Ibid.
[17] Ibid.
[18] Ibid.
[19] Ibid.

The growing number of clerical staff and the complexity of these enterprises would result in new managerial hierarchies. One American firm realised that its current means of communication between staff was becoming increasingly problematic. Its solution was the formation of interdivisional committees who could oversee the major functions and activities of the business. The corporation formed 'product management, works management, power and maintenance, sales, and industrial advertising' committees who had 'their own salaried staffs.'[20] Using this technique 'top management was able to free itself of operating biases and responsibilities,' giving direct responsibilities for each division to the committee, who in turn give direction to managers and supervisors, who subsequently directed the clerical staff.[21] The purpose if these new organisational structures, the establishment of management hierarchies, was control, something acutely seen in the programs of office management that these growing firms adopted. One instructional manual, *Office Management: Its Principles and Practice*, makes the point that the function of the office is control,

> it is the work of the office organization, under the supervision of the office manager, to devise records, methods, and systems for carrying out the function of control and co-ordinating the activities of one department with those of another.[22]

[20] Chandler, p. 462.
[21] Ibid.
[22] Lee Galloway, *Office Management Its Principles and Practice* (New York, The Ronald Press Company, 1922), p. 4.

It is also clear from this that the writer also believes that the purpose of the managers is control over the office. The office was seen as fundamental to the success or failure of the business enterprise, therefore the office had to be managed and the labour of its clerical workers tightly controlled.

> The essential feature of this effort was to make the clerical workers, of whatever sort, account for the entire working day. Its effect was to make the work of every office employee, not matter how experienced, the subject of management interference. In this way, management began to assert in the office its hitherto unused or sporadically exercised right of control over the labor process.[23]

This increasing management control would gradually put an end to the work of the clerk being carried on 'according to traditional methods, independent judgement, and light general supervision.'[24] The clerk's labours would therefore be carried out in a way that was ever more prescriptive and controlled by the office manager.

> If the work of the office is to be carried on smoothly, accurately, with the utmost dispatch, and with least effort, it must be planed and scheduled. To plan effectively the office

[23] Braverman, p. 214.
[24] Ibid, p. 212.

> manager must know what work is to be do done, who is to do it and be responsible for its doing.[25]

To this end the clerical staff's duties would begin to be divided and standardised.[26] Subsequently the manner in which the clerk would carry out his tasks would gradually begin to reflect the way in which factory work was directed and recorded. This was done with the purpose of 'knowing the capacity of every clerk,' and consequently 'spurring him to even better efforts.'[27] According to one writer 'the output of one clerk was doubled merely by the re-arrangement of the work of the desk.'[28] But as Braverman points out,

> we many understand this was an effect of close and frightening supervision rather than a miracle of efficiency; this was understood by managers as well, although concealed beneath a "scientific" mystique.[29]

The process of clerical labour begins to reflect the processes of production exemplified by factory labour. Offices appear to become '"production" machines,' and the production of the clerk an endless stream of paper carried out through a process and under the sort of supervision seen in places like 'the cannery, the meatpacking line, the car assembly conveyor,'

[25] Galloway, p. 24.
[26] Ibid, p. 434.
[27] Braverman, p. 213.
[28] Ibid.
[29] Ibid.

and its workers 'organized in much the same way.'[30] The increasing numbers of those involved in clerical work would, according to sociologist Hans Speier, see 'the social level of the salaried employee sink[ing] within the increasing extent of the group;' something which he concluded led to 'salaried workers to be proleterianised.'[31] At the same time the routinisation of clerical labour also gradually led to the deskilling and specialising of the work; this, when combined with the growing use of office machines (something I will deal with in the next section), would increasingly alienate the labourer from the work of their own hands. It is briefly worth noting, and is something I will return to at the end of this section, that, according to Braverman, this alienation through deskilling and specialising was most evidently demonstrated as the numbers of female salaried employees increased. He writes that the growing number of female clerical workers would mostly 'perform subordinate work.'[32] He writes that the man would typically have the principle authority, while the women was 'typically the subordinate,' and it is these subordinate employees who would 'perform duties which are specialized and schematized down to the minutest detail.'[33]

It is worth noting before I move on that although clerical work was beginning to reflect both the pattern and social status of factory work the clerk was, at the turn of twentieth century, still a privileged position partly because it was not factory work. Savel writes that the 'office offered a

[30] Braverman, p. 208.
[31] Bob Carter, *Capitalism, Class Conflict and the New Middle Class* (Abingdon, Routledge, 2016), p. 27.
[32] Braverman, p. 241.
[33] Ibid.

potential refuge from that other icon of tedium, the factory.'[34] Also the clerical worker was still perceived to be closer to the centres of financial power, with greater prospects of both self-improvement and promotion. For the clerk 'the potential for upward mobility and respectability was ritually affirmed.'[35] But, with the change were hierarchical organisational structures, with the increase in clerical numbers and the routinisation of the work there became a 'dissonance between the perceived potential of the office and its actual nature.'[36]

[34] Savel, p. 5.
[35] Savel, p. 36.
[36] Ibid.

Part Three: The White-Collar Worker

Between 1900 and 1950 a new stratum of clerical workers arose whose role mirrored the role of the clerk in that they primarily dealt with paperwork, but whose actual responsibilities were increasingly specialised and routinised. This was arguably the moment when the white-collar worker, rather than the clerk, became the primary functionary within the office. It was during this period that the sense of privilege which had surrounded the role of clerk and office work faded. In the twentieth century the white-collar worker, argues Mills, has never 'been independent […] He is always somebody's man, the corporation's, the government's, the army's.'[1] The white-collar worker is, according to Mills, someone who is closely supervised, given little freedom, and also under the close watch of the managerial eye. This individual had by the 1950s in 'some heavily mercantile cities, such as New York […] become ubiquitous; the 1955 census recorded clerks as the city's third largest occupational group,' and the perception of this now ubiquitous group was not flattering.[2] According to Savel,

> when cartoonists wanted to depict John Q. Public, they showed a white-collar worker: as one contemporary account had it, "a frail man, timid, retiring, a tiny derby seated atop a worried brow."[3]

[1] Mills, p. xii.
[2] Savel, p. 14.
[3] Ibid, p. 113.

The popular press and media represented the white-collar worker in less than complimentary terms. Billy Wilder's 1960s film *The Apartment*, a film which coincided with the arrival of the Xerox 914, shows how that perception abided well into the middle of the twentieth century. In the film the chief protagonist and owner of the apartment from which the film takes its title is one C. C. Baxter. We see that Baxter is bound by necessary employment to the company. To remain in the good graces of his superiors, he is forced to allow them the use of his apartment for their adulterous liaisons. He is eventually given an enviable position within the company by its chief executive, but only as long as he continues to acquiesce to the demands made by that same man. The depiction of Baxter in Wilder's film appears to epitomise Mills' view that the white-collar worker is always someone else's servant. But despite the general pejorative perception of the white-collar worker this position was viewed by many who found themselves in the role, at least for a while, quite differently. Savel writes that in the era proceeding the Second World War, many of those who found themselves in these positions experienced

> a kind of unholy postwar calm – the feeling of having walked away from a train wreck that injured everyone else, not only unscathed, but healthier, happier, and stronger. "there arrives a day when the corporate sanctuary become our whole world," wrote Alan Harrington in his memoir of being a PR

man in a major corporation, Life in the Crystal Palace (1958).[4]

But this view of the corporate world as sanctuary was, was according to Savel, illusory, it was increasingly the fear of losing work that kept people in these positions; he writes that 'office jobs were hard to come by and easy to lose.'[5] Mills writes that 'white-collar employees are no longer immune to crises of employment.'[6] Historically clerical work offered more protection than factory or wage-workers but this was beginning to change before the outbreak of the Second World War, and aside from a brief abatement in the years after the war ended, would only intensify as the century wore on. Increasing costs, increased mechanisation, outsourcing, and white-collar work's increasing routinisation, meant that there were 'more people available to perform easier tasks, and the possibility of unemployment increased'.[7] The term 'organisation man' was coined by William H. Whyte in 1956 in his book *Organization Man* to describe those who would begin to see conformity to a corporate system as a way to stave off financial hardship. In talking to university students he found a silent generation that shied away from risk, and which made depressing statements about financial depression.[8] He was amazed at those students who 'weren't seeking excitement, or challenge. They wanted a safe haven. They wanted to work

[4] Savel, p. 155.
[5] Ibid, p. 182.
[6] Mills, p. 281.
[7] Ibid. p. 282.
[8] William H. Whyte, *A Time of War: Remembering Guadalcanal, a Battle Without Maps* (New York: Fordham University Press, 2000), p 106.

for AT&T and General Electric.'[9] The once prestigious nature with which white-collar work was held was increasingly replaced by a pragmatism that cast financial dependence upon the success of the corporation, and an individual's creative activity and labour were given over to the continued sustenance of the corporate system. This work would increasingly become a grind; Mills writes that 'in the lower reaches of the white-collar world, office operatives grind along, loading and emptying the filing systems' becoming 'operators of light machinery, comptometers, Dictaphones, [and] addressographs.'[10] The transposing of factory methods onto the office routine 'turned white-collar work into numbing, repetitive labour.'[11]

Alongside this depreciation in the prestige of office work was the equally unflattering depictions of the office as the backdrop against which this work takes place. In King Vidor's 1928 film *The Crowd*, the office is depicted as a machine

> for producing conformity, churning out thousands of drones in cavernous spaces dressing in the same standard attire, working at the same kind of desk talking in the same tired mannerisms.[12]

[9] Whyte, p. 106.
[10] Mills, p. x.
[11] Savel, p. 6.
[12] Ibid, p. 113.

By the mid-point of the twentieth century this opinion hadn't improved. In *The Apartment* Baxter is depicted as just one of countless individuals working in the offices of a fictitious insurance firm, and his office presented as a huge open space arrayed with rows of identical desks (fig 30). Each desk occupies its own space, regimented in neat rows and line throughout the open space. The lines of lights in the ceiling reflect the pattern of desk below, and as if to highlight the regulated nature of the office even further the equipment on the desks is similarly arranged in the same configuration on each desk, with no personal embellishments or other features to break up the monotony of each individual's work space. In one scene Baxter is pictured surrounded by countless others repeating, to the viewer at least, the same ambiguously repetitive activity. In (fig 31) the image framed by the camera shows rows and rows of identical desks stretching off into the distance, individuals, including the main character, carrying out a seemingly identical task to the person next to them, behind them, and in front of them. As the scene plays out, and is repeated throughout the film, we watch them repeatedly all carrying out the same activity over and over again, the endless clatter of the counting machines an accompaniment to almost every scene which takes place in office. In Wilder's presentation of office work Baxter is just one of a countless mass, each one endlessly repeating the same process again and again, bound to a desk and office machine. Another, more recent, fictional representation of the office is found in Ricky Gervais's 2001 British TV mockumentary *The Office.* It chronicles the day-to-day activities and personal lives of a group of office employees who work for a

branch of the fictitious Wernham Hogg Paper Company. The show exemplifies current perceptions of office work and the role of the white-collar worker. It is filled with self-important characters, social awkwardness, the frustration of banal work, and desperate desire to be anywhere else. In one of the opening scenes of the first episode the character played by Martin Freeman talks to the off-screen interviewer about his role and one of the company's sales representatives. He describes his role as one in which he has to, '"speak to clients on the phone, about the quantity and type of paper and whether we can supply it to them, and whether they can pay for it,"' at which point he breaks off and says '"I'm boring myself talking about it."'[13] His frustration and lack of enthusiasm for his work is evident in his demeanour as well as his language, and his frustration is echoed by other members of the cast. His, and the majority of the other characters' frustrations and the obvious banality of the work they do is set against a backdrop that is a cluster of beige furniture, piles of papers, polystyrene ceiling tiles, and bland conference rooms. The perception of white-collar work and the location in which is it carried out is depicted as bland, and seemingly pointless. Whether it is Wilder's or Gervais's depiction, the individuals who find themselves employed as white-collar workers are seemingly confined by corporate and administrative structures that frustrate and bore, and the offices themselves only exacerbate those feelings. Against bland and regimented office structures, Mills argues that the white-collar worker has become self-

[13] Ricky Gervais, The Office, The Office (London: Entertain Video, 2004).

alienated as he subsumes his own desires to the corporate whole. He argues that 'the individual employee is a unit in an administrative hierarchy of authority and discipline.'[14] This self-alienation, he writes, becomes 'an accompaniment of this alienated labour,' something which reflects Marx's argument about the alienation of the factory worker.[15] In *Marx and the Machine* author Donald MacKenzie writes that

> a form of alienation is involved here […] the literal alienation of the collective nature of work. For that collective nature is here seen a becoming the power of another, of the capitalist. In addition, the physical concentration of workers under the one roof greatly facilitates the down-to-earth tasks of supervision: enforcing timekeeping and preventing embezzlement.[16]

The office then, according to Braverman, and as portrayed in these fictitious examples, is 'nothing but a white-collar factory.'[17] As the 'full range of factory organization and techniques' is applied to office work it can be 'simplified and specialized,' and 'work standards for each operation can be set up and applied to individual workers.'[18] The white-collar worker is increasingly alienated from the products of his work, he does not make

[14] Mills, p. 209.
[15] Ibid, p. xvii.
[16] Donald MacKenzie, 'Marx and the Machine', *Technology and Culture*, 25.3 (1984), p. 475.
[17] Braverman, p. 242.
[18] Mills, p. 196.

anything, ‘no product or craftsmanship can be his to contemplate with pleasure as it is being created and after it is made.’[19] For the white-collar worker his operation, his output, is paperwork, the office worker goes through what Braverman calls a ‘paper routine,’ handling an endless stream of paperwork under the watchful eye of supervisors and management.[20]

I have examined in this section some of our Western cultural attitudes to office work, and their trend towards routinization and frustrating mundanity. My intention has been to demonstrate that it is this perception of the banality and frustration of the office and office work that acts as our primary framework for our perception of the photocopier as a banal and dreary piece of technology. It is the day-to-day experience of office work, increasingly routinized, set against the backdrop of the office which is the photocopier’s primary location, and the photocopier’s own functionality as a piece of office light machinery that helps shape these perceptions, and which we must also take into consideration what we later turn to consider its appropriation. But before I move on to that in this next section I will examine another important feature of office work the has also helped shape our view of office work and the photocopier, the feminization of the office.

[19] Mills, p. xvi.
[20] Ibid, p. xvii.

Part Four: The 'Feminisation' of Office Work

Before I bring this section to a close I need to discuss one more crucial element of clerical, white-collar and office work, and that is the role of gender and the so called 'feminisation' of office work. Sharon Hartman Strom, author of *'Light Manufacturing': The Feminization of American Office Work, 1900-1930*, writes that

> the connection between women and office work appears to be both inevitable and somehow "natural." […] Most historians of women's work have talked about the feminization of office work as a near fait accompli the moment women began to use typewriters.[1]

I have discussed previously that the white-collar worker is not the historical descendant of the clerk, rather the clerk should, as Braverman argues, be more appropriately understood as the progenitor of middle management, whereas the white-collar worker was a new class of workers. Braverman also argues that the claim for the white-collar worker being a new stratum of office workers is best iterated by two fundamental changes which took place within office work. The first being the relative pay, which decreased as the numbers of individuals involved increased and as the work was subdivided as each business enterprise required.[2] The second fundamental change that

[1] Sharon Hartman Strom, '"Light Manufacturing": The Feminization of American Office Work, 1900-1930', *ILR Review*, 43.1 (1989), p. 54.
[2] Braverman, p. 205

took place was the rise in the number of women involved in this work.[3] In the British census of 1851 only 19 women were counted 'under the headline of "commercial clerks;"' a number estimated to be 'no more than one-tenth of 1 percent.[4] During the Civil War in the United States the federal government hired an increasing number of female clerical workers, partly because there 'were not enough qualified men to fill the demand,' but also because they could, not inconsequentially, pay them less.[5] This practice continued and the government carried 'on hiring them in the following decades to take over hand work usually done by men.'[6] The reason for this was simple, government managers 'wanted to reduce labor costs.'[7] In 1866 the government had created a law which 'established a maximum salary for women of $900 a year in 1866, whereas maximum salaries for men ranged between $1200 and $1800.'[8] This resulted in the initial opposition to hiring women for low-level government roles quickly falling away as financial concerns overruled other objections. Strom writes that

> the Librarian of Congress succinctly stated a compelling reason for hiring women: "they could give good service for less pay than the men on his staff, thus resulting in economy."[9]

[3] Braverman, p. 205.
[4] Ibid.
[5] England and Boyer, p. 311.
[6] Strom, p. 55.
[7] Ibid.
[8] Ibid.
[9] Ibid.

By the turn of the century 'nearly one-third of all the employees in Washington offices of the federal government were women.'[10] During this period there was also an increase in the systemisation and mechanisation of the office work – I will deal with the mechanisation of office work more in the following section but it bears consideration here, as 'women were more likely than men to be hired for office jobs that were being subjected to systemization or mechanization, or both.'[11] Mechanisation and the specialisation of office work gradually increased the number of office jobs as it led to a growing division in labour and to the rise in the monotony of certain jobs. It was these jobs that were much more likely to be filled by women, 'whether performed in conjunction with machines or not,' and it was increasingly 'suggested through advertising' and the 'sex segregation in the office, that more interesting and varied jobs were reserved for men.'[12] This gender bias was a 'firmly implanted cultural notion' which said that it was more '"natural" […] to see women as likely candidates for routine work.'[13] A repercussion of this was the growing assumption that

> if women were doing office jobs, whatever the skills the jobs required, whether mechanized or not, their pay and status should automatically be linked to "operative" status.[14]

[10] Strom, p. 55.
[11] Ibid, p. 59.
[12] Ibid.
[13] Ibid.
[14] Ibid, p. 60.

As Donna Bobbitt-Zeher writes in *Gender Discrimination at Work: Connecting Gender Stereotypes, Institutional Policies, and Gender Composition of Workplace*, it was 'women first, workers second.'[15] The new white-collar jobs being created were increasingly associated with women because employers could hire women at a greatly reduced financial burden to themselves. It was a discriminatory cycle, because women were being denied access to other fields of employment so there were always a greater number of women seeking these jobs than jobs existed. This in turn enabled employers to keep wages for these posts low, therefore keeping women's wages lower than men's. Also, because there was a paucity of available jobs women were more likely to stay in school longer and 'therefore had the English and maths skills required of clerks,' this only increased their chances of being hired for those positions.[16] This tough competition and the shortage of jobs open to women also 'had the effect of making them less likely than men to leave low-paying jobs.'[17]

During the 1910s and 1920s there was a rapid increase in the number of 'women going into clerical work,' which led to a growing perception of these jobs as having being feminised. [18] This was partly due to large numbers of men who enlisted during the First World War, 'but more significant was the huge demand for clerical labor as office work continued

[15] Donna Bobbitt-Zeher, 'Gender Discrimination at Work: Connecting Gender Stereotypes, Institutional Policies, and Gender Composition of Workplace', *Gender and Society,* 25.6 (2011), p. 771.
[16] Strom, p. 60.
[17] Ibid.
[18] England and Boyer, p. 311.

its rapid expansion.'[19] Kim England and Kate Boyer, authors of *Women's Work: The Feminization and Shifting Meanings of Clerical Work,* note that 'in early 1918 there were about 61,000 women working for the railroads, and by October there were more than 100,000, 72% of them in offices.'[20] Women were increasingly entrenched in office positions, which is demonstrated by the fact that

> although most women hired for the industrial jobs during World War I throughout the country were fired in 1919, women office workers often stayed on; the war had demanded more deep-rooted modernization, permanently increased the number of jobs in the office, and installed women in them for the foreseeable future.[21]

What is worth highlighting here is that as the number of office jobs grew, rather than these jobs actually being 'feminised', with women taking over office or white-collar jobs from men, instead women 'took jobs created by the revolution in new methods of communicating, cost accounting and recordkeeping.'[22] So rather than the established clerical roles being feminised it was the newer, lower ranked white-collar office jobs, which were being created in increasing numbers, that were being filled by women.

[19] England and Boyer, p. 311.
[20] Strom, p. 67.
[21] Ibid, p. 68.
[22] Ibid, p. 69.

As Anne Phillips and Barbara Taylor write in *Sex and Skill: Notes Towards a Feminist Economics*,

> it was not that men's jobs were deskilled, and women drawn into them, but the new category of work was created which was classified as 'inferior' not simply by virtue of the skill required for it but by virtue of the 'inferior' status of women who came to perform it.[23]

In this new system it was these less prestigious positions that were more likely to be filled by women, and occasionally young men. In the older system, 'clerks (nearly all men) began in low positions but were promised access to promotions,' but in the new system women were largely 'expected to work with no expectations of promotion to management positions or significantly higher salaries.' [24] These new roles would increasingly be associated with women, and it was a function of gender discrimination in the work place that resulted in this work being 'feminised;' not the work itself imprinting upon those who assumed the roles but rather the growing number of women in those positions who shaped perceptions about the work. As Phillips and Taylor write, 'women workers carry into the workplace their status as subordinate individuals, and this status comes to define the value of the work they do.'[25]

[23] Phillips and Taylor, p. 84.
[24] Strom, p. 69.
[25] Phillips and Taylor, p. 79.

Once again during the next global conflict the numbers of women in work rose dramatically as men were conscripted to fight. In the decades following the Second World War the numbers of women in white-collar office positions rose again. By

> the census of 1961 in Great Britain and 1960 in the United States, the percentage of women [clerical work] had risen in both countries to about two-thirds. And within only another decade in the United States, three-fourths were women; this represented an increase from little over 200,000 female clerical workers in 1900 to more than 10 million only seventy years later![26]

One particularly significant position that women would come to dominate was the role of secretary. By 1970 approximately 2.75 million women were employed as doing secretarial work.[27] Braverman writes that the secretary was originally a position designed to 'extend the administrative scope of the entrepreneur and proprietor.'[28] The post of secretary would come to perfectly illustrate the ongoing discrimination of women in the workplace and exemplify the belief in the 'feminisation' of a certain stratum of office work. As new business enterprises grew it was increasingly thought 'wasteful' to have a manager spend time typing letters, opening mail, sending parcels, making travel arrangements, answering the telephone,

[26] Braverman, p. 205.
[27] Ibid, p. 235.
[28] Ibid.

[using the photocopier], etc.'[29] The new administrative and managerial hierarchy would outsource these duties to be 'performed by labor power hired at anywhere from one-third to one-fifth of the remuneration of the manager.'[30] But even this would eventually be deemed wasteful, and increasingly the role of secretary would be 'replaced by an integrated system' that would break down 'secretarial jobs into detail operations subdivided among production workers.'[31] This would result in a reduction in the 'number of secretarial workers to one-half, one-quarter, or even smaller fractions of their former number.'[32]

The shift from the clerk of the nineteenth century to the twentieth century white-collar worker exemplified the century's attitudes to women. The positions and skill level of the jobs that women would come to fill were generally significantly lower than the positions occupied by men. But even 'when men and women do work in the same industry, sex demarcations are still rigidly maintained.'[33] There is still a significant tendency to classify certain work as women's work, with a clear distinction made between it and men's work, 'with women's work almost invariably characterized by lower pay, lack of craft traditions, weak union organization, and - above all - unskilled status.[34] The significance of this for my discussion of the photocopier is that perceptions of the photocopier as a feature of the office

[29] Braverman, p. 245.
[30] Ibid, p. 235.
[31] Ibid, p. 239.
[32] Ibid.
[33] Phillips and Taylor, p. 79.
[34] Ibid.

are tied to a system which, shaped by a general discrimination towards women, associates office work with the inferior status of women. The demeaning perception of the banality of office work, and the historical trend toward gender discrimination in the office underlies any consideration then of the office and those tools, office machines, which have come to be associated with it. I will look at this idea more in the following section but I think it worth quoted again from Schwartz when he argued that,

> if women in offices had to become "thoughtful" copying machines, copying machine in turn require the presence and gradually took on the personae of women, whose "tendency of toward reproduction. While man's is toward production," wrote a man in Popular Science Monthly in 1985.[35]

The cultural discrimination women have faced in the workplace and continue to face has shaped our perception of the photocopier and demeaned its role and function in the office as those office jobs are themselves demeaned. Consequently our perception of the photocopier has shaped our perception of those jobs which require its use and those who have to use it. As the view of office work became increasingly one of 'feminization' then office work and the use of office machines became increasingly perceived as woman's work, which again reflects my early examination of Schwartz's discussion about the growing perception of women in the office as

[35] Schwartz, p. 226.

thoughtful machines. Subsequently the photocopier is perceived as a banal and mundane piece of technology because of these associations, a view that results in the conveyance of meaning upon those who use it and the jobs it is used for. I this next section I will move away from examination of the office worker and look more closely at the role of machines in the office.

Section Three – Office Machines

Part One: Labour-Saving Office Machines

I have so far discussed in this chapter how the role of the clerk and the white-collar worker, how the optimism of the clerk gave way to a perceived post-war white-collar resignation, and the office space was defined by an increasing regimentation and restriction of staff. A key facet of this increased regimentation of office work, and a significant feature of the office that I have touched upon throughout but want to come back to here is the use of office copying or labour-saving devices. In this section I want to examine the influence of office machines on the pattern of office work and the comparisons that can be drawn to mechanised factory work. I will then discuss the relationship between the 'feminisation' of office work and the use of office machines.

I have previously discussed the idea that mass production, and particularly mechanical mass production, when coupled with a steady supply of cheap labour is the foundation for the modern capitalist system. The full flowering of the automated process within the factory was seen by Marx as modern industrial mass production taking control of its own means of production: 'it

built up for itself a fitting technical foundation, and stood on its own feet'.[1] Marx believed that bourgeois modern industrial capitalism was only made possible by 'the [...] subordination of the mass of individuals', and that in the process the individual had become an appendage, an extension of the capitalist industrial machine.[2] In his view, the individual had become subordinate not only to the capitalist system but also to the mechanisms, the machines that made it possible. Braverman later expanded upon this argument in his book *Labor and Monopoly Capital* when he wrote that, 'the more machinery that has been developed as an aid to labor, the more labor becomes a servant of machinery.'[3] Both Marx and Braverman argue that these mechanised processes increasingly subordinate the individual, not only to the system but to the machines that make it possible. I start here because not only was mechanisation the foundation for modern capitalism and was therefore subsequently the foundation for the development of the modern office, but because the mechanisation of the office, it has been argued, mimics the factory's division, specialisation, and automation of labour. In 1920 office management expert T. George Frederick noted that in the previous ten years there had been a definite increase in the use of '"standardized methods" in offices' of the type 'originally developed in factories.'[4] He argued that office work had become

[1] Marx 'Capital', p. 263.
[2] Marx 'Grundrisse', p. 102.
[3] Braverman, p. 319.
[4] Strom, *Beyond the Typewriter: Gender, Class, and the Origins of Modern American Office Work, 1900-1930* (Urbana, University of Illinois Press, 1992), p. 187.

> simply production work of another kind, different only in its character, and not as different from factory work, as factory work differs between various factories. indeed, it is light manufacturing, and the principles are precisely similar.[5]

In *Cubed* Saval makes the point that working patterns in the office began to replicate those adopted by factory owners, resulting in creation of a de-facto office production line with clear demarcation of roles and responsibilities. In *White-Collar* Mills writes that

> as office machinery is introduced, the number of routine jobs is increased, and consequently the proportion of positions requiring initiative decreases. Mechanization is resulting in a much clearer distinction between the managing staff and the operating staff.[6]

An increasingly regimented and regulated office space, controlled by ever more efficient machines and new administrative hierarchies would see the office come to reflect the factory's method of mass production in which, as Marx's claimed the 'labourer becomes a mere appendage to an already existing material condition of production'.[7] It is the tendency, argues Braverman, for the capitalist mode of production to create deeper division of labour, which means for the white-collar worker that 'scheduling clerks,

[5] Strom 'Beyond the Typewriter', p. 187.
[6] Mills, p. 205.
[7] Ibid, p. 264.

inventory clerks, timekeepers, machine tenders, machine repairers, stock chasers,' and so on, increasingly 'performs simple labor in service to a complex machine.'[8] With the office's dependence upon machines and their subsequent influence on labour patterns it is possible to see Marx and Braverman's argument concerning the subordination of the individual to the factory machine played out in the office. One newspaper columnist wrote in the *Observer* in 1957 that the office was now seemingly run by 'smooth grey business machines.'[9] The mechanisation of the office would increasingly give direction to the function and pattern of corporate activity and the individual's pattern of employment. The individual is subsumed and directed by the machines they operate, the possibility of subjective expression supressed due the ongoing control of the machine and managerial oversight.

In a 1957 *Observer* newspaper article the journalist describes a 'typical' office scene. We have apparently done away with the beleaguered executive and rows and rows of accountants and desks. The office has been streamlined, paperwork is now ordered, and a single computer sits in a room of its own managing the office accounts without aid.[10] The picture is one of order and efficiency, where the stresses and strains of office work are relieved through the use of new technologies. This journalistic vision of a stress-free, streamlined office stands at odds with the, admittedly fictitious,

[8] Braverman, p. 320.
[9] John Davy, 'Getting the Paper Under Control', *The Observer*, 16 June 1957, p. 4.
[10] Davy, p. 4.

depiction of the office presented to us in Wilder's *The Apartment*, which was released only three years after the article was written. In Wilder's *The Apartment* there is plenty of stress, beleaguered staff, and countless rows of desks and accountants. But, while these two portrayals may differ, particularly in respect to their representation of the office worker, they do actually bear some striking resemblances. The journalist and film maker's versions of the office are both ordered, efficient machines carrying out roles once reserved for human hands; in the newspaper article it is the computer, while in Wilder's film it is the accounting devices, operated automaton-like by the actors. One thing missing from Wilder's vision, but present in the journalist's, is the photocopier. The journalist describes the photocopier in glowing terms. He writes that this 'new process' simplifies all office copying at a speed previously impossible. The office presented in this article is one ostensibly managed by these new business machines, machines that are able to relieve drudgery and aid in the more efficient day-to-day running of the office.[11] The results of the implementation of ever-improving technologies were not as welcome as the author of the newspaper article presented them. The new machines that the author discusses would actually equate to job losses; tens of thousands saw themselves replaced as these new processes and machines streamlined and deskilled the workplace. The tone in which this article is written, and the way it praises the ability of these machines to ease the drudgery of office life and cut back on the flow of unnecessary paperwork, demonstrates that the author had little idea that

[11] Davy, p. 4.

the photocopier would eventually become the single biggest cause of the thing the article claimed these new machines would eradicate, paperwork. Less than thirty years on another newspaper article highlighted the problem and the shift in attitudes away from praising the technology to lamenting a 'generation of pointless paperwork made possible by the photocopier.'[12] The author even goes on to describe it as 'one of the most unfortunate phenomena of the second half of the century'.[13] The chore of office work and the passivity of the workers increasingly appear to mirror the process of industrialised mass production, the routinised nature of the workspace, and the sublimation of the worker to the machine. In *New Connections: Social Studies of Science and Technology and Studies of Work* author Judy Wajcman writes that 'technologies not only change the nature and meaning of jobs and work activities, but they also reconfigure relationships between people and the spaces they occupy.'[14] The automation of the office changed the practice of clerical work. In their function these office machines, including the photocopier, created more monotonous and boring jobs as they deskilled certain tasks. Some of these new office machines, according to Strom, 'prompted the operator, who, in a sense, thus because part of the machine,' becoming 'so to speak, merely a cog in the machine.'[15] In the case of the photocopier, a minimum amount of human activity and a standardisation of the materials used in the process enables creation of

[12] Hamish McRae, 'Xerox Will Hardly Do For The Typewriter What It Did For The Photocopier', *The Guardian*, 18 November 1981, p. 14.
[13] McRae, p. 14.
[14] Judy Wajcman, 'New Connections: Social Studies of Science and Technology and Studies of Work', *Work, Employment and Society*, 20.4 (2006), p. 773.
[15] Strom, p. 57.

countless identical reproductions of an original captured by the photocopier's fixed field of vision, prompting the user when to press buttons, close lids, and change paper trays. People increasingly become isolated through specialisation, as Marx saw within the factory, subsumed by the machine, individuals are directed by the forms of produced, and the managerial hand.

Part Two: Devalued Labour and the Feminised Machine

The functions of office machines, the realisation of an office production line, requires, as Marx noted, a high level of specialisation similar to that found within the fully mechanised factory setting. Each time a process, such as the one the photocopier 'improved', is deskilled and reduced to an activity requiring minimal input, the esteem with which that activity is held is also reduced. Tasks are simplified, demeaned and cheapened by their apparent ease. Marx argued that the labourer, who commodifies his labour, reduces the value of his labour as those skills he once had are devalued. As I discussed previously, with the rise of multiunit business enterprises came the division and specialisation of clerical tasks. Consequently, the white-collar worker, assigned to a specific department, becomes responsible for a particular task, their own section of the production line. Unlike the clerk whose responsibilities covered a broader range of tasks due to the nature of smaller businesses, white-collar work was deskilled in each area in which the employee is not required. There is an increasing inability on the part of the office labourer to complete tasks other than those allotted to them by their employer. The replication of the production line becomes ever more evident as each individual employee is allotted a particular section of the process, at each stage the individual dependent upon the prior individual and essential for the next person in the chain, while at the same time completely separate from them. This high level of specialisation is intensified by the operation of these machines, offering little chance of deviation from pattern that these machines establish.

> For the office worker [...] interactions with the machine – whether telephone, adding machine, or typewriter – enforced a rhythm or repetition and fine coordination.[1]

This mechanisation enforced a pattern of repetition and in doing so also cheapened the value of the labour involved in the work. The view that machines would lead to a cheapening and undervaluing of human labour was not held only retrospectively but arose at the same time as the machines themselves. In 1811 the Luddites witnessed their profession slowly becoming dominated by new advances in technology.[2] They denounced the mechanisation of their profession, and in anger, occasionally resorted to violent demonstrations and the destruction of the machines that had begun to replace them. This anger and rejection of an increasing mechanisation of once skilled trades also found voice subsequently within the arts and crafts movement nearly ninety years later. William Morris and his ilk deplored the inevitable devaluing of the craftsman and his skill and sought to stop the widening gulf that had appeared between art and crafts. They held the view that anything created by machine would become increasingly culturally devalued and lessen the esteem in which the craftsman had once been held. They said that 'if artists cease to be found among the crafts there is great danger that they will vanish from the arts also, and become manufacturers

[1] Orvell, p. 4.
[2] Nicols Fox, *Against the Machines: The Hidden Luddite Tradition in Literature, Art and Individual Lives* (Washington, Island Press, 2004), p. xii.

and salesmen'.[3] They feared that what was happening to the craftsman would also happen to the artist; both would eventually become little more than manufacturers, operators of machines. They envisaged that a mechanised industrial system, driven by trade and financial gain, would lead to the loss of creativity and that what had once been creativity born of necessity would, as Marx said, be 'abolished' by the 'manufacturing systems in those spheres of production that it first seized upon'.[4] The organic process of a handcrafted production of need was being lost to a commercially-driven commodification of objects and labour. A newspaper report from 1983 highlights the damage inflicted upon the more traditional print industries by the advent of new technologies. It reports that in the previous decade the numbers employed by the printing industry declined by 55,000 to 250,000, and that the National Development Office forecast that that number could plunge by another 84,000 to 166,000. While not singularly responsible for this downturn in printing jobs, the article does make the assertion that it is in part due to 'expanding rival sectors such [as] photocopiers'.[5] Office machines, such as the photocopier, were originally seen as boons, devices that enabled the office worker a greater freedom and increased productivity, the photocopier was once hailed as a 'space age revolution.'[6] Those once futuristic machines would eventually become objects of contempt, objects that would begin to cause frustration rather than

[3] William Morris et al, *Arts and Crafts Essays* (London, Rivington Percival & Co, 1893), p. 5.
[4] Marx '*Capital'*, p. 262.
[5] Michael Smith, 'Jobs 'At Risk' In Print Industry', *The Guardian*, 02 February 1983, p. 14.
[6] Ritchie Calder, 'The Space Age Revolution Called Xerography', *The Guardian*, 06 November 1962, p. 3.

alleviate it. The seeds of this contempt stemmed from the same attitudes that Morris feared would bring about the devaluing of the craftsman-made object.

As offices and workplaces became increasingly governed by machines, the same deskilling and devaluing of labour was repeated. Although we do not equate the white-collar work with a craft in the way we may have with the labours of the clerk, office machines such as the photocopier can still be said to lessen the possibility of individual expression as they enforce a repetitive pattern of behaviour. This is significant when we also consider it alongside the growing perception of office work as feminised. As I have previously discussed these increasingly mechanised and routinised office positions would steadily be filled by women, and the jobs themselves gradually seen in an increasingly pejorative light. Partly this was due to the mechanised routinisation of the work, but also because of the gender discrimination directed toward the women who would come to fill those roles. Both manufactures of office machines and managers of growing administrative organisations envisaged 'a rationalized system with a division of labor based on gender,' with the more interesting or prestigious roles largely reserved for men.[7] As Strom writes,

> office machine companies, perceiving a golden opportunity to sell new products, urged businesses to buy machines […]

[7] Strom, p. 58.

> They quickly made the link between women, routinized work, and machine operation that was helping to ease the transition of women workers into the office.[8]

There was a growing association between the low paid office jobs and the women who filled them. The discrimination women faced meant that 'women workers carry into the workplace their status as subordinate individuals, and this status comes to define the value of the work they do.'[9] Although men and women may work in the same industry, Phillips and Taylor write that 'sex demarcations are still rigidly maintained.'[10] A consequence of this has been the pervasive association between the female operators of office machines and the machines they operated. I previously quoted Schwartz who wrote that, 'women in offices had to become "thoughtful" copying machines, copying machine in turn require the presence and gradually took on the personae of women.'[11] This was because of the belief in 'the compatibility of women and machine with duplicating processes.'[12] The historical trend of employing women to fill light manufacturing roles carried over into the office, and eventually shaped the perceptions of the machines they operated. According to Wajcman, the relationship 'between gender and technology' is 'one of mutual shaping' as women in the workplace acquire 'their meaning and character through their

[8] Strom, p. 68.
[9] Ibid.
[10] Phillips and Taylor, p. 79.
[11] Schwartz, p. 226.
[12] Ibid.

enrolment and embeddedness in work machines.'[13] To paraphrase Crowley, in those office jobs which have been subjected to automation women are allowed to push the buttons, but it's the men who 'meddle with the works.'[14]

The modern office is organisationally and mechanically routinised, deskilling and specialising its tasks. It has also adopted the connection between women and light manufacturing that existed in the industrial era and associated that with the use of office labour saving devices. I would argue then that the photocopier and its use in office work exemplifies these tendencies. First, the photocopier enables the efficient mass production of paperwork, specialising to a fine degree in one task, while at the same time requiring minimal understanding to operate, reducing the need for other specialised forms of mass-producing paperwork. The photocopier requires little skill to use, as exemplified by the Xerox Corporation's first advert which I discussed in Chapter One, and needs only basic training to master. It is worth noting that in the advert the man is the one in charge and his young daughter is the one responsible for going to make the copy. We assume this is done to demonstrate that the machine is so simple to operate that even a girl can do it. When the process begins the operator has minimal input, reduced to making limited decisions and pressing a few buttons. One newspaper article from 1966 seems to delight in this deskilling and trumpets this as a positive corporate advance:

[13] Wajcman, p. 781.
[14] Martha Crowley, 'Gender, the Labour Process and Dignity at Work', *Social Forces*, 91.4 (2013), 12p. 1215.

> The difference now is that no transcription errors are made, preparation time spent by experienced staff is reduced, and the company has fewer employment worries at a time when competent staff is increasingly hard to find and keep.[15]

Second, as England and Boyer write 'new rounds of automation thus, once again helped shift the meanings and practices of clerical work.'[16] Office work, particularly the kind involving the more repetitive and mundane jobs increasingly became women works. Crowley writes that

> positions filled with women thus come to be regarded as "women's jobs" and workers in them, regardless of sex, are treated in ways consistent with societal, and more local notions of what it means to be a woman.[17]

An early newspaper report, trumpeting the exciting advances enabled by the photocopier, demonstrates the early discrimination bias against women and the photocopier as a device to be used by women. The article places the photocopier squarely within the purview of the office secretary who was assumed to be a woman; an assumption we also saw in the original Xerox advert for the 914. That same article would then illustrate the ease of its use by describing a second Xerox advert that had shown a monkey using it, (fig

[15] Parkinson, p. 11.
[16] England and Boyer, p. 319.
[17] Crowley, p. 1212.

32).[18] This commercial was the second advert for the 914 and a follow up to the advert that I discussed previously that showed a little girl using the photocopier for her father. The first advert sought to demonstrate that the photocopier was incredibly easy to use. The advert's creator George Lois 'made his point even clearer when he got a chimp to make copies, flying in the face of competitors who argued the original ad was a hoax.'[19] The set up for the advert is exactly the same as the previous one, seemingly using the same furnishings and layout, and the advert proceeds in exactly the same way as the first. We may be surprised at the idea that the first commercial was considered a hoax and required a second to reinforce the claims made by the Xerox Corporation about the 914, but it demonstrated why the photocopier was thought of as a revolutionary technology. The advert is looking to ridicule the original advert's detractors, while hoping to reinforce just how simple it is to use. But, within this advert is am implied pejorative view of the role of secretary, further suggesting that the post most associated with women was one even a chimp could carry out. The correlation between the female associated role of the secretary and the monkey is made pretty clearly. The simplicity of the task, when combined with the culturally assumed gender of the secretary as female, appears to suggest that such a banal and simplistic task is beneath the manager who obviously has more important things to do. This gender bias in favour of women using the

[18] 'The Xerography Boom Echoes Across the Globe', *The Washington Post*, 28 December 1964, p. 13.
[19] "So Easy Even a Chimp Can Do It: Now, it's a Chimp's Turn to Do the Talking." AdAge, February 4, 2013. http://creativity-online.com/work/xerox-chimp/31177, accessed 24/01/2018

photocopier still exists, particularly when compared to the more technical skill required to fix the photocopier. If you search of the phrase "using the photocopier" in a search engine you will find that in the majority of the images that search engine returns the person operating the photocopier will be a woman. (figs 7-8). But, if you search for "photocopier engineer" the vast majority of the images will be of men, (figs 33-34); women pressing buttons but men meddling with the works.[20]

One thing evident within the newspaper articles, adverts and their ilk is that the photocopier, as originally intended, was designed and viewed as a workplace tool, a mechanism of the office. The photocopier was bound by association to this location, and demeaned and devalued by the nature of its function as a means of mass production, as a creator of mundane jobs, and the gender discrimination associated with the so-called feminisation of office work. Increasingly the photocopier would also be tied to the general frustrations and necessary nature of capitalistic employment, the photocopier is tainted by association. If work is viewed as a functional necessity of the corporate capitalist system, which we can argue from Marx's discussions of the commodity of an individual's labour, marketed to earn enough to survive in a marketplace of commodities, then to function as part of the system, to attain the desired commodities and essentials, you become bound by the social structure of paid employment. Almost every aspect of the system is predicated upon selling the individual's labour to be

[20] Crowley, p. 1215.

able to participate in the system, to afford not to work, to acquire luxuries with which to enliven that 'free time'; even acquiring the necessary sustenance to survive requires participation. The Situationists, who I will look at in more depth in the following chapter, believed that this resulted in 'the ability to control one's own life [being] lost in the midst of all pervasive capitalist relations'.[21] In that system work becomes an essential, an individual's labour is bound up with social consumption. As Marx wrote, 'consumption creates the need for new production [...] that is it creates the ideal, internally impelling cause for production'.[22] We become tied in to our own consumption, compelled by a need:

> consumption ideally posits the object of production as an internal image, as a need, as drive and as purpose. It creates the objects of production in a still subjective form. No production without a need. But consumption reproduces the need.[23]

This form of consumption is enabled by financial remuneration gained from employment and turns capitalist employment into a functional necessity. This system creates a structured pattern of life that facilitates the spectacular and binds the individual to it. From this viewpoint the actions of all employees could be seen to be little more than deferential conformity, and an acceptance of a system created by and sustained by us, but which dictates

[21] Plant, p. 2.
[22] Marx '*Grundrisse'*, p. 33.
[23] Ibid.

our actions. By this logic that office machine, the photocopier, becomes a facilitator of the system that ties us to a continued compliance. It is at this point that this complex combination of interaction, experience and environment resolves to frame people's perceptions of this everyday office appliance. Marshall McLuhan writes that it is in the interactions between things, between processes, that our environment is formed. He writes that, 'environments are not passive wrappings, but are rather, active processes which are invisible'.[24] Our human experience is never passive but involves active engagements for the formation of our environment, environments that themselves form perceptions of those objects that create them, which in turn add to our interpretation of that environment. In this complex system of cause and effect, the photocopier becomes seemingly trapped by the environment it exists in and helped to create and, unlike the computer, which moved beyond the office to find a place in people's homes and as a recreation tool, the photocopier struggled to sever those ties and has become seemingly fixed within the office environment it helped to create.

[24] McLuhan '*The Medium is the Message'*, p. 68.

Section Four – Xeroxlore and Little Rebellions

Part One: The Appropriation of the Photocopier

I concluded the previous section claiming that our human experience is never passive and always involves some form of engagement and mediation by the environment. I quoted Marshal McLuhan's assertion that 'environments are not passive wrappings, but are rather active processes which are invisible.'[1] My intention has been thus far to demonstrate the cultural wrappings that not only dominate our perception of the photocopier, but which also includes the photocopier. The photocopier is a product of the corporate, it is a facilitator of capitalist expansion, and is an ever-present reality for countless office and workplace employees. My intention in this next section is to discuss the first of the alternate uses of the photocopier that I believe begins to not only demonstrate the photocopier's complex nature and its multifaceted substance, but also its function as an extension of the individual through its appropriation and subversion.

The premise of this section is based on a section of the study of folklore called Photocopylore, or Xeroxlore. Author of *Censure of a Photocopylore*

[1] McLuhan '*The Medium is the Message'*, p. 68.

Display, Nancy Michael, describes these folklore texts as 'a group of written, drawn, and typed humorous materials. They are usually roughly drawn, crass, and obscene in their content; some are pornographic.'[2] Xeroxlore, as I will continue to call it, is a subset of what authors of *Work Hard and You Shall be Rewarded: Urban Folklore from the Paperwork Empire,* Alan Dundes and Carl Pagter, call urban folklore. They write that 'urban folklore from the paperwork empire represents part of the human response to some of the ills of urban life.'[3] I have already dealt with certain aspects of these ills, particularly in relation to the function of the office or white-collar worker, in the previous section. In it I noted that over time the role of the office worker had increasingly come to reflect the pattern of the factory floor. A series of specialised roles and dictatorial corporate structures increasingly which alienate and isolate the individual from the results of their own labour. In *Cubed*, the author Nikil Saval writes that,

> the phrase "white-collar slave" became a popular one in the press, particularly to describe the stereotype of the office worker who failed to recognise the fact of his own exploitation.[4]

This increased perception of the individual exploited, and the growing feeling of being trapped within the capitalist system goes some way to describing 'some of the ills of urban life.'[5] Saval goes on to write that,

---

[2] Nancy Michael, 'Censure of a Photocopylore Display', *Journal of Folklore Research*, 32.2 (1995), p. 138.
[3] Alan Dundes and Carl R. Pagter, *Work Hard and You Shall Be Rewarded: Urban Folklore from the Paperwork Empire* (Bloomington, Indiana University Press, 1975), pxi.
[4] Saval, p. 114.

> transposing the factory model to the office turned white-collar work into numbing, repetitive labour. The mid-century middle manager began to feel himself as spiritually trapped – an 'organisation man,' his soul made captive to his company.[6]

This picture of the 'organisation man' is one which appears to show the individual isolated from themselves as well as others. The individual is mediated by the environmental dictate of the workplace. Dundes and Pagter write that 'clothing and hair styles, methods of advancement, and patterns of conduct are coded through company channels, both formal and informal.'[7] The individual worker is subsumed beneath the office or workplace environment, their individuality, at least partly, detached by the requirements of capitalistic employment. This pattern of work, which mimics Marx's description of the individual factory worker subsumed by the mechanism of mass production, removes the individual from themselves. Further to this 'there is the fact that office workers deal typically in the intangibilities of service. And service in the office.'[8] I have previously referred to Marx's claim that 'every producer becomes dependent on the exchange value of his commodity,'[9] and that subsequently the social character of capitalism demands the commodification of labour to participate. Consequently, this requires the 'subordination to relations which

---

[5] Dundes and Pagter, p. xi.
[6] Saval, p. 6.
[7] Dundes and Pagter, p. 124.
[8] Ibid.
[9] Marx '*Grundrisse'*, p. 84.

subsist independently of every worker, the individual conditioned by this exchange and division of labour.[10] The office worker is thus conditioned by their capitalist employment and, as Marx writes,

> it is impossible for the individuals of a class etc. to overcome them en masse without destroying them. A particular individual may by chance get on top of these relations, but the mass of those under their rule cannot, since their mere existence expresses subordination, the necessary subordination of the mass of individuals.[11]

Consequently, the individual is forced to operate in a space that is not their own; if they wish to participate in the capitalistic system of necessary capital, they must conform their individuality to the capitalistic will. This is why, as Dundes and Pagter write, that 'employees, we need to remember, operate necessarily in the space of the other,' they are 'expected to become Other even to themselves.'[12] This otherness sees the incorporated individual necessarily subsuming themselves 'in ways that accommodate not their own individuality but the goals of the corporation.'[13] It is with this in mind that Dundes and Pagter goes on to write that,

[10] Marx 'Grundrisse', p. 94
[11] Ibid, p. 102.
[12] Dundes and Pagter, p. 123.
[13] Ibid.

> if one can see the plight of being a small cog in a massive uncaring wheel, of being put upon by mechanistic forces of big business or government, one can readily appreciate the necessity of having urban folklore to ease the stain.[14]

Dundes' and Pagter's argument for the necessity of an active practice of urban folklore to relieve the strain of the incorporated existence of the individual hints at the possibility of regaining, or retaining, something of the individual's individuality. In *Photocopy Lore and the Naturalization of the Corporate Body*, the author Danielle M. Roemer writes that 'photocopy lore gives employees the opportunity to personalize the allegedly depersonalized corporational environment in which they work.'[15] This challenge to the paperwork empire gives 'occasion for folkloristic protest,'[16] and 'in the process, the "corporational" is brought down to the level of the "corporeal" in the service of employee iconoclasm and assuagement.'[17] If, as Marx argued, the nature of capitalistic, commodified labour sees the individual not only subsumed by the system, but also separated from the resultant products of their own labour, then Xeroxlore, this urban protest appears to allow the individual to momentarily create a corporeal object, an object that enables a moment of individualistic reassertion amidst corporate control.

---

[14] Dundes and Pagter, P. xviii.
[15] Danielle M. Roemer, 'Photocopy Lore and the Naturalization of the Corporate Body', *The Journal of American Folklore*, 107.423 (1994), 121–38 http://dx.doi.org/10.2307/541076 (p.121).
[16] Dundes and Pagter, P. xix.
[17] Roemer, p. 121.

I will look more closely at these objects in the next subsection, objects which Roemer calls 'worker-generated symbolic and metaphoric protests against corporational hegemony.'[18] But I want to give a moment to the engine that drives the creation of many of these moments of protest, these instances of individualist reassertion: the photocopier. In *Traditional Humor from the Fax Machine: "All of a Kind"*, author Michael J. Preston writes that 'the photocopy-machine has been the most frequently used device for the unofficial circulation' of these, often humorous texts.[19] Dundes and Pagter describes this use of the photocopier as 'the "liberation" of the material resources of its manufacture.'[20] The context of Xeroxlore and Dundes' and Pagter's description of it as a form of protest leads me to argue that the use of the photocopier must be included as part of that protest. In situation, the photocopier functions as part of the corporate environment; it is 'owned not by the employee but by a reified abstraction, the corporation.'[21] Consequently, any subversion of the corporate environment, any uses of the photocopier that are contrary to this hegemonic entity, can be seen as a rejection, a challenge, or protest against it. This form of appropriation, this repurposing of the photocopier, could be designated as what the situationists called *détournement*. *Détournement* is described by Sadie Plant in *The Most Radical Gesture: The Situationist International in a Postmodern Age* as something that 'lies somewhere between diversion and subversion.'[22] In

[18] Roemer, p. 121.
[19] Michael J. Preston, 'Traditional Humor from the Fax Machine: "All of a Kind"', *Western Folklore*, 53.2 (1994), p. 147.
[20] Dundes and Pagter, p. 128.
[21] Roemer, p. 123.
[22] Plant, p. 86.

using the photocopier, which is a corporate entity for the creation of this urban folklore, the photocopier is being diverted, its means subverted to facilitate these counter-cultural creations. Plant continues by describing *détournement* as 'plagiaristic, because its materials are those which already appear within the spectacle, and subversive, since its tactics are those of the 'reversal of perspective.''[23] The generally accepted cultural perspective of the photocopier is one of hegemonic workplace banality. In a recent report on the *BBC News Magazine* website an article titled 'Some of the world's most boring jobs,'[24] reports the findings of a survey carried out by the BBC. In it they asked BBC magazine readers 'What is the most boring job you have done?' While the use of the photocopier does not appear anywhere in the list, it is noticeable that the image used for the article header is of a woman who has obviously fallen asleep over a photocopier while in the process of photocopying a stack of papers. (fig 9). The image presents a young woman in the process, or at least having recently been in the process, of making copies. I highlighted in the introduction that the majority of images showing someone making copies involves women making them. This harks back to my earlier discussion of the Xerox adverts which assume the people using the photocopier would be women, when it was not a monkey, and my discussion on the role of gender in the growing world of office work. This image appears to combine the prejudices and assumptions made about the so-called feminisation of office work and role of women, it reflects the assumed structures of power and gender in the

[23] Plant, p. 86.
[24] 'Some of the World's Most Boring Jobs', BBC News, 2016 <http://www.bbc.co.uk/news/magazine-36902572> [accessed 17 August 2016].

workplace; men doing the important tasks while the women carry out the more mundane activities. The perceived mundanity or boring nature of the using the photocopier only reinforces an opinion that suggests women's time is not wasted on such menial tasks, whereas a man's would be. There is also a question about when this is exactly taking place. Although it is light in the office the woman in the image appears to be alone. This might suggest that she has been working through the night, falling asleep at some point during this supposedly tedious task. This, and mundanity of the work, coupled with her relatively young age might suggest she occupies a somewhat junior position, which can be taken advantage of. But is also worth highlighting the sexualised nature of the woman in the image. The positioning of the woman bent over the photocopier seems purposefully suggestive, more so when combined with her skin-tight jeans and exposed skin. There is a somewhat leering eye to the image, one which seems objectify the woman present. In *The Culture of the Copy*, Schwartz writes that women 'in offices had to become "thoughtful" copying machines.'[25] Not individuals, not persons, colleagues, friends, or staff, but objects, machines. Which, when combined with an attitude that suggested that 'copying machines [had] in turn required the presence and gradually took on the personae of women,' leads to the not-so-subtle suggestion that the woman's role in the office might come to an end when she fulfilled her biological function as reproducer.[26] In the context of the article the photocopier is not only assumed to be a recognisable inhabitant of the

[25] Schwartz, p. 226.
[26] Ibid.

workplace, but using the photocopier, copying stacks of workplace materials is inferred to be boring, a process only adding to what Dundes and Pagter call the paperwork empire. Therefore, the use of the photocopier for the creation of these Xeroxed moments of rebellion is, as Plant describes, the process of *détournement*, 'a sort of embezzlement of convention.'[27] In *Appropriation*, authors Guy Debord and Gil. J Wolman, in the chapter *Directions for the Use of Détournement,* write that 'the main force of *détournement* is directly related to the conscious or vague recollection of the original contexts of the elements.'[28] *Détournement* is carried out with an awareness of the object's accepted cultural or situational context, in this instance banal, restrictive capitalistic employment. But through a process of *détournement*, the urban folklorists are able to subvert the photocopier from this situational context and recontextualise it, challenging its perceived role, and in the process attempt 'to meet what it suggests are corporate excesses with its own iconoclastic ones.'[29] Through the photocopier, Xeroxlore offers the possibility of creating a 'transgressive space,' within a hegemonic corporate one.[30] Although still physically situated within the workplace, the use of the photocopier by Xeroxlore practitioners offers the possibility of an 'alternative order focusing ludically and regeneratively on the marginal and the repressed,' reasserting the individuality of the individual, turning a protest into an interaction with the space around them.[31]

---

[27] Plant, p. 86.
[28] Guy Debord and Gil J Wolman, 'Directions for the Use of Détournement ', in *Appropriation* (London, Whitechapel Gallery and The MIT Press, 2009), pp. 35–39, p. 35.
[29] Roemer, p. 124.
[30] Ibid.
[31] Roemer, p. 12; Michael, p. 141.

Part Two: Images of Appropriation

I have just argued that the use of the photocopier by urban folklorists enables the individual to recapture elements of their individuality through the *détournement* of the machine. I have also asserted that this appropriative use of the photocopier is an extension of the individual and the creation of these objects begins to create a 'transgressive space'[1] in the midst of a hegemonic corporate one. In *The Most Radical Gesture* author Plant writes that

> resistance is always already constituted by the relations of power it opposes; its means and ends of struggle are defined by the nature of the particular exercise of power it opposes, and all resistance inevitably arises in an internal relation to its object.[2]

I will examine this more closely in the following chapter on subculture, but it is worth noting here because the nature of Xeroxlore is constituted largely in its relationship to corporate power. Although the use of the photocopier in creating items of urban folklore is not restricted to the corporate sphere, its use in the workplace environment does 'reflect themes of importance in contemporary urban American life.'[3] The physical objects I will discuss in this next subsection will reflect these themes in relationship to the individual and corporate, the white-collar worker and necessary employment. These objects of Xeroxlore often using a 'style folklorists can

[1] Roemer, p. 124.
[2] Plant, p. 119.
[3] Dundes and Pagter, p. xviii.

recognise as grotesque realism.'[4] Through rejection, parody and satire, Xeroxlore acts as not only a form of resistance to perceived workplace hegemony but also as a reassertion of the individual.

In *Work Hard and You Shall be Rewarded* Dundes and Pagter write

> if one can see the plight of being a small cog in a massive uncaring wheel, of being put upon by mechanistic forces of big business or government, one can readily appreciate the necessity of having urban folklore to ease the strain.[5]

In Dundes' and Pagter's view of urban folklore there is the perceived assumption that the employee or white-collar worker feels a certain level of dissatisfaction with this corporate employment. He describes, much as Marx does, the corporate tendency to incorporate the individual into the corporate machine, the individual becoming another tool or another part of the machine. Marx, writing about modern industry, writes that,

> modern industry has a productive organism that is purely objective, in which the labourer becomes a mere appendage to an already existing material condition of production. In simple co-operation, and even in that founded on division of labour, the

[4] Roemer, p. 124.
[5] Dundes and Pagter, p. xviii.

> suppression of the isolated, by the collective, workman still appears to be more or less accidental.[6]

The system of production, of modern employment, described by Dundes and Pagter, is beyond the individual, and the individual becomes, as Marx argues, merely an appendage. The nature of this system requires, demands, compliance for the system to work. In the previous chapter I discussed Saval's examination of the office, and in particular its increasing replication of the factory. The individual is de-skilled and specialised to meet the needs of the corporate body. Marx argues that 'co-operative character of the labour-process is [...] a technical necessity dictated by the instrument of labour itself.'[7] Capitalistic employment is outside and beyond the individual, aimed solely at 'producing surplus value,' corporate profits. In this image, (fig 33), the perceived reality of this is displayed plainly.[8] The front cover of Dundes' and Pagter's book highlights the perceived disparity between the idea of a just reward for one's work, and a less than just outcome. The title echoes words found in *The Bible* from the book of 2 Chronicles, chapter 15, verse 7, in which God speaks to the people of Israel and says that if they 'be strong and do not give up' then their 'work will be rewarded.'[9] But the image which accompanies the title of the books suggests a reality of working life that shows the worker's belief in a fair

---

[6] Marx '*Capital'*, p. 204.
[7] Ibid, p. 264.
[8] Ibid, p. 257.
[9] '2 Chronicles 15:7 NIV - But as for You, Be Strong and Do Not - Bible Gateway' <https://www.biblegateway.com/passage/?search=2+Chronicles+15%3A7&version=NIV> [accessed 2 May 2018].

recompense for their labours to be misplaced. The comical figure stares out from the cover with a resigned expression, a hunched back and a receding hair line. The figure is aged and wrinkled, bent over through time and hard work. And what has that hard work led to? What is the result, what has been their reward? A screw through the chest – the reward the viewer is being told to expect for all their hard work is being screwed over. The worker's true reward is disappointment. While the worker puts in the effort, someone else reaps the true financial reward. There are other, more explicit variants of this image, which I have chosen not reproduce in this thesis but which can be found in Dundes and Pagter's book, that illustrate more graphically the use of screwed as a euphemism for sex. The meaning conveyed in both instances is that of a resigned compliance, the individual acquiescing to their situation with an almost fatalistic belief in the unfairness of their situation. Dundes and Pagter write that

> the caption presents a statement from ideal culture, but the cartoon indicates that hard work is not always properly rewarded. The boss or company can screw the hardworking employee.[10]

There is a dissatisfaction with this situation inherent in this cartoon, but there is not necessarily the implied belief that freedom from corporate employment must be sought. But in this next image we are presented with a

[10] Dundes and Pagter, p. 145.

possible way out, a possible route to a better situation. This piece, (fig 34), called the *Organisation Chart*, appears to 'reflect the hierarchical structure of most organisation,' and depicts 'several customary gestures.'[11] In it, the man at the top is shown having his hand kissed by someone depicted slightly lower and smaller then himself. That individual is also having their hand kissed in the same manner by someone smaller and lower down. As you follow the image downward, the characters get smaller, and the further down the character the more unpleasant their situation becomes. The progression moves from kissing the hand, to kissing the feet, to kissing bottom. The final image is hard to make out, and it could either be someone kissing the bottom of the individual in front or it could be someone with their head inserted into the rectum of the person in front. As Dundes and Pagter write, 'the folk cartoon suggests that the degree of servility depends upon one's position in the power structure: hand-kissing at the top, bootlicking in the middle, and ass-kissing at the bottom.'[12] The cartoon could be read as either mocking those who are seeking to get ahead in the corporate world, or as a resigned acceptance that this is the only way of moving higher up the corporate ladder. Either way there is a demonstrable disaffection with the corporate or workplace system. The individual at the top is seen with a halo in, one would assume, a satiric depiction of hierarchical perfection, the individuals further down become smaller and more indistinct. Another aspect of this image is the obvious unprofessional nature of its creation; it is a material response to an individual's isolation.

[11] Dundes and Pagter, p. 163.
[12] Ibid.

The grainy nature of the image and the obviousness of its photocopied state speaks to that repurposing of office materials. Preston writes that 'they all reflect the same aesthetic, not a formally articulated aesthetic to be sure, but nonetheless a share aesthetic,' one which seeks to mock and ridicule the power structures of the work place, through the repurposing of office materials.[13] These examples of Xeroxlore demonstrate a dissatisfaction with the system and, as Roemer writes, this form of Xeroxlore 'calls attention to points of stress in corporational life.' He goes on to write that 'at the same time,' Xeroxlore 'provid[es] employees with a way of coping with that stress.'[14] The stress relief is carried out through what Roemer calls 'parodic and satiric corporational photocopy lore.'[15] This form of Xeroxlore

> reinterprets business's typical categories, procedures, and values, and argues that the corporational ethos interferes in a range of ways with the everyday humanness of its employees.[16]

In this example the idea of corporate paperwork is compared to toilet roll, (fig 13). The image is of an old-fashioned outhouse or outside toilet. The implication being that the day-to-day functions of employment can be compared to a necessary bodily function, and the paperwork of Dundes and Pagter's paperwork empire is just a means to an end. In this way 'corporational life is accused of being insensitive to the heterogeneity,

[13] Preston '*Western Folklore'*, p. 159.
[14] Roemer, p. 123.
[15] Ibid.
[16] Ibid.

dynamism, and quiet human provisionality of its rank and file.'[17] As the idea of employment is portrayed and degraded to the level of a necessary bodily function, 'corporate values and authority are levelled to the strata of the literally and symbolically base.'[18] Again in this example the implied necessity of employment is presented. Defecating is a daily routine, it is a bodily necessity. In the same way, work is presented as a daily routine, a necessity. If the comparison can be stretched, in this image the notion of doing away with work seems as likely as doing away with the need to defecate. These objects appear to offer no solution to the situation, their function seemingly one of relieving this dissatisfaction through mockery, using humour, which Michael suggests 'is often in trouble with taste.'[19] But I would argue that these sometimes course and base sheets of hand drawn ephemera offer the possibility of recontextualising the corporate space around the individual, and allow the individual to become more than a textualised cog in the corporate machine. Roemer writes that,

> parodic and satiric photocopy lore gives employees the opportunity to personalize the allegedly depersonalized corporational environment in which they work.[20]

In this example, (fig 35), which is not only a product of the photocopier but is also directed at its use, it is a parodied notice that would be attached to the

[17] Roemer, p. 126.
[18] Ibid.
[19] Michael, p. 138.
[20] Roemer, p. 121.

space above the photocopier. At first glance the language appears to be German, but the reader soon realises that it is in fact is a parody of the German language. In an article on Xeroxlore in *Keystone Folklore,* from which this example came, the author Preston writes that,

> the means by which this kind of Xerox-lore circulates is obvious. A person simply removes the notice from the wall, Xeroxes a copy or two, replaces the notice, and takes the copies for additional Xeroxing or posting elsewhere.[21]

Preston says that this example came from the English Department of the University of Colorado and had replaced the official notice above the machine. While this particular example of Xeroxlore is not directed at, referencing, or parodying corporate practice, it is directed at dealing with the frustration and impatience often felt by those having to using the photocopier. In replacing the official notice this object allows an individual to 'display [what] reflects his or her expressive choices.'[22] More significantly Roemer argues that,

> as a result, we might say, office space is made to function as a symbolic extension of the worker's own body and the identity it marks. What emerges is a multivocal environment in which

[21] Preston '*Xerox-Lore'*, p. 12.
[22] Roemer, p. 125.

> tokens relevant to the individual confront and (may literally) layer over those of the institution.[23]

Also, the location specific nature of this piece of urban folklore, placed above the photocopier, appears to demonstrate to each user that photocopier has the possibility to become a site, not just of protest but of interaction, of meaning making.[24] Due to the placement of this comedic item within the vicinity of the photocopier, and as an object so obviously created using the machine, the individual is shown that there is the possibility of creating meaning for themselves not connected or associated with the work they may be carrying out. In that moment the individual is challenged to use the depersonalised office space to reassert their individuality amidst the corporate, or workplace conformity. Through this item the appropriative use of the photocopier has been demonstrated, each person who sees it is subsequently encouraged, or at least made aware of the possibility of appropriating the photocopier further. From this point in the vicinity of the photocopier, this single item suggests the possibility of a flow of objects which may move out from the site-specific location surrounding the photocopier to other situations around the workplace. In this way this item shows that office materials and office machines can be appropriated. But it also shows that the very space of the office can be appropriated as well, walls, cubicles, noticeboards become possible sites to display these little acts of rebellion and in doing so reclaim some semblance of individuality. If

[23] Roemer, p. 125.
[24] Michael, p. 141.

the ‘intent of corporate business is to make and assure profits,’ then these forms of Xeroxlore allow the individual to challenge their perceived sense of loss of individuality.[25] Through the creation of these objects the individual is able to personalise their environment, and while not disconnecting the individual from the requirements of necessary employment, enables them to ‘personalize an environment of officially defined depersonalization.’[26]

In *Understanding Media* McLuhan argues that we have ‘extended our senses and our nerves by the various media.’[27] I will argue in the final chapter of this thesis that, by extension, as artists have used the photocopier they have extended their creative ability through utilisation of the machine. But more immediately, Roemer actually argues that the use of the photocopier is more than purely an extension of our human capabilities; he argues that ‘some photocopy practice allows its users the opportunity to remake their own body.’[28] (fig 36). This example of a photocopied hand is something familiar to any who have had cause use to use a photocopier. The photocopied hand bears all the hallmarks of the photocopier used to create it, with the addition that the creator has identified the use of the machine with the writing on their hand. In doing so, the author of the piece deliberately situates the creation of these objects in the site-specific location of the photocopier. The particular aesthetic of the photocopier’s process of creating copies and the individual writing on their hand demonstrates again

[25] Roemer, p. 125.
[26] Ibid.
[27] McLuhan ‘*Understanding Media’*, p. 4.
[28] Roemer, p. 129.

the appropriative nature of the machine. But equally, as I have already mentioned, the photocopying of the hand acts as a corporeal extension of the individual into a depersonalised space. This may arise from the feeling that the individual is trapped in their work. The hand then photocopier with the words 'Send Help! I'm Trapped In This Xerox Machine,' reflect feelings of being trapped in their current employment, and a possible belief that only an outside agency, something beyond the workplace, might be able effect change. But also, we might read this as a belief on behalf of the individual that the photocopier is itself part of what is confining the creator. If the Xerox machine is viewed as a corporate facilitator, as a product of capitalism, and as part of the system that seeks to depersonalise the individual, then it may bear some of the ill will directed at necessary employment by those who have cause to use it. The photocopier then has a symbolic duality for the creator and the viewer, one which firstly reinforces their situation as employees in a depersonalised workplace environment, but one which secondly offers the possibility of reclaiming some sense of their identity within that space. Similarly, there is the culturally understood practice of photocopying other more intimate parts of the human body at an office party. Roemer goes on to write that,

> it is probably not coincidence that the body parts reported as most frequently re-presented in this way are those used often in

> wider cultural contexts to emphasize a sense of the self: the hand, the face, the genitals.[29]

Although these body parts will rarely, if ever, be identifiable to anyone but the folklorist, they are a corporeal, oppositional, material reminder of the physical nature of the individual amidst the incorporeal practice of commodified labour.[30] The process of creating these objects of Xeroxlore results in objects that reflect the personal, individual, and often communal 'values of all who share in the communication of that item.'[31] These objects are identifiers of individuality; they are 'worker-generated symbolic and metaphoric protests against corporational hegemony.'[32]

> In the business ethic, the body and the self are expected to perform so as to reflect business values and to facilitate its goals. Photocopy lore can counter this ethic by privileging the natural over the artificial or, at the least, by problematizing their relationship.[33]

In using the photocopier for the creation of these objects, Xeroxlore demonstrates that the photocopier cannot be solely understood as an object of corporate banality. As an extension of our creative ability, as a functional tool of parody and satiric folklore, and tool of individual expression, we can

[29] Roemer, p. 129.
[30] Michael, p. 138.
[31] Roemer, p. 222.
[32] Ibid, p. 121.
[33] Roemer, p. 129.

demonstrate that the photocopier as a complex substance, both theoretically and functionally intricate. In choosing to thematise Xeroxlore in this section I have been attempting to demonstrate the alterity of the photocopier. In the practice of Xeroxlore the photocopier enables 'the celebration of the commodified employee transformed into the subversive agent.'[34] Roemer argues that,

> photocopy lore promotes values of heterogeneity and of emergent materiality. "Embodying" the natural as a trope and displaying it graphically on the page, it encourages the debasement of icons and the regenerative pleasures of context.[35]

The photocopier is the foundation for much of this activity. Appropriated and subverted to allow each individual the opportunity to demonstrate their individuality against the hegemony of their necessary employment, the photocopier's substance becomes more complex and so forces us to re-evaluate our perception of it.

[34] Roemer, p. 136.
[35] Ibid.

Chapter Three:
Debord, the Spectacular, and the Spectacular Subverted

Section One - The Spectacle and Commodity

Part One: Debord's Spectacular

The purpose of each previous section of this thesis has been to establish a framework for an understanding of the photocopier. I have sought to foreground the foundations upon which our perception of the photocopier rests and in doing so begin to demonstrate the different aspects that make up the photocopier's substance. I have done so by giving an overview of the history of the copying technologies to which the photocopier was added, examining the purpose and function of corporate capitalist mechanical mass production, and by extension the place and function of the office. I have argued that the photocopier's function as a product of corporate design, as a product of mass production, and as office functionary has created a perception of the photocopier that overlooks, and even dismisses, the photocopier's wider influence upon Western culture, and had been particularly downplayed in art history and visual culture. I began to challenge and argue for a more complex and nuanced reading of the photocopier by briefly examining the photocopier's use as a facilitator of Xeroxlore. In the proceeding chapters of this thesis I will now focus on other examples of the photocopier's use that demonstrate its ability to

facilitate more than just the corporate system that is responsible for its creation and that it is responsible for enabling. With the intention of challenging what I see as a misrepresentation of the technology, these followings chapters will focus on the appropriation of the machine diverting it from those corporate roots, something I touched upon in the previous section. In examining Xeroxlore I demonstrated how the use of the photocopier, for a form of subversive activity, acknowledged the situation of the worker while also seeking to undermine the tight strictures of capitalist employment. Xeroxlore demonstrates that the photocopier, although still restricted to the office or workplace, is able to facilitate a form of individual expression and dialogue that emphasises the individual rather than subsuming them into the capitalist system. The use of the photocopier in this way demonstrates that a limited perception of the photocopier dictated by its office associations is unhelpful, and to dismiss it out of hand would be to reject the idea that the photocopier has had a wider influence upon our culture than simply as a reproducer of office ephemera.

In the following chapter my intention is to examine the photocopier as utilised by subcultural groups, particularly Britain's punks in the 1970s, and America's Riot Grrrl movement of the 1990s. Both groups used the photocopier to facilitate subcultures that challenged the precepts of the dominant culture. I will be arguing that the photocopier facilitated both subcultures in the creation of subcultural community and aided in subcultural communications. In the first section of this chapter I will be

examining Guy Debord's notion of the Spectacle and its use of commodities, itself an extension of Marx's claims about capitalism and its system of production. Marx believed that bourgeois economists had twisted and misrepresented history to suit their own ends. He wrote that economists sought to enshrine their system of production, distribution, exchange and consumption,

> in[to] eternal natural laws independent of history, at which opportunity bourgeois relations are then quietly smuggled in as the inviolable natural laws on which society in the abstract is founded.'[1]

Consequently, Debord argued that 'the spectacle is the present model of socially dominant life. It is the omnipresent affirmation of the choice already made in production and its corollary consumption.'[2] This will form the foundation for my examination of subcultural groups, the challenge they level at the capitalist spectacle, and the basis of the photocopier's use within subcultural communities. Any examination of Debord's spectacle will also require a discussion of the commodity, which will touch upon Marx's views of the commodification of labour, the production of commodities, and their consumption. Following on from this, I will argue that through the use of the photocopier subcultural groups have been able to appropriate the Spectacle's commodities for their own ends, creating dissonant groups

[1] Marx '*Grundrisse'*, p. 28.
[2] Debord, s. 6.

based on an opposition of the spectacular, establishing communities with their own forms of communication, and in doing so establish another facet of the photocopier's substance.

I have argued that capitalism not only forms the basis of our current social system but also constrains those who live within it. At the beginning of this thesis I quoted Adam Smith who claimed that the foundation for the capitalist system was our 'propensity to truck, barter, and exchange one thing for another.'[3] He continued by claiming that 'it is the power of exchange that gives occasion to the division of labour.'[4] Smith's claim is that the end point, the 'power of exchange', is what dictates the division and function of labour. In this view the capitalist system only creates what it needs, it is a system driven by the need of the consumer. But Marx claimed that the capitalist system of 'production, distribution, exchange and consumption' was by no means driven solely by the needs of the consumer.[5] Marx believed that the purpose of capitalist mechanical reproduction, of social production, was ultimately self-sustaining, an end unto itself. Marx begins and ends the system of 'distribution, exchange and consumption' with production, production that ultimately produces the system.[6] This process becomes an eternal cycle in which production ever seeks new markets, something we demonstrated by Haloid CEO Joe Wilson's desire to

[3] Smith, p. 15.
[4] Ibid, p. 29.
[5] Marx '*Grundrisse*', p. 40.
[6] Ibid.

create a new market Haloid could dominate with the photocopier, new consumers, and new products to sell them.

The French Marxist theorist and founding member of the Situationists Guy Debord wrote that 'the development of productive forces has been the real unconscious history which built and modified the conditions of existence of human groups.'[7] As I have previously stated, the system of capitalist mechanical reproduction has both consciously and unconsciously shaped Western society around its own needs. These 'productive forces,' this process of production through to consumption, is one of transformation, creating an 'economy' which 'transforms the world, but transforms it only into a world of economy.'[8] The shape into which capitalist mass production moulds society is one that facilitates the continued sustenance of capitalist mass production; Debord called this the spectacle. Debord argued that 'the spectacle, grasped in it totality, is both the result and the project of the existing mode of production.'[9] The spectacle, the system of capitalism, could be compared to an Escher drawing, or the ancient Greek symbol lemniscate, constantly cycling back in on itself. The purpose of the spectacle, Debord believed, is ultimately the spectacle itself, a self-referential system that facilitates its own existence. Debord believed that the spectacle achieved this self-sustaining cycle through 'social relation[s] among people, mediated by images,' something that subcultures like punk sought to challenge by creating their own imagery by subverting the

[7] Debord, s. 40.
[8] Ibid.
[9] Ibid, s. 6.

photocopier.[10] By this he argued that the spectacle was a created perception. Commodities, created and marketed, created the perception of need, but that this need was actually masking the desire to have. Debord claimed that we have been dominated by the economy, an economy that isolates individuals but presents us with the façade of social relations. Behind this façade the 'social' economy degrades 'being into having,' making 'all individual reality [...] social reality.'[11] Therefore, the individual's experience is mediated by this economic social power and creates a pressure to conform. Through mass media, 'having' becomes the driving force of that social economy and the individual is pressured to conform. Each individual is encouraged to strive to attain that object, item, lifestyle, that thing which the economy has imbued with prestige, a prestige that is supposedly bestowed upon its owner through 'having.' This 'having' is united to commodification, which I will deal with in more detail in the next section. We tend to think of commodities as physical objects, but as Marx writes in *Grundrisse*,

> every commodity (product or instrument of production) is = the objectification of a given amount of labour time. Their value, the relation in which they are exchanged against other commodities, or other commodities against them, is = to the quantity of labour time realized in them.[12]

[10] Debord, s. 4.
[11] Debord, s. 17.
[12] Marx '*Grundrisse'*, p. 79.

Marx argues that labour has become a commodity, and Debord writes that 'the spectacle', being 'the main production of present-day society,' is the ultimate commodity.[13] In this way through 'production, distribution, exchange and consumption,' those 'must have' objects, which we strive to attain, are actually only a facet of the ultimate commodity, the spectacle.[14] It is worth noting that the photocopier must be considered as part of that system, as a must have object, one whose purpose was to perpetuate Haloid and the spectacle.

[13] Debord, s. 15.
[14] Marx '*Grundrisse*', p. 40.

Part Two: Debord's Commodity

The commodity is a central consideration for capitalists and Marxists alike as it is a key factor in sustaining current Western culture, shaping the spectacle, and determining individual lives' associations. It is important therefore to spend some time examining the commodity if we are to have a proper understanding of the photocopier, as the photocopier is itself a commodity, is involved in the daily commodification of the individuals labour, and enables the creation of subcultural commodities. Our perception of the commodity will influence our opinion of the photocopier, and will therefore establish another facet of the photocopier as a substance. The photocopier has a duality within capitalism as both a product of, and facilitator of, the corporate capitalist spectacle. But, as I will demonstrate, the photocopier also occupies an important place within subculture as both a commodity and creator of commodities. The photocopier in this way is both a commodity and producer of commodities, enabling the capitalist system and subcultural communities alike.

The commodity is the foundational linchpin of the capitalist system, and Debord's discussion of the social spectacle. Debord writes that 'the spectacle aims at nothing other than itself,' and its foundation is the commodity.[1] The commodity is the lifeblood that sustains and enables the spectacular, it is both spectacular and utilitarian in its function as an essential mechanism in a capitalist economy. At the core of Smith's

[1] Debord, s. 14.

economic progression is the item, the object, or the thing exchanged. The commodity is the thing that has value, it forms that functional heart of Smith's capitalist system, and is foundation upon which each stage is grounded. But Marx contested the idea that the capitalist system's purpose in production was one of producing 'in accord with human needs.'[2] This was to Marx a denial of the interconnectedness and interdependence of each stage from production to distribution. Marx wrote that the 'notion that the spheres of distribution and of production are independent,' was to 'tear apart things which belong together.'[3] In Marx's view production and consumption are connected, they are part of the same system. He wrote that 'production is also immediately consumption.'[4] Marx believed that the system requires a never-ending cycle of production, distribution and consumption, and that the machine creates a system to sustain itself. Marx wrote that,

> for example, a garment becomes a real garment only in the act of being worn; a house where no one lives is in fact not a real house; thus the product, unlike a mere natural object, proves itself to be, becomes, a product only through consumption.[5]

In the midst of this system is the individual, the labourer, the producer, the distributor and the consumer. As a consumer the individual is again shown to be just a part of the machine. The individual not only facilitates the

[2] Marx '*Grundrisse*', p. 30.
[3] Ibid, p. 31.
[4] Ibid.
[5] Marx '*Grundrisse*', p. 32.

creation of the commodity, through the commodification of their labour, they are also the consumer of the commodities, the individual becoming commodity to the grist of the machine. Within the capitalist system the individual acts an instrument of production, their strength, appearance, intelligence, is ascribed a value, their existence becomes a commodity, but a commodity measured against the value of other commodities. Marx writes that,

> the product becomes a commodity, i.e. a mere moment of exchange. The commodity is transformed into exchange value. In order to equate it with itself as an exchange value, it is exchanged for a symbol which represents it as exchange value as such.[6]

The individual becomes dependent upon this system; something I discussed in the in the second chapter when thinking about the office and the notion of necessary employment. In the West we are largely bound by our environment; if we want food we must have something to exchange, if we want shelter we must have something to exchange, we 'become dependent on the exchange value of [our] commodity,' and what we exchange it for has itself become a commodity.[7] Marx argues that this system has created between people 'a social relation between things.'[8] It is in the exchange and

[6] Marx '*Grundrisse*', p. 82.
[7] Ibid, p. 84.
[8] Ibid, p. 96.

division of labour that we are 'reciprocally condition[ed],' that although everyone seemingly works for themselves we each must,

> exchange, not only in order to take part in the general productive capacity but also in order to transform [our] own product into [our] own subsistence.[9]

The individual is forced to exchange, to ascribe a certain value, measured against other commodities, to their commodified labour in order to participate, or to a more serious extent, survive. In this way each individual is drawn into becoming part of a collective whole. A social system driven by exchange, which in part ascribes value to the thing being exchanged. Marx believed that in this system people are 'subsumed under social production.'[10] He goes so far as to say that this external system, external to the individual, is their fate; something, which, in connection with office work, ultimately colours the individual's perception of the photocopier as a functionary of that system. This, he argues, is contrary to the capitalist view that the system is ultimately 'subsumed under the individual,' that the system is purely there to meet perceived needs.[11] Where capitalists such as Smith believed that social production was 'managed by them as their common wealth,' Marx argued that the individual becomes managed by the system of social production.[12] This is what Debord believed was

[9] Marx 'Grundrisse', p. 96.
[10] Marx '*Grundrisse'*, p. 97.
[11] Ibid.
[12] Ibid.

encapsulated by the spectacle. He argued that 'the spectacle is the moment when the commodity has attained the total occupation of social life.'[13] Within the spectacle interactions between people were increasingly moderated through the occupying presence of the commodity. But Debord goes further because he claims that the commodity, and by extension the spectacle, had forced upon that social existence a level of unrealism. He wrote that there is a 'heart of unrealism' in 'real society';[14] social life is no longer lived in social interaction but was being mediated through the occupying commodity. This feeds into my earlier discussion about Xeroxlore. I argued that, to paraphrase Debord, working life is no longer lived in social interaction but that each individual experiences office life in isolation. But, I also argued that in Xerorelore, through the subversion of the photocopier, the individual is able to recapture something lost, to re-establish, if even momentarily, a sense of identity in a depersonalised space, and challenge the workplace hegemony.

[13] Debord, s. 42.
[14] Ibid, s. 6.

Part Three: Debord and Mass Media

In dwelling upon the nature of the commodity, we see its function and role in sustaining and driving forward the system of capitalist mass production. But we also see that the commodity is more than simply a mechanism for maintaining the system that created it. Debord believed that the commodity had become an endless procession of things, a system of unreal, fleeting images. These images, he argued, now acted as mediators between individuals, resulting in the social isolation of the individuals who sought to possess them; commodities had become social interaction. The spectacle, embodying production and consumption, is, as Marx argued, an interdependent system, production not possible without consumption and visa-versa. As part of this interdependent system Debord established another facet of the spectacle which he deemed vital to its longevity, mass media. Mass media is the advertisement, the commercial, a reflection of the spectacle's purpose. Mass media works to progress commodified social relations, extending the spectacular beyond the confines of its production, and shaping its consumption. Mass media pushes the boundaries of social relations beyond the confines of local communities and creates global ones. Debord believed that through mass media the spectacle was able to foster the idea that 'that which appears is good' and 'that which is good appears.'[1] The spectacle is not just an individual's experience, although we will see how it does isolate individuals. The spectacle is not isolated to a specific individual, or to one specific commodity. The nature of western mass

[1] Debord, s. 12.

production, and the financial cost of its creation, demands widespread social consumption if it is to remain financially viable. This is why Jean Baudrillard could write that 'the discourse of advertising only arouses desire' and that consequently 'deep motives […] are indexed on an institutionalized code of connotations.'[2] This is why the spectacular does not remain a socially controlled construct, it must, according to Debord and Baudrillard, become the mediator or the controller of social relations, it indexes desire. The spectacular is a display of things, commodities that seek to 'concentrate all gazing and all consciousness.'[3] This is what Debord meant by 'images', those things that the spectacular promotes, encouraging the belief that 'that which appears is good.'[4] The image is the 'thing' that appears, not the commodity, but the idea of the commodity, an unattainable goal. This fleeting image has to be fleeting, it ultimately has to be unattainable because of the product it is selling, and its ultimate purpose is the continuance of the spectacle. To this end the spectacle enshrines within all mass media promotion a compulsion to attain, an aspirational desire to have. The focus of this aspiration is the commodity, which becomes an image, an aspiration. Baudrillard claims that from this position,

> it is clear that the whole economic and psychosociological apparatus of market and motivation research which pretends to uncover the underlying needs of the consumer and the real

[2] Poster, p. 18.
[3] Debord, s. 3.
[4] Ibid, s. 12.

> demand prevailing in the market, exists only to generate a demand for further market opportunities.[5]

Debord asserts that 'the first phrase of the domination of the economy over social life' is the 'degradation of being into having.'[6] This having, or aspiration, constitutes a significant function of the image and creates social relationships based on mutual or competing aspirations. Through mass media the spectacle concentrates all gazing upon the idea of the commodity, and transforms individuals into consumers. Baudrillard argued that 'everywhere [we are] surrounded by the remarkable conspicuousness of consumption and affluence.' This, he claimed,

> now constitutes a fundamental mutation in the ecology of the human species. Strictly speaking, men of wealth are no longer surrounded by other human beings, as they have been in the past, but by objects.[7]

Because 'we are living the period of the objects,' or commodified individuals 'we live by their rhythm, according to their incessant cycles,'[8] and consequently 'we have reached the point where "consumption" has grasped the whole of life.'[9] This is why Debord argued that if attaining the object or commodity was the ultimate goal of the spectacle the spectacle

[5] Poster, p. 39.
[6] Debord, s. 17.
[7] Poster, p. 29.
[8] Ibid.
[9] Ibid, p. 33.

would eventually wither, slowly losing its central place within modern capitalist society, and possibly coming to a point in the Western development of production based on need rather than spectacular aspirational desire. But if having, or an aspirational desire is the goal, if the rhythm of commodification continues to change and cycle through, then production continues, the spectacle flourishes, new markets are created and exploited, social relationships continue to be mediated by the desire to attain and the system continues without end; a desire which also factors into our earlier discussion about office work, this becomes another aspect of our perception of work in general, but for the consideration of this thesis office work in particular. Work becomes a means by which the worker can purchase, can consume the commodities of the spectacle, work is necessary to participate in the system, something I touched upon in the previous section. It is with this spectacular intentionality in mind that Debord says that 'the society of the spectacle […] chooses its own technical content.'[10] 'Mass media' writes Debord becomes the spectacle's 'most glaring superficial manifestation' of this technical content, becoming so in such a way that it seemingly 'invades society as mere equipment.'[11] In this way mass media has become integral to the continued existence of the spectacle, and its agency employed to foster the desire to have or to attain. Baudrillard argues that this is why products are offered with brand names. These, he claims, both signals the product and functions to 'mobilize connotations of

[10] Debord, s. 24.
[11] Ibid.

affect.'[12] In this way 'we can see that what is consumed are not objects but the relation itself,'[13] the relation between commodified individuals and the system of production. In this way mass media is used to create an aspirational ideal proving itself to be 'in no way neutral,' and becoming the spectacles means of 'total self-movement.'[14] Debord writes that,

> accompanying the progress of the accumulation of separate products and the concentration of the productive process, unity and communication become the exclusive attribute of the system's management.'[15]

Mass media becomes integral to the spectacle's self-movement, it becomes an attribute and tool used by the spectacle in the creation of the image and a lens through which social relationships are focused. Through mass media, which may also be understood as an increasingly socialised media, the locus of aspiration is created. Through advertising a product is promoted, an image is created, a new social locus, a new language is established, with the sole function of creating a socially acceptable aspiration. At this point, Debord writes, this becomes the spectacular's 'weapon for constant reinforcement of the conditions of isolation of "lonely crowds."'[16] Through 'marketing, purchasing, sales, the acquisition of differentiated commodities and object/signs' through the mass media the individual increasingly

[12] Poster, p. 17.
[13] Ibid, p. 22.
[14] Debord, s. 24.
[15] Ibid, s. 26.
[16] Ibid, s. 28.

'recognise[s] himself in the dominant images of need.'[17] In this way, he 'understands his own existence and his own desires' less and less.[18] The individual is 'separated from his life,' as 'his life is now his product.'[19] The individual becomes both their desire and their product, the individual becomes bound up with that which they desire and that which they aspire to. This is why Debord can write that 'the spectacle subjugates living [individuals] to itself.'[20] And why Baudrillard could say that the 'ultimate goal of consumer society […] is the functionalization of the consumer and the psychological monopolization of all needs.'[21] Debord claimed that social life has become about having and not about being. It is in this way that the individual is, through an increasingly socialised mass media, tied to other isolated individuals. The desire to attain, and have aspiration, is a social phenomenon; it is created by a spectacularly mediated set of relationships between isolated individuals. This Debord writes is,

> the principle of commodity fetishism, the domination of society by "intangible as well as tangible things," which reaches its absolute fulfilment in the spectacle, where the tangible world is replaced by a selection of images which exist above it, and which simultaneously impose themselves as the tangible par excellence.[22]

[17] Poster, p. 48.
[18] Debord, s. 30.
[19] Ibid, s. 33.
[20] Ibid, s. 17.
[21] Poster, p. 12.
[22] Debord, s. 36.

The commodity is intangible, held up as the mode or the means of satisfaction and connection to other individuals. The desire for the commodity is imprinted on the individual, says Debord, imposed upon the individual by a system which only seeks to promote and produce itself and does so in a way which is always out of reach, always desirable but never attainable. The commodities created by the spectacular system are no longer desired for their use-value. Commodities are 'now sought in the recognition of their value as commodities,' their worth is now in the aspirational image they create, which is why we have brand names.[23] Commodities, through spectacular mass media, create a system of social competition, seeking to attain what other individuals have, the individual aspires to mimic their neighbour or be superior to them. In doing so each individual partakes in the thing that the spectacular fosters: endless change. As Debord writes 'what the spectacle offers as eternal is based on change,' and as I have previously claimed, must change if the system is to be maintained.[24] This is typified through the mass media's use of advertising; advertising is eternal change. Advertising is in the business of selling, marketing the new, the desirable, and doing so unendingly; it is notable that one of the first strategies that Haloid employed in creating a new market for the photocopier was the television advert. Debord writes that 'every new lie of advertising is also an avowal of the previous lie.'[25] For adverts to succeed they must deny sufficiency of the thing that came before, the old product, the old

[23] Debord, s. 76.
[24] Ibid. s. 71.
[25] Debord, s. 70.

commodity is not enough, it is insufficient and must be replaced; change is eternal. This idea of insufficiency is something we saw in Chester Carlson's creation of the photocopier, the desire for a new, better device for copying. Carlson himself was part of the spectacular system, and the photocopier he pioneered a commodity that functioned to facilitate that system, through the advertising employed by Haloid. It is mass media's job to constantly sell the new, the possible, or at least sell the image of the possible. This is why Debord says that 'the celebrity, the spectacular representation of a living human being, embodies this banality by embodying the image of a possible role.'[26] The celebrity, or the celebrity lifestyle, exemplifies the product to be attained and the life to be aspired to. In this way culture 'becomes nothing more than a commodity,' and in doing so becomes 'the star commodity of the spectacular society.'[27] In this way Debord is able to claim that the spectacular creates social relationship through isolating individuals. He writes that the individual is required to be 'integrat[ed] into the system,' and to achieve this it is essential that 'isolated individuals be recaptured and isolated together.'[28]

This brief examination of the spectacle and it use of commodity and mass media is important to explore here because it links back to my previous discussions about capitalism, mechanisation, and office work, and shows how the individual is conditioned and made subordinate to the spectacle. These conditions then act as the foundations for our perception of the

[26] Debord, s. 60.
[27] Ibid, s. 193.
[28] Ibid, s. 172.

photocopier and the primary filter through which we perceive it. But although the individual appears to operate in a space that requires their acquiescence, conforming their will in a need to participate, there is the possibility of individualistic reassertion. As I discussed in the section on Xeroxlore, the photocopier, appropriated and repurposed, allows for the possibility of individual expression and rejection of the spectacle. I will now discuss in the next section two different subcultures and how the language of the spectacle has been appropriated by members of these subcultures to assert a space of opposition and, through the photocopier, how these individuals have created subcultural commodities that have fostered subcultural communication and community.

Section Two – Subculture and Commodity

Part One: The Roots of Subculture

In the previous subsection I sought to argue that the dominant culture as described by Debord in his discussion of the spectacular is one of hegemonic conformity. The spectacular requires its citizens to inhabit and abide by systems created for spectacular self-promotion, which are fostered by the creation, promotion, and consumption of commodities. In this way individuals are isolated together through their own aspirational desires to attain that which is ultimately unattainable. The individual imitates a pattern of existence that identifies themselves as a member of the dominant spectacular culture. Debord writes that,

> passing into the spectacle as a model for identification, the agent renounces all autonomous qualities in order to identify himself with the general law of obedience to the course of things.[1]

[1] Debord, s. 61.

My intention in beginning this chapter with a discussion of Debord's spectacular is for it to be the foundation for these next subsections examining subculture and their use of the photocopier. I have continued to assert throughout that the photocopier, which is both a creation of and functionary of the corporate, has been undervalued and its influence upon a broader span of our culture overlooked. Our perception of the photocopier has been shaped consciously and subconsciously by its association with the capitalist system and its importance beyond that field is under-examined. If, as Debord claims, the individual has identified themselves 'with the general law of obedience to the course of things,' I would argue that the photocopier has, through general perception, been identified as part of that same system.[2] In its creation by a corporate entity, its facilitation of capitalist enterprise, and through individual association, it can be recognised as part of the spectacle's 'course of things.'

I have thus far demonstrated the photocopier's position within the corporate spectacular realm and the resultant interpretation and perception of it as a corporate entity. But I have also argued throughout that a singularly corporate perception of the photocopier misrepresents its true nature, and that as a substance it is far more complex than is generally appreciated. In this next section my intention is to examine the roots of subculture as born out of an opposition to the dominant spectacular culture. My reasoning for this is to be able to then demonstrate the photocopier's role in enabling

[2] Debord, s. 61.

subculture, nurturing subcultural community, and fostering an oppositional form of visual communication. I will argue that the use of the photocopier by subcultural communities has resulted in the creation of a culturally recognisable subcultural aesthetic. I will demonstrate using examples drawn from British punk subculture from the 1970s and the American Riot Grrrl movement of the 1990s that, although twenty years apart, in their use of the photocopier they have perpetuated a recognisable photocopied aesthetic, a subcultural aesthetic. In this way I will argue that the photocopier and the individual subculturist's use of it both critiques and seeks to negate the spectacular culture. The use of the photocopier by subcultural groups, rather than simply accepting the cultural perception of the photocopier and the restrictions placed upon it, have subverted it and in doing so challenged that perception and argued for a possible alternative to the spectacle and the photocopier's role in it.

In *Society of the Spectacle* Debord critiques what he views has become a pervasive, oppressive, culture that isolates individuals, mediating their existence through the use of commodities. His critique also recognises that any assessment or analysis of the spectacle is carried out using 'the language of the spectacular itself in the sense that one moves through the methodological terrain of the very society which expresses itself in the spectacle.'[3] But, while Debord argued that the spectacle was a pervasive Western totality, he also believed that the spectacle created its own possible

[3] Debord, s. 11.

means of dissent and refusal. In *The Most Radical Gesture,* Plant writes that,

> all those whose desires and behaviour are refused by the conventions of the established order, begin to constitute an unidentifiable 'class', threatening not because of the place it assumes within capitalist society, but by virtue of its refusal of any place.[4]

Plant builds on Debord's claim that each individual speaks the language of the spectacle, showing how the point of refusal is also the demonstration of the individual's or the subculture's use of the spectacular language. Plant writes that 'one of the distinguishing features of situationist theory was its recognition that all forms of criticism, dissent, and resistance occupy an internal relation to the system they oppose.'[5] Plant affirms Debord's assertion that critique or dissention of the spectacle is only possible in relation to the spectacle itself. In fact, Plant writes that,

> a critical analysis of the totality of social and discursive relations must recognise that the meaning, tactics, and goals with which it works are always already implicated within the relations of power they resist.[6]

[4] Plant, p. 125.
[5] Ibid. p. 75.
[6] Ibid.

Plant identifies that each moment of subcultural resistance, its meaning, its tactics, and its goal, are shaped by the spectacle. Plant claims that each step of subcultural opposition is itself shaped, even to the extent of its desired end, by the culture it resists. In a broader discussion on working class children's experiences of bourgeois education systems, authors of *The Politics of Youth Culture*, Paul Corrigan and Simon Frith, make the point that,

> the irony of this situation (something which most analysts miss) is that the kids' ideological resistance to bourgeois education (i.e. their rejection of a set of norms and values) takes place in the context of and as a result of their incorporation in bourgeois institution.[7]

Debord argued that 'the resumption of revolutionary class struggle' would only be possible by 'developing the critique of the spectacle;' using language shaped by the spectacle, from within the spectacle.[8] This, he said, would unveil the spectacle's 'practical conditions of oppression.[9] Now while Debord was arguing for a Marxist style class revolution, I would argue that he also outlines the model for possible subcultural revolt. He writes that any critique, any rejection, of the society of the spectacle must be based on a language of contradiction, and that this 'language of

[7] Paul Corrigan and Simon Frith, 'The Politics of Youth Culture', in *Resistance through Rituals: Youth Subcultures in Post-War Britain*. (London, Taylor & Francis, 2006), p. 236.
[8] Debord, s. 203.
[9] Ibid.

contradiction, which must be dialectical in form as it is in content' requires a 'critique of the totality' and a total 'inversion' of the spectacle, or a 'style of negation.'[10] Plant writes that,

> resistance is always already constituted by the relations of power it opposes; its means and ends of struggle are defined by the nature of the particular exercise of power it opposes, and all resistance inevitably arises in an internal relation to its object.[11]

Both Debord and Plant articulate the idea that resistance is born in relationship, that it arises at the point of opposition. I would argue that this is true of subcultures and that they are born at the point of resistance, or opposition, to the dominant culture. Corrigan and Frith make the point that 'youth culture must be understood as a response to the problems posed by a framework of bourgeois institutions.'[12] This ideological resistance of the bourgeois, or spectacular arises because of a perceived problem or flaw, a fault or alleged injustice within the dominant system, one identified by the subcultural group or individual. It is this observed unfairness that begins to ferment a desire in this 'unidentifiable class' to reject the strictures and precepts of the dominant culture and to foster a 'seeking after alternatives'.[13] Not only is this view of subculture one that highlights the refusal to passively accept spectacular isolation but it is also one that results

[10] Debord, s. 204.
[11] Plant, p. 119.
[12] Corrigan and Frith, p. 235.
[13] Plant, p. 125.

in active opposition; I will deal more directly with the means of opposition in the next section. Again, Plant writes that 'resistance is always already constituted by the relations of power it opposes.'[14] Plant is articulating Debord's belief that resistance was only possible within the existing ideas about the spectacle and that 'resistance inevitably arises in an internal relation to its object.'[15] This idea is one that author of *Inside Subculture: The Postmodern Meaning of Style* David Muggleton takes a step further. He argues that, not only is subculture found in opposition to the dominant culture, but that it is 'through a comparison with a homogenised conventional "Other" that subculturalists maintained their distinctive individuality and heterogeneity.'[16] In this way subculture is not just about an oppositional stance against perceived cultural norms, but rather subculture's point of opposition begins to create an identity, a distinctiveness derived from the very thing it opposes. In *Style*, John Clarke writes that 'self-identity is generated not simply through the internal processes of the group, but by the development of the group in relation to its situation.'[17] As Plant argues, the individual 'is the product of the situations [they] go through' and is partly 'defined by [their] situation.'[18] It is seemingly the individual's condition that drives their desire for 'situations worthy of [their] desires.'[19] In this way the spectacle not only gives rise to its detractors, but it may actually shape the nature and appearance of that opposition. Plant writes that

[14] Plant, p. 119.
[15] Ibid.
[16] David Muggleton, *Inside Subculture: The Postmodern Meaning of Style* (Oxford, Berg, 2000), p. 158.
[17] John Clarke, 'Style', in *Resistance through Rituals: Youth Subcultures in Post-War Britain* (London, Taylor & Francis, 2006), p. 180.
[18] Plant, p. 20.
[19] Ibid.

'everyday life is […] experienced as mundane and dull in its ubiquity,'[20] and that 'the boredom, frustration, and powerlessness of contemporary life are the direct consequence of capitalist social relations.'[21] It is these conditions, I would argue, which become the discourse of subcultural existence, and it is from these frustrations that the desire to create new situations arise.

It is important to note at this point that the purpose of subculture is not just to act as an agent of opposition; the purpose of any subculture is not just to act as a visible negation of the spectacle. Hall and Jefferson make this point when they write that, in part 'the process of forming the group's identity is […] due to "negative" reactions to other groups, events, ideas, etc.' But it is also 'positive reactions towards particular directions.'[22] This particular direction is what Plant hints at when she writes that 'all those whose desires and behaviour are refused by the conventions of the established order, begin to constitute an unidentifiable 'class'.[23] Rejection of the spectacle, of any form of perceived inequality, is not just about acting as an agent of opposition, but rather about identity, about a class or community. These refusals to fit in begin to constitute a new place, a new community of individuals. This new class is not purely nihilistic, seeking to overthrow the confines and perceived injustices of the spectacular culture, but demands the creation of a new environment, a new paradigm. Plant writes that,

[20] Plant, p. 64.
[21] Ibid, p. 10.
[22] Clarke, p. 180.
[23] Plant, p. 125.

> since [individuals are] the product of the situations [they] go through, it is essential to create human situations. Since the individual is defined by [their] situation, [they] want the power to create situations worthy of [their] desires.[24]

I would argue that the aim of subcultural existence is the practice of creating these 'human situations,' bringing about new cultural norms that equate to the individual negotiating a 'space of their own.'[25] This becomes an ideological demonstration of the opposition and differences that subcultures rejoice in and points to a certain utopian idealism present at the heart of the most seemingly nihilistic of subcultures. The individual is once again free to decide, not forced into a pattern of repeated, repetitious adherence to a spectacular culture, but able to express freely. While we consider subculture we automatically think of a constituent group, but this idea shows that at the core of the subculture is the individual, each subculture starts with the individual, true subculture begins from the ground up rather than top down, a cooperative anarchism rather than an enforced conformity. In *Subculture: the Meaning of Style* the author Dick Hebdige writes that 'the relationship between experience, expression and signification is therefore not a constant in subculture.[26] In this way subculture is shown to be the antithesis of the spectacle, given rise to by the spectacle, but rejecting the monotheistic

[24] Plant, p. 20.
[25] Angela McRobbie and Jenny Garber, 'Girls and Subcultures: An Exploration', in *Resistance through Rituals: Youth Subcultures in Post-War Britain* (London, Taylor & Francis, 2006), p. 221.
[26] Hebdige, p. 126.

approach that is the foundation of spectacular capitalist enterprise and culture.

Part Two: Subverting the Culture

I have just argued for the idea that subcultures are born in discourse, created in that moment of deliberate cultural rejection. I have argued that subculture stands in opposition to the spectacular culture and arises as a consequence of that rejection. In this next subsection I will argue that not only is subculture dialectically opposed to the dominant culture, but that it often expresses that opposition by deliberately appropriating and subverting both the ideological and physical embodiments of the spectacular. This subsection will be given over to this idea of spectacular subversion, then in the following subsection I will examine the actual appropriation and creative subversion practised by both the British Punk scene in the 1970s and the New York Riot Grrrl movement of the 1990s.

As I have already argued, the roots of subculture are to be found in the dominant culture, often given form and direction by the things it opposes. It is in reference to the rejected culture that new ideas take form. Clarke writes that,

> meanings alternative to those preferred by the dominant culture, generated within the experience and consciousness of a suppressed social group, may be brought to the surface.[1]

[1] Clarke, p. 178.

But subculture is not just an expression of an ideological oppositional position, it is about creating a space for the opposite to become real, an oppositional, or alternative culture. In *Profane Cultures* author Paul E. Willis writes that 'evolutionary cultural change will only come from reinterpretations, reformations of consciousness, and fermentation from below.'[2] The author claims that in this way 'oppressed or excluded social groups can creatively select, develop and transform aspects of their environment to make their own distinctive cultures.'[3] These new cultures are 'not given but made,' the subculturalists reinterpreting 'certain real material and social elements,' in a way that 'supports […] the different ways the class lives and resists its continuing subordination.'[4] Oppositional subculture is not just an opposition of ideas but is connected to an oft downplayed utopian desire for change, more specifically a change in the subculturalists 'conditions of existence.'[5] The subversion of the ideological and physical materials of existence is part of the subculturalists' desire to create a new space in which to dwell, in which they can be free from perceived dominant cultural dictate. Willis argues that the subcultural group or individual drives towards not only a change in the ideological framework within which they exist, something Debord argued for, but also the subversion and recreation of the mundane everyday objects of their existence. This demands a level of cultural awareness from the

[2] Willis, p. 7.
[3] Ibid, p. 170.
[4] John Clarke and others, 'Subcultures, Cultures and Class: A Theoretical Overview', in *Resistance through Rituals: Youth Subcultures in Post-War Britain* (London, Taylor & Francis, 2006), p. 44.
[5] Willis, p. 170.

subculturalist as they seek to create their own cultural existence. An important issue to raise at this point is that, as Muggleton writes in *Inside Subculture*, 'individuality [...] is the basis of subcultural authenticity.'[6] This reformation initially takes place through the individual's reinterpretation of their own space, and subsequently the material surrounding them. This is why 'subcultures can therefore be understood, somewhat paradoxically, as collective expressions and celebrations of individualism.'[7] It is this individualism that of course is a direct challenge to the dominant system of spectacular. Hebdige writes that 'the relationship between experience, expression and signification is therefore not a constant in subculture.'[8] This challenges the spectacle which seeks to isolate individuals and mediate all relationships through a pervasive image created in part by a commodification of individuality. The spectacle seeks to regiment and dictate those expressions and direct them. As such the very existence of an unspectacular subculture is a subversive challenge to the spectacle. If the dominant spectacle of Western culture seeks an unchallenged hegemony over all cultural life, the creation of subculture requires the practice of subversive forms of thought and activity at the individual level. Subculture may subsequently develop a more cohesive identity, something which may lead to its own eventual reabsorption into the spectacle, something I will explore further in a subsequent section, but subculture, recognised or not, begins with the individual's rejection and subversion of the spectacle. In *Resistance through Rituals: Youth Subcultures in Post-War Britain*, authors

[6] Muggleton, p. 77.
[7] Ibid, p. 79.
[8] Hebdige, p. 126.

Stuart Hall and Tony Jefferson write that 'culture is the way, the forms, in which groups 'handle' the raw material of their social and material existence.'[9] The way in which subcultures 'handle' the raw material of their cultural existence is something I will come on to in the next section dealing with the subcultural subversion of the commodity. But for the moment, in the reformation of ideas subcultures seek to 'realise *or objectivate* group-life in meaningful shape and form,' which by their nature as oppositional must challenge and subvert the very pattern of spectacular existence.[10] Through subcultural existence an individual is expressing their desire for the possible, an activity that requires a subversion of spectacular means.

Author and academic C.S Lewis once wrote about friendship that 'friendship [...] is born at the moment when one man says to another "What! You too? I thought that no one but myself.'[11] I would argue that Lewis' portrayal of friendship expresses a truth about the nature of subculture. As the individual chooses to reject some aspect of the dominant cultures that surround them, others may begin to recognise in them a kindred spirit and they perceive that that individual or group appears to hold to the same 'espousal of the rejected, hated and expelled.'[12] The individual comes together with others who have also rejected and 'inverted that conventional morality, questioned the whole notion of progress and suggested very

[9] Stuart Hall and Tony Jefferson, *Resistance through Rituals: Youth Subcultures in Post-War Britain* (London, Taylor & Francis, 2006), p. 4.
[10] Hall and Jefferson, p. 4.
[11] C.S. Lewis, 'The Four Loves Quotes', *Goodreads* <https://www.goodreads.com/work/quotes/14816053-the-four-loves> [accessed 9 September 2016].
[12] Willis, p. 173.

different ways of valuing human qualities and achievements.'[13] This argument suggests that subcultural formations are instigated from the ground up rather than the top down. The spectacle seeks to impose cultural identity from a position of dominance, creating a persona in the celebrity for the mass to aspire to. These descriptions of subculture argue that subcultural identity is first and foremost a matter of individualism, a subjective decision rather than an objective imposition. As opposed to the 'human experience' being a 'passive reflex of social structure and social conditions,' Willis argues that this subcultural 'subjectivity [is] an active moment', not a 'whispered bourgeois apology for a belief in individual sensibility.'[14] These individual active moments are what give shape and form to any subcultural movement, they are the 'distinctive shapes in which this material and social organisation of life expresses itself.'[15]

But as is the case for most recognisable subcultural groups, those individual expressions also begin to express something of the group with which the individual has now aligned themselves. Hall and Jefferson write that 'culture […] embodies the trajectory of group life through history,'[16] the same, I'd argue, can be said of any subculture. The formation of a subcultural group begins to express more than its individual members, it begins to take on a life, an active identity that begins then to shape those individuals who are part of it, it becomes an 'ensemble,' that 'embod[ies]

[13] Willis, p. 173.
[14] Ibid, p. 170.
[15] John Clarke and others, p. 10.
[16] Hall and Jefferson, p. 4.

and express[es] the group's self-consciousness.[17] The subcultural label begins to embody the ideal rather than being solely about individual expression. Muggleton writes that 'what subcultures can succeed in doing is 'to imbue their members with some sense of higher purpose.'[18] In doing so, subcultures appear to take on a cultural identity, an agency that now influences its members. Without any one individual those subcultural formations now exist, not only in the mind of its members, but also in the consciousness of the wider culture. Muggleton writes that 'youth cultural styles may begin by issuing symbolic challenges, but they must inevitably end by establishing new sets of conventions.'[19] If I was to paraphrase his statement I would argue that individuals 'may begin by issuing symbolic challenges,' but subcultures 'end by establishing new sets of conventions.'[20] These subcultural 'conventions' become those things 'which are reflected and expressed in the cultural field' and demonstrate the assumed or associate 'position of the social group in the social structure.'[21] The subversive ideology and activity of the individual becomes a marker of an established subcultural group, they are the ways that the group is 'able to recognise itself.'[22] The activity of the individual gives the subculture shape, but once a subculture is established this then acts upon its current and future members. Subversion is then not only the ground of these subcultures but it is then also part of its ongoing expression. This subsequently affects future

[17] Clarke, p. 179.
[18] Muggleton, p. 23.
[19] Ibid, p. 96.
[20] Muggleton, p. 96.
[21] Willis, p. 4.
[22] Clarke, p. 178.

individuals' own perception of the subculture and their own place within it. Subversion may then be increasingly understood to be the mark of authentic subculture, its founding principle and its primary outward expression. In the same way Hall and Jefferson argue that,

> a social individual, born into a particular set of institutions and relations, is at the same moment born into a peculiar configuration of meanings, which give her access to and locate her within a culture.[23]

I would argue that the individual born since the establishment of a particular subculture is then able to locate themselves according to already well-established laws of that particular subculture. Hall and Jefferson's argument is that,

> these structures – of social relationship and of meaning – shape the on-going collective existence of groups. But they also limit, modify and *constrain* how groups live and reproduce their social existence.[24]

The subversive tendency of any subculture can become the constraint by which all subsequent members are judged. Hall and Jefferson argue that,

[23] Hall and Jefferson, p. 4.
[24] Ibid, p. 19.

> a culture includes the 'maps of meaning' which make things intelligible to its members. These 'maps of meaning' are not simply carried around in the head: they are objectivated in the patterns of social organisation and relationship through which the individual becomes a 'social individual'. Culture is the way the social relations of a group are structured and shaped: but it is also the way those shapes are experienced, understood and interpreted.[25]

Interestingly this 'map of meaning' could also be applied to those affordances, or the understood functionality the photocopier offers to those members of a subculture. For those individuals born after the introduction of the photocopier, its function and uses are fairly well established. The simplicity and relative ease of access, if sometimes needing to be covert, offered the possibility of creating materials that reflect the individual's personal beliefs and ideas. Creating material using the photocopier is a haptic experience, to the subculturalist it is does not offer commodities to be consumed but a hands-on method of reproducing the physical creations placed on its lens. The speed with which the photocopier creates also offered the subculturalist the possibility of a form of multiplication and distribution of that material not previously available. The photocopier offers a creative immediacy, the individual doesn't hand over their creation to someone else, to have it return as a set of multiples, but watches the process

[25] Hall and Jefferson, p. 4.

unfold, the act of creation is personal and direct, an immediate subversion of the spectacular culture. In the next section I will go on to examine how the subculturalist demonstrate their individualism through the rejection of the spectacle and the creation of these subcultural commodities. I have discussed previously how subculturalist, rather than being a passive consumer of the spectacle actively appropriate and subvert the spectacle for their own ends, and in this next section I will begin by looking at subculture's repurposing of the spectacular commodity before going on to look more specifically at the appropriation of the photocopier for the creation of subcultural commodities.

Part Three: The Subverted Commodity

I have argued that subculture begins at the point of an individual's rejection of the spectacular. Any subculture, which I have argued begins with the individual, is by its nature subversive, and rejects, whether consciously or not, spectacular ideology and the isolation of the individual. In this next subsection I will be looking more generally at the means of that rejection, more specifically at the commodity, its relationship to subculture, and its subcultural subversion. My intention in this is to lead to an examination of the particular subversives uses of the photocopier as a commodity in the following section.

I have throughout discussed Marx's view of capitalism, particularly his views concerning the individual and the commodification of labour. He argued that,

> individuals are subsumed under social production; social production exists outside them as their fate; but social production is not subsumed under individuals.[1]

The individual becomes dependent upon the commodification of their labour, dependent upon a spectacular structure aimed at the perpetuation of itself. In this system of spectacular production the individual becomes part

[1] Marx '*Grundrisse'*, p. 97.

of that production, an instrument used to further the spectacular's goals. Marx writes that,

> exchange and division of labour reciprocally condition one another. Since everyone works for himself but his product is nothing for him, each must of course exchange, not only in order to take part in the general productive capacity but also in order to transform his own product into his own subsistence.[2]

The system of production, distribution, exchange and consumption which is the spectacle requires participation from each individual if, as Marx says, they hope to 'transform [their] own product into [their] subsistence.'[3] The means of production, the means of creating capital, or the individual's labour, becomes a commodity proffered to the individual and given a social value for the purpose of exchange. The commodity becomes the 'social connection between persons,' and transforms social relations into a 'social relation between things; personal capacity into objective wealth.'[4] The commodity has not only a relationship with other commodities, but also mediates the relationships of individuals, through a system of 'production [that] is shaped in such a way that every producer becomes dependent on the exchange value of his commodity.'[5] This pernicious cycle, argues Marx, is

[2] Marx '*Grundrisse'*, p. 97.
[3] Ibid, p. 96.
[4] Ibid.
[5] Ibid, p. 86.

then not just about transforming the individual's product into their 'own subsistence.' [6] It is also about 'the necessary subordination of the mass of individuals' and the individual's unwilling participation in conditions that make it 'impossible for the individuals of a class etc. to overcome them without destroying them.'[7] This is why Debord argues that 'the modern spectacle […] expresses what society can do.' [8] The spectacle, through the commodification of life and individual relations, expresses that which the isolated individual is required or allowed to do. As Debord says 'all the goods selected by the spectacular system are […] its weapon for constant reinforcement of the conditions of isolation of "lonely crowds."'[9] The commodity becomes a fetishised object, one through which 'the tangible world is replaced by a selection of images which exist above it, and which simultaneously impose themselves as the tangible par excellence.'[10] This is what Debord calls the 'materialization of ideology.'[11] Plant writes that,

> people are moved and alienated not only from the goods they produce and consume, but also from their own experiences, emotions, creativity and desires. People are spectators of their own lives, and even the most personal gestures are experienced at one removed.[12]

[6] Marx '*Grundrisse'*, p. 97.
[7] Ibid, p. 102.
[8] Debord, s. 25.
[9] Ibid, s. 28.
[10] Ibid, s. 36.
[11] Ibid, s. 217.
[12] Plant, p. 1.

In the spectacle the commodity embodies that which the system holds to be most important, the continued need for economic progress and the commodification of cultural existence. But in Debord's argument concerning the commodity and the spectacle expression of what the individual can do, he allows for the possibility of other outcomes. He claims that the spectacle expresses what is permitted, but he offers the chance of amelioration when he writes that the 'permitted is absolutely opposed to the possible.'[13] We can extrapolate from this that Debord envisaged that something other must be possible. He further grants the possibility of dissention when he claims that 'a product which already exists in a form which makes it suitable for consumption can nevertheless in its turn become a raw material for another product.'**[14]** In the same way that Marx argued that in production the products of nature were themselves appropriated and repurposed Debord posits the possibility of the appropriation and subversion of the spectacular commodity, and its becoming the 'raw material for another product.'[15]

As I have already discussed, the commodity is the means by which the spectacular mediates individual relations and perpetuates the continuation of the spectacle, and as such are, through their creation, created with an intended purpose that ultimately signifies the system that created them. As Muggleton writes 'commodities arrive at the market-place laden with significance. They are, in Marx's words, 'social hieroglyphs' and their

[13] Debord, s. 25.
[14] Ibid, s. 151.
[15] Ibid.

meanings are inflected by conventional usage.'[16] But although these 'social hieroglyphs' may be perceptually burdened by cultural and individual association, as Willis writes, 'though the whole commodity form provides powerful implications for the manner of its consumption, it by no means enforces them.'[17] These perceptual associations and cultural assumptions do not ultimately determine how the photocopier was to be used. This is why when Debord argues that although the spectacle, using the commodity, seeks to state what each individual can do and is 'absolutely opposed to the possible,' it is possible to argue that 'opposed to the possible'[18] does not mean opposition is impossible. Willis again writes that,

> commodities can be taken out of context, claimed in a particular way, developed and repossessed to express something deeply and thereby to change somewhat the feeling [...] and all this can happen under the very nose of the dominant class – and with their products.[19]

Therefore, at the point that any commodity is used, counter to its primary intended purpose, it has the ability to be 'symbolically repossessed' and the 'commodities themselves may generate new, oppositional meanings;' or be endowed with implicitly oppositional meanings.'[20] The commodity can then

[16] Hebdige, p. 96.
[17] Willis, p. 6.
[18] Debord, s. 25.
[19] Willis, p. 6.
[20] Hebdige, p. 16.
Clarke, p. 178.

become a sign of something else, a signifier of the subculture that created it. Not only is the physical object appropriated, and its function subverted, but its meaning is also appropriated and subverted to now reflect the beliefs and purpose of the individual and subculture that subverted it. Plant writes that 'commodities have meaning only within the whole – the spectacle – in which they appear.'[21] In the same way once a commodity has been appropriated and its purpose subverted to fit the subcultures it is imbued with a new meaning, it becomes a new sign, a signifier of the subculture. According to Clarke 'when the object is placed within a different total ensemble, a new discourse is constituted, a different message conveyed.'[22] In this way the individual is no longer alienated from the commodity, but can create and consume these subverted artefacts as part of their own subcultural existence. Through the creation of subcultural commodities, or artefacts, new relations are formed and individual labour redirected to a non-spectacular end.

This labour, which is itself still a commodity, is freed from spectacular facilitation and subverted to another end. In the creation of subcultural commodities the individual is no longer isolated by the appropriated commodities but through their subversion aims at the creation of a new space, a new culture. This is why Willis can write that 'oppressed or excluded social groups can creatively select, develop and transform aspects

[21] Plant, p. 35.
[22] Clarke, p. 177.

of their environment to make their own distinctive cultures.'[23] The appropriation and subversion of the commodity, alongside the subculturalist's labour involved in creating a new subcultural artefact, not only creates new commodities but new relations between individuals, new ways of communication which enable the creation of subcultural community. Plant writes that 'in short, the radical subject demands the right to construct the situations in which it lives.'[24] This consequently means that 'excluded social groups can creatively select, develop and transform aspects of their environment to make their own distinctive cultures.'[25] In this way, through the subversion of commodities and individual subculturalist labour, 'subcultures can be said' to reject and subvert the spectacle 'by repositioning and recontextualising commodities, by subverting their conventional uses and inventing new ones,' and in so doing challenge the spectacle and the commodities it produces.[26] As I have argued concerning the photocopier, the central theme of this thesis, the photocopier is itself a spectacular commodity, a commodity whose substance is not only imbued with meaning through its creation and function, but also marked by the perceptual meaning laid upon it by it users. Because of this, as the photocopier is subverted from its primary intended purpose a new facet of its substance is formed, as individuals reclaim their labour for their own ends rather than as a saleable commodity. The individual is enabled through the photocopier to create a subcultural artefact, to add to their own

[23] Willis, p. 170.
[24] Plant, p. 38.
[25] Willis, p. 170.
[26] Hebdige, p. 102.

personalised space. Through the photocopier the individual is offered the possibility of connecting through the labour of their hands and the labour of others to a community of individuals that challenges the hegemony of the spectacle. Because of this haptic process and the individual's subverting of the photocopier the machine is recontextualised, demonstrated to be a more complex substance. The use of the photocopier and its output is no longer understood to be confined to the office space, can be read as a device whose aesthetic and physical material have influenced a sphere beyond the office, becoming something more complex than a producer of business ephemera.

Section Three – Subculture and the Photocopier

Part One: Cultural Anomaly

In the previous section of this chapter I dealt more generally with subculture and the subversion of the commodity. I highlighted how the individual's subversion of the commodity, including the subversion of the individual's commodified labour, undermines and subverts spectacular ideology. In this section I will now focus more specifically on the photocopier, its subversion as a commodity, its creation of commodities, and its facilitation of subcultural community. I have already dealt with some of these issues in the section on Xeroxlore. In that section I examined the use of the office photocopier for the creation of those articles of Xeroxlore or urban folklore that aimed to challenge the hegemony of capitalist employment. It will be worth reiterating some of those points again here as I seek to establish another aspect of the photocopier's substance. In the previous section on Xeroxlore I examined the use of the photocopier as a tool for subversion, as an apparatus used by isolated individuals within the strictures of corporate or capitalist employment to challenge and begin to push the boundaries of the accepted spectacle. In this section I will be looking at those individuals who have been classed by the dominant culture as outsiders, subculturalists,

whose use of the photocopier subverts the machine from its perceived function as capitalist functionary. In these next few subsections I will be arguing for the photocopier's use as a tool for the promotion and facilitation of subculture. I will be examining its use and agency in the promotion of subcultural communication and community, and the creation of a subcultural aesthetics. I will be drawing upon examples from the British punk scene of the 1970s, and the 1990s American Riot Grrrl movement.

I have argued thus far for Debord's reading of our culture as a system of spectacular images, commodities acting as mediators between isolated individuals, for the purpose of sustaining the spectacle. The foundation for this is, as we have already seen, the isolation and commodification of the individual, consumed by a system driven by mechanical reproduction, facilitated by a capitalist controlled mass media. Author of *Anthropology and Mass Media*, Debra Spitulnik, writes that,

> mass media – defined in the conventional sense as the electronic media of radio, television, film, and recorded music, and the print media of newspapers, magazines, and popular literature […] are economically and politically driven.[1]

[1] Debra Spitulnik, 'Anthropology and Mass Media', *Annual Review of Anthropology*, 22 (1993), p. 293.

Each example given by Spitulnik is, as she writes, driven by political and economic concerns, and that concern results in a privilege of access given to those who serve that end. Mass media, access to the means of producing newspapers, television programs, global broadcasting systems, are strictly regulated and require corporate and governmental cooperation. Consequently, almost all systems of mass media and mass communication are tightly controlled and regulated by governments and corporate interest.[2] As such any individual or group who finds themselves at odds with such hegemonic cultural structures are allowed little room to voice opposing concerns. Hebdige writes, that,

> the crucial question has to do with specific ideologies, representing the interest of which specific groups and classes will prevail at any given moment, in any given situation. It should be obvious that access to the means by which ideas are disseminated in our society (i.e. principally the mass media) is not the same for all classes.[3]

Restrictions are placed upon almost all systems of communication and mass production, and are tightly controlled by the dominant cultural interests that align with established beliefs and financial gain. An example of this which predates by focus on both punk and Riot Grrrl is Soviet Russia's state control of all means of the dissemination information in the 1960s. I have

[2] Julia Sefton-Green, 'Youth. Technology, and Media Cultures', *Review of Research in Education*, 30. Special Issue on Rethinking Learning (2006), p. 283.
[3] Hebdige, p. 14.

chosen to briefly discuss this here because, although Soviet control over its media was more extreme than that faced by either the punks or members of the Riot Grrrl movement it does exemplify the appropriation of state-controlled media and the subversion of means of production for counter-cultural and subcultural ends.

In the 1960s Russia's communist party systematically arrested and imprisoned anyone caught distributing unauthorised materials such as books and journals that did not meet with state sanctioned approval.[4] Government restrictions limited access and ownership of any method of mass production and mass communication including 'printing presses, mimeographs [and] Xerox machines.'[5] But as I have already argued, dominant cultural restrictions placed upon means of communication still offers the possibility of alternative practices from those seeking to proffer an alternate stance than that offered by the dominant culture. It is worth noting that these subcultures do not share the same relationship to the spectacle as those I have previously discussed. When we compare the situation of those working in offices in Soviet era Russia we find that the isolation of the individual which takes place under the spectacle, was an active endeavour undertaken by the state in the 1970s for the means of control. Harvey Fireside, author of *The*

[4] Peter Reddaway, *Uncensored Russia: The Human Rights Movement in the Soviet Union* (London, Jonathan Cape, 1972), p. 17.
This practice had previously been carried out by Tsar Nicolas II in the 1890s. It is also worth noting this is the same Tsar the Bolsheviks executed, and whose provisional government they had overthrown in 1917.
[5] Van Het Reve, 'Samizdat', *The Observer*, 20 May 1970, p. 21.

Conceptualization of Dissent: Soviet Behavior in Comparative Perspective writes that this control was

> A bureaucratic prelude to enforced conformity […] in which the regime deliberately seeks to sow suspicion among the population […] in the work situation and elsewhere […] to isolate the individual. The regime tries to destroy all social bonds except the ones that it has itself created, and through which it can manipulate.[6]

While there were significant differences between office workers, and subculturalists in the West and those in Soviet Era Russia there are helpful comparisons to be drawn from the subsequent appropriation and subversion of restricted reproductive devices by those who felt themselves subsumed by a system they rejected. In Soviet era Russia these restrictions fostered alternative methods of communication, and lead to the creation of an underground press, or Samizdat, which means 'own publishing house.'[7] Russia's underground press sought to secretly distribute manuscripts and materials that had been banned by government censors. By the 1950s this resulted in more than 1,500 documents reaching the West, and consisted of objects that had been,

[6] Harvey Fireside. 'The Conceptualization of Dissent: Soviet Behavior in Comparative Perspective.' *Universal Human Rights*, vol. 2, no. 1, (1980), p. 36.
[7] Reddaway, p. 17.

> self-published, clandestinely circulated and reproduced [...] originally written and read by participants and sympathisers of the contemporary Soviet dissident movement.[8]

Restrictions placed upon reproductive technologies by the government led to crude but creative means of production guided by necessity. Alternative means for the dissemination of information had to be used to enable the promotion of anti-government sentiment and opinions not supported by the Communist Party. A journalist from the *Observer* newspaper spent time in Russia in 1970 and wrote,

> anybody printing anything, even a visiting card, without the written permission of the censor, is liable to be condemned to hard labour. The only available means of multiplying a text are by typewriter, camera or tape-recorder.[9]

At one time he expressed an interest in seeing a copy of Solzhenitsyn's *First Circle*. He writes,

> this time I received a photographic copy, two extremely bulky volumes with pages half as big as the *Observer*. On to every page were glued four photographs of typewritten pages, just

[8] Rudolf L. Tokes, *Dissent in the USSR: Politics, Ideology and People* (Baltimore, The John Hopkins University Press, 1975), p. xv
[9] Reve, p. 21.

> big enough to be readable. The typing was bad; so were the gluing and the photography. Some pages were hardly legible.[10]

The production of these subcultural artefacts stemmed from necessary means, methods that sought to circumvent the restricted access to state controlled means of production. Subsequently these creations were crude, imperfect, but loaded with unintended aesthetic significance. The purpose of Soviet State publishing, the goal of socialist realism, was as one writer puts it 'to educate and inculcate appropriate tastes so that they were consistent with the ideological foundations as well as practical considerations of the regime.'[11] Samizdat was a challenge to this state approved reality, and 'self-proclaimed monopoly on truth.' Samizdat was, through a multitude of outputs, compelling 'because of the contradiction it present[ed],' it was 'fragile and compromised material, and yet it carried 'precious content, a metaphor for human life.'[12] This image, (fig 39), shows an example of a leaflet produced by Baptist Initiative Group in 1965. The '*Fraternal Pamphlet*' ran from 1964 to 1986 and was created by an Evangelical group of Christians and represented the Council of Churches and was the 'Council's answer to the officially published "Bratskii vestnik" (*Fraternal Herald*).'[13] The pamphlet was an informational publication which dealt with subjects like human rights and religious persecution. Like much Samizdat

[10] Reve, p. 21.
[11] Hyung-min Joo, "Voices of Freedom: Samizdat." *Europe-Asis Studies* 56, no. 4 (2004), p. 572.
[12] Ann Komaroni, "The Material Existence of Soviet Samizdat." *Slavic Review* 63, no. 3 (2004), p. 615.
[13] "Soviet Samizdat Periodicals." University of Toronto Libraries. Accessed January 26, 2018. https://samizdat.library.utoronto.ca.

material which showed that 'attention to the physical form was considered a luxury,' this example demonstrates the hallmark scrappy, immediate nature of the practice.[14] According to Ann Komarino, author of *The Material Existence of Soviet Samizdat*, 'typical Samizdat type was characteristically wretched and frequently featured mistakes and corrections as well as blurred or pale type.'[15] This scrappy aesthetic demonstrates in part the nature of a society where copying machines were tightly controlled, and exemplifies the deliberate challenge to Soviet state-controlled media outlets and creations offered by these creations and their creators. The information in this pamphlet demonstrated the functioning oppositional views held by a portion of Russia's population. This pamphlet 'articulate[s] clearly a dissident challenge to monolithic political truth, and […] uphold[s the] literature's independence from it.'[16] And this material carried great risk for its creators; one newspaper article in a 1970s edition of the *New York Times* describes intimidations, confiscations of machines and materials, discrediting tactics employed by the KGB, and arrests and prosecutions.[17] It is through this atmosphere and limited means that the aesthetic of Samizdat 'provides a visual symbol of the material and cultural poverty out of which Soviet dissidents struggled and grew.'[18] I will look more closely at the aesthetic result of the appropriated means of production on subcultural artefacts in a subsequent section of this thesis. But it is worth highlighting

[14] Komaroni, p. 600.
[15] Ibid, p. 603.
[16] Ibid, p. 606.
[17] Albert Parry, "Samizdat Is Russia' Underground Press." The New York Times, March 15, 1970. http://www.nytimes.com/1970/03/15/archives/samizdat-is-russias-underground-press-russias-underground-press.html.
[18] Komaroni, p. 618.

here that these objects demonstrate the existence of contrary beliefs, of opinions expressed, in the form of subversive objects that posit the possibility of a different truth, or alternative existence.[19] These handmade creations demonstrated the desire for an alternative space, a place of resistance, created through 'agitation and propaganda carried out for the purpose of subverting or weakening Soviet power.'[20]

While both punk and Riot Grrrl may not have faced such authoritarian repression, there still existed a morally implied and culturally enforced control of the primary means of mass production and mass communication at the time both groups existed. Neither punks or Riot Grrrl had, to paraphrase Hebdige, control over the means of material and mental production, which created in such groups a requirement to find alternative means of communication.[21] It was increasingly apparent to each disenfranchised individual that unless a new avenue of communication was cultivated they would be left with only that which had been socially approved. This then, in its broadest sense, means that any individual or subculture who seeks to interpellate a divergent or alternate environment must by necessity become a do-it-yourself practitioner. This means that an individual, driven by the awareness that any message or opinion, any book, song or aesthetic interpretation that deviates from dominant spectacular culture, will have to create the things they desire themselves using whatever

[19] Tokes, p. 16
[20] Reddaway, p. 11.
[21] Hebdige, p. 15.

means necessary. In her book *DIY: The Rise of Lo-Fi Culture* the author Amy Spencer writes that DIY is,

> about using anything you can get your hands on to shape our own cultural entity; your own version of whatever you think is missing in mainstream culture.[22]

The fostering of subculture through either the creation of an alternate ideology or the more haptic practice of DIY resulted in both punks and Riot Grrrls utilising alternative methods of creation, constructing alterative avenues of access through which subcultural identity could be created.

As I have already argued, such subcultures demonstrate the central importance of subversion, subversion of the ideology of the spectacle, and the subversion and appropriation of spectacular means and commodities. Punk and Riot Grrrl both exemplified this subversive and appropriative practice, and both demonstrated some element of the necessary subversion of cultural materials. It is at this point that the use of the photocopier can be first associated with the creation and facilitation of subculture. Anecdotal evidence from both UK and US members of punk and Riot Grrrl tell a similar story. As young men who are part of the British Punk scene of the 1970s Mark Perry and Tony D recount almost identical narratives of the creation of their fanzines first issues. Perry recounts how once he'd

[22] Amy Spencer, *DIY: The Rise of Lo-Fi Culture* (Great Britain, Marion Boyers Publishing, 2008), p. 11.

'finished putting the mag together, I got some copies printed up on a Xerox machine (in my girlfriend's office),'[23] essentially an act of theft. Tony D recounts a similar situation, but this time at his own work place,

> I was working at an advertising company at the time and used their photocopier to print out ten copies of the ten pages of what was to be the first issue of *R+T*.'[24]

I have already used Hebdige to argue that access to most means of mass production and mass communication are severely restricted by social or financial restraint. Photocopiers, although not state-controlled as they were in Soviet Russia, were beyond the reach of the average teenager, their cost restricting them to offices and copy shops, and generally only accessible through either financial outlay or subterfuge and theft. In exactly the same way the author of '*Adjusted Margin: Xerography, Art, and Activism in the Late Twentieth Century*' Kate Eichhorn, writing about the Riot Grrrl movement which developed some twenty years after punk, demonstrates a similar appropriation of the photocopier, Eichhorn writes,

> because Xerography was a highly accessible technology, readily available in most activists' workplaces, its deployment also meant that both AIDS activists and queer rights

[23] Spencer, p. 2.
[24] Tony D, *Ripped and Torn: The Glasgow Years Issue 1-4* <http://rippedandtorn.co.uk/background/the-glasgow-years-issues-1-4/> [accessed 22 August 2012]

> movements were partially underwritten by private and public institutions that had yet to embrace either AIDS or queer rights as respectable causes.[25]

While the AIDS and gay rights movements did receive some significant financial backing, the majority of individuals involved in both punk and Riot Grrrl did not have significant financial wherewithal.[26] This led these subcultural activists to appropriate the means of production, sometimes resulting in the subversion of the photocopier through acts of theft. This was the genesis of many punk and Riot Grrrl fanzines and other subcultural materials. David Ensminger, author of *Visual Vitriol* recalls his own moment of cultural appropriation as he describes the creation of his own fanzines in the US in the early 1980s, in this instance he co-opted,

> my father, a Reagan Republican, [who] was a manager at a grinding wheel factory in small South Beloit, Illinois who, nonetheless, would stay on after work to copy my raw and rough fanzines in batches of 70, which I would then locally distribute and send/trade/barter. He never discussed this as an act of theft (which it was, essentially), but treated it as a no-

[25] Eichhorn '*Adjusted Margin*', p. 121.
[26] M. Kent Jennings and Ellen Ann Andersen, 'The Importance of Social and Political Context: The Case of AIDS Activism', *Political Behaviour*, 25.2 (2003), p. 184.

> big-deal, positive act towards his son's aspiring punk journalism.[27]

These acts of subversion are moments of *détournement*, subverting the photocopier as both commodity and method of mass production. These subversive uses of the photocopier redirected its creative function from its corporate and bureaucratic ends to one of rebellion. The use of the photocopier in these ways, beyond the obviously legal ramifications, stands as a direct challenge to the dominant culture and the corporate driven spectacle. The photocopier enables anyone to publish, to promote ideologies. As Ednie Kaeh Garrison writes in *U.S. Feminism-Grrrl Style! Youth (Sub)Cultures and the Technologies of the Third Wave*, democratised technologies such as the photocopier have,

> become a resource enabling young women to get information to other young women, girls, and boys, a means for developing political consciousness, and a space that can legitimate girls' issues.[28]

Not concerned with corporate dictate or cultural norms, the photocopier enables comment on the position and belief of subcultures within the wider bounds of their environment, and their rejection of spectacular constraint.

---

[27] David Ensminger, 'Punk Research', Private Email Correspondence with David Ensminger, 20 February 2012

[28] Ednie Kaeh Garrison, 'U.S. Feminism-Grrrl Style! Youth (Sub)Cultures and the Technologies of the Third Wave', *Feminist Studies*, 26.1 (2000), p. 152.

Part Two: Subversion of the Photocopier and Subcultural Commodities

I have previously argued that the nature of the spectacle shapes the way in which subcultures are formed and argued that they appear at the point of opposition to spectacular ideology. This rejection of the dominant spectacular culture occasions individuals to react against spectacular constraints and to seek to establish a space for an alternate existence. Along-side this spectacular rejection I would argue that the restrictions placed on mass media and other methods of communication ultimately shape the resultant nature of subcultural methods and means of communication. I previously described the appropriative use of the photocopier by Mark Perry, Tony D, and members of the Riot Grrrl movement, and highlighted the theft which was sometimes involved in the creation of their subcultural material. But it is important to note that necessity not only drove the means of production of these subcultural artefacts; it was also often behind their conception.

Subcultures, an individual or group, stand, as I have already argued, in opposition to the dominant spectacle. Likewise, they also stand in opposition to meanings and messages conveyed by the spectacular mass media. I have already discussed Debord's claim that mass media acts to reinforce the spectacle and helps isolate individuals through the creation of an idealised commodity. The outputs of the spectacular mass media, magazines, newspapers, adverts, etc, are concerned with promoting the spectacular lifestyle through an endless cycle of desirable ever-changing

commodities. Consequently, the subculturalist is driven, by necessity, to address this imbalance. Subcultures are necessarily required to create their own commodities, their own outputs if they are to create their own space. Mark Perry's fanzine *Sniffin' Glue* is a perfect example of this, (fig 14). This issue of *Sniffin' Glue*, the first, demonstrates the immediacy with which Perry approached its creation. It was largely written on the typewriter his parents had given him for his birthday, and any illustrations or images that appear in it were hand drawn. When seen in contrast to a cover from *NME* produced in the same year (1976), the difference is stark, (fig 40). The *NME* was at the pinnacle of music journalism, and had access to all the professional equipment and materials it needed to produce these professional magazines. In contrast to the full photographic image on the front cover on *NME* Perry's amateurish, hand-drawn effort looks like what it is, an amateur publication. It bears all the hallmarks of necessity rather than intention. Felt tips, a cheap typewriter, the use of an appropriated photocopier – these aesthetics markers speak to a creation by someone without access to professional methods of mass media, but who wanted to engage. *Sniffin' Glue*'s aesthetic tone reflected the fledgling punk scene, and the ground swell of youths who found something in the raucous, offensive, and discordant music that spoke to their situation. *Sniffin' Glue* was a message from one young person to another, proof in its haptic construction that engagement with something beyond the hegemony and strictures of the dominant middle-class Western British culture was possible. Perry was driven to create *Sniffin' Glue* because of his own frustration at the

mainstream music press and the lack of coverage of the music he liked. He recalls that after attending a Ramones gig at the Roundhouse in 1976 he,

> asked the guys at the Rock on Record stall in Soho Market […] whether there were any British Publication covering the new music, because […] I had seen nothing. He jokingly said I should start one up myself. I obviously took his suggestion seriously because I went straight home and started typing the first words of […] *Sniffin' Glue*.'[1]

Both *Sniffin' Glue* and *Ripped and Torn* where necessary commodities, created to address perceived shortfalls in the promotion of the authors' interests. In the first issue of *Sniffin' Glue* in July 1976, Perry criticises the music press because,

> they don't f'ing understand […] they put down their songs, stances and even their enjoyment […] they treat it like some kind of freak-show to be laughed at […] the weeklys are so far away from the kids that they can't possibly say anything of any importance to punk-rock fans.[2]

In the same way Eichhorn recounts that the Riot Grrrl movement 'armed with little more than scissors, glue, and stolen time on copy machines […]

[1] Mark Perry, *Sniffin Glue and Other Rock and Roll Habits* (London, Omnibus Press, 2009), p. 2.
[2] Perry, p. 14.

made zines an integral part of their movement. Valuing expediency over posterity.'[3] This image, (fig 41), is taken from a zine called *Summer Olympia*, and its material nature, the cheapness of materials and the obviousness of its means of creation speaks to the functional immediacy valued by the movement. The marks of the photocopier, the scribbles of felt-tip, and cut-up lettering are both evidence of its amateurish creation and its challenge of visual, aesthetic and moral norms. This is backed up, or reinforced by the reference to Lenny Bruce. The creator is seeking to align and compare the message of the fanzine with the vitriolic nature of Bruce's comedy. Bruce was someone who peppered his stand-up with profanity, and references to sex, religion and politics. He took a satiric and barded swipe at mid-twentieth century middle-America, challenging the norms of sex, race, attitudes to the police and more. Bruce's comedy was a rage filled rejection of middle-class, white American norms and was giving expression to an obvious desire for social change. The author's use of Bruce's name ties their dissatisfaction with social norms to his. The declaration that Lenny Bruce hates squares is placed side by side with a character the author calls the monkey boy. The cut-out lines of text describe that the monkey boy, who we assume is the faceless, roughly drawn illustration on the right, and his rejection of the norms and niceties of an American education. All the character wants to do is make noises, because as the author writes, sometimes there aren't words for things. Everything about the publication, the rough nature of its production, the references to Lenny Bruce, the

[3] Eichhorn '*The Archival Turn in Feminism'*, p. vii.

faceless, hunched figure, reflect the authors feelings of frustration, feelings that cannot always be expressed with words, only noises. The fanzine is a haptic howl of frustration, and an attack on what is conceived of as normal.

Eichhorn says that those feminists involved in the 1990s Riot Grrrl movement were 'inheritors of a movement suddenly in decline,' and that,

> rather than build institutional bases from which to restructure the social world, feminist activism in the 1990s was about making do in a world where it had grown increasingly difficult to ignore precariousness, even the precarious nature of past political victories.[4]

In both instances the conviction behind the use of the photocopier for the creation of these subcultural artefacts are the same: need. Both groups perceived flaws within the culture, both groups believing that the dominant culture 'can't possibly say anything of any importance'[5] to their cause or concerns. The photocopier allowed these groups, who were 'intent on circulating ideas outside established economies of print and in opposition to established social norms' the ability to do so.[6] Both punk and Riot Grrrl actively engaged in the creation of their own material, zines, posters, flyers, etc, creating subcultural commodities that allowed their view to be heard. Eichhorn writes that 'copy machines were deployed to produce pamphlets,

[4] Eichhorn '*The Archival Turn in Feminism*', p. viii.
[5] Perry, p. 14.
[6] Eichhorn '*Adjusted Margin'*, p. 41.

flyers, posters, and banners of all kinds – in short, they were deployed as propaganda machines.'[7] Through both the conviction of necessary action and the necessity of financial constraint the photocopier became a tool for subcultural individuals and groups to create objects that spoke in a way the dominant culture did not, and would enable the establishment of a space, not just for individuals, but for growing communities of individuals. As Elke Zobl writes in *Cultural Production, Transnational Networking, and Critical Reflection in Feminist Zines*,

> zine makers turn to self-publishing for a variety of reasons: for personal expression, as an outlet for creativity, out of isolation, as a supportive space and network tool in search of like-minded friends and community, and as a form of cultural resistance and political critique.[8]

As Eichhorn writes, 'the copy machine, like the web, is a technology that was readily embraced because of its ability to transgress borders.'[9] As any other communication technology the photocopier was able to 'redefine, expand, and collapse spaces and in the process open up the possibility for new types of networks and communities to take shape.'[10]

---

[7] Eichhorn '*Adjusted Margin'*. p. 120.
[8] Elke Zobl, 'Cultural Production, Transnational Networking, and Critical Reflection in Feminist Zines', *Signs*, 35.1 (2009), p. 5.
[9] Eichhorn '*Adjusted Margin*', P. viii.
[10] Ibid, P. viii.

Debord believed that the purpose of spectacular commodities is the mediation of relationships and the isolation of the individual, for the purpose of sustaining the spectacle. This pattern of cultural commodification dictates from the top down, capitalist enterprise both creating and promoting the desire for commodities through mass media promotion. But inherently the creation of subcultural commodities begins with the individual. The individual or subculture perceiving the need creates the commodity, not for the purpose of isolation, but, as I have already stated, for the creation and fostering of community and communication. As Zobl writes in *Let's Smash Patriarchy! Zine Grrrls and Ladies at Work*, those individuals involved in the Riot Grrrl movement who made zines did so

> not only to provide a space where women and queer youth can create their own meanings, for their own pleasure and amusement, but are also a medium for feminist dialogue, community building and networking.[11]

In both British punk in the 1970s and the American Riot Grrrl movement in the 1990s the creation of fanzines, posters, album covers, and countless other forms of subcultural ephemera were created with the intention of creating community, of reconnecting isolated individuals. In the necessary act of creation individuals sought to further the cause of cultural change and

[11] Elke Zobl, 'Let's Smash Patriaracy! Zine Grrrls and Ladies at Work', *Off Our Back*, 33.4 (2003), p. 61.

revolt. These objects 'become a platform for personal correspondence, a practical method to inscribe set lists and guest lists,' and a means for individuals to communicate and shape their surroundings.[12] These objects all serve a purpose, stand as representative signposts for those subcultures, acting as markers of the community and their belief. They stand in opposition to those spectacular commodities that demand conformity to a prescribed spectacular view. Subcultural commodities demand a reaction from those viewing them. They prompt a response as they are themselves a rejection of inaction. I would argue that in this way the photocopier has been utilised as an important agent of cultural change, its uses rejecting the notion of a device whose purpose is only the facilitation of commercial interests. I would argue that the photocopier has a revolutionary significance as it both enables the growth of subcultures and the creation of subcultural ephemera; I will also argue later that that significance is again affirmed by the photocopier's aesthetic influence upon subcultural ephemera. David Ensminger writes,

> Xerography was a low cost, easy to use tool providing new channels of distributing and fomenting a petri dish of vernacular expression that helped fuel punks' long lasting sense of community.[13]

Equally Eichhorn writes that,

[12] David Ensminger, *Visual Vitriol: The Street Art and Subcultures of the Punk and Hardcore Generations* (USA, University Press of Mississippi, 2011), p. 5.
[13] Ensminger, p. 70.

> Xerography helped people imagine and realize publics and counterpublics that operate along a startling different axis – where the possibility to express and circulate opinions is infinitely expanded, where even opinions expressed by the mass media may be quickly appropriated and put back into circulation as types of critique.[14]

Its ease of use and the ease with which it is repurposed lent itself to rapid reaction and the shifting nature of subcultural existence. Its singular interface also prompted a level of individual engagement with the machine, rather than the mass consumption of commodities as promoted by the spectacular mass media.

This individual interface and interaction with the means of production is important in the creation of subcultural commodities and materials. In *The Medium is the Massage* McLuhan makes the distinction between what he calls amateurism and professionalism. He writes that,

> professionalism is environmental. Amateurism is anti-environmental. Professionalism merges the individual into patterns of total environment. Amateurism seeks the development of the total awareness of the individual and the

[14] Eichhorh '*Adjusted Margin'*, p. 110.

> critical awareness of the ground rules of society. The amateur can afford to lose. [15]

The professional is part of the spectacle, the environment, constrained by the moral, social and financial restrictions of that system. Designers and creators working within the spectacular system are constrained by a financial need to succeed, a need to justify corporate investment. The professional is hampered by a top down system of dictation, driven by the market, by the requirement to facilitate the continuation of the global system of capitalist mechanical reproduction. The amateur, the subculturalist, who is not part of that system, is able to fail, able to experiment, to say and do things that are only possible because of their situation as outsiders, they are people who have chosen to reject the spectacular requirements of their situation and critique 'the ground rules of society.' [16] The individual subculturalist may be hampered by financial constraints and have restricted access to the more proficient means of production, but the subcultural individual is able to experiment and utilise means of production that would be rejected by the professional. In this way the individual amateur's engagement challenges the spectacular tendency to turn the isolated individual into consumer. In the creation of subcultural commodities, the subculturalist can engage with each point of the process, production,

[15] McLuhan '*The Medium is the Massage'*, p. 91.
[16] Ibid.

distribution and consumption, rather than solely consuming.[17] The spectacle is about the creation of a socially isolated identity, subculture is about creating individual identity, and the creation of subcultural ephemera enables the individual to engage, not only with the immediate subculture they belong to, but also the wider culture they are critiquing. Garrison writes that for women involved in the Riot Grrrl movement these creations could become acts of resistance and subversion through which

> many young women produce critiques that address their own and others' experiences as women as well as their experiences of race, sexuality, class, and other forms of embodiedness.[18]

In this way, as the subculturalist utilises the photocopier for the creation of subcultural ephemera, in an act of appropriation, the photocopier is given a new identity within that subcultural environment, it becomes a force for reconnecting isolated individuals and giving them voice. Giving the photocopier a new identity, diverting it from its professional roots towards amateurism, is what the situationists would call an act of *détournement*. *Détournement* is a moment that,

[17] Although anyone who has ever spent time copying, stapling, folding or cutting up Xeroxed fanzines, flyers or posters will come to realise that because an activity is revolutionary, or subversive, does not stop it from also being boring and frustrating.
[18] Ednie Kaeh Garrison, 'U.S. Feminism-Grrrl Style! Youth (Sub)Cultures and the Technologies of the Third Wave', *Feminist Studies*, 26.1 (2000), p. 157.

> lies somewhere between diversion and subversion [...] it is plagiaristic, because its materials are those which already appear within the spectacle, and subversive, since its tactics are those of the 'reversal of perspective'.[19]

This appropriation, this *détournement* of the photocopier, particularly when enacted through theft, for the creation of subcultural materials, is a deliberate rejection of the dominant spectacle, disregarding the system and its restrictions in favour of an alternate approach to community and communication. The photocopier, and these photocopied creations reflect subcultural intent, the photocopier no longer a creator of corporate ephemera, but acting in the role of subcultural facilitator and creator of subcultural artefacts.

Debord wrote,

> a product which already exists in a form which makes it suitable for consumption can nevertheless in its turn become a raw material for another product.[20]

Debord claimed that products created by the spectacle could become something new, could have their purpose subverted, could be repurposed and given a new meaning. The photocopier's use by subculturalists

[19] Plant, p. 86
[20] Debord, s. 151.

demonstrates this repurposing as its function is subverted for subcultural ends. A device which helped to establish the modern office, and facilitated the growth of modern spectacular capitalism, would see that function subverted, and in the process be given a new meaning, a new facet of its substance. The photocopier's rapid reproductive ability, which reinforced the practice of corporate professionalism, is subverted towards the subversive amateur, and used as an agent of subcultural change. This is what Andre Breton called 'a total revolution of the object; acting to divert the object from its ends.'[21] The inherent DIY in the creation of subcultural artefacts, and the *détournement* of the photocopier is evidence of its agency in the rejection of the spectacle. Through the use of the photocopier, and the creation of photocopied subcultural materials, the subcultural individual is rejecting the dominant understanding of the photocopier in favour of one which sees its subversive potential. The photocopier is given a new meaning, a new facet through which it must be viewed; its substance becomes much more complex.

[21] Hebdige, p.105.

Part Three: Subculture and the Photocopier

Throughout this thesis I have sought to challenge the notion that the photocopier is a one-dimensional technology with a singular substance. One of the main perceptive filters through which we see the photocopier, and one of dominant reasons we view this technology as singularly banal, is that it is perceived by many to be the epitome of boring office work. In three newspapers articles from *The Guardian* (2002), *Telegraph* (2004), and *Independent* (2015), the photocopier is assumed to be an ever-present aspect of boring office work.[1] An interviewee in *The Guardian* complains that 'I was definitely photocopier in chief. I went from being bored to being brain dead.'[2] Endless photocopying, making copies, this is the photocopier's function, and according to Schwartz 'copying is pedestrian.'[3] In a culture that prizes originality Schwartz goes on to write that,

> The more adept the West has become at the making of copies, the more we have exalted uniqueness. It is within an exuberant world of copies that we arrive at our experience of originality.[4]

---

[1] Karen Hainsworth, 'They Don't Mention Photocopying and Making the Tea', *The Guardian*, 2002 <https://www.theguardian.com/money/2002/may/11/careers.students1> [accessed 9 May 2018].
John Clare, 'What You Can Learn From a Dull Week', *Telegraph*, 2004 <https://www.telegraph.co.uk/education/3344363/What-you-can-learn-from-a-dull-week.html> [accessed 9 May 2018].
Neela Debnath, 'GoPro Video of Boring Office Tasks Sums up Working in Admin in One Video', *Independent*, 2015 <https://www.independent.co.uk/news/world/americas/gopro-video-of-boring-office-tasks-sums-up-working-in-admin-in-one-video-10196364.html> [accessed 9 May 2018].
[2] Hainsworth.
[3] Schwartz, p. 211.
[4] Ibid, p. 212.

In a culture that prizes uniqueness, the function of a copy is, if not openly belittled, then at least subconsciously devalued. This is of course the function of the spectacle, the mass reproduction of identical copies, given only a momentary value, to be disposed of when the next commodity is created and marketed through the mass media. The photocopier appears to epitomise the copy, its singular function is to make copies, and subsequently its nature is imbued with a cultural perception of it as a singularly ordinary technology, responsible for the reproduction of unoriginal objects. But I have argued that the photocopier's appropriation and subversion by subcultural groups, and particularly its facilitation of the creation of subcultural community and identity demonstrates that the photocopier has an agency rarely considered in part due to the perceived mundanity of its reproductive function. In this next subsection I want to spend some time examining the idea of the photocopier's influence upon, not just the creation of community, but its creation of a style and aesthetic that has become much more permanent than the objects its created.

Marshall McLuhan wrote that,

> societies have always been shaped more by the nature of the media by which men communicate than by the content of the communication.[5]

[5] McLuhan '*The Medium is the Message*', p. 8.

McLuhan believed that the methods societies used to communicate shaped and influenced the reception of those messages, and ultimately the way they were perceived. To take as an example, the announcement of the birth of a new baby is read differently sprayed in graffiti on a wall, compared to a telephone call from a loved one. These ways of communicating and the media used to communicate come with socially perceived and imbued statues. McLuhan wrote that, 'all media are extensions of some human faculty - psychic or physical.'[6] He believed that media, as created objects, embody human understanding and conscious decision, and that therefore each unique media is ideologically marked, not just by its creator but also by the wider culture. I have gone some way to making this argument throughout this thesis about the photocopier. Its creator envisaged a way of more efficiently making copies, stemming from his own hampered ability to copy from law books by hand. The Haloid Corporation invested in the photocopier as a financial investment in the future, believing that the photocopier would change the nature of the office and revolutionise office productivity. The photocopier would be tied to the increasing routinisation and perceived feminisation of office work. Equally, as each individual confronts the photocopier in their daily work, the machine is increasingly associated with the necessity of employment and the banality of office labour. In each of these instances the photocopier becomes an 'extension of some human faculty - psychic or physical,' and its subsequent uses are

[6] McLuhan '*The Medium is the Message'*, p. 26.

inflected by those associations.[7] But I have also argued that the counter-cultural and subcultural uses of the photocopier should be considered equally as valid examples of different aspect of the human psyche, and understood in that light. But the photocopier's facility as a mode of copying and reproduction has gone beyond just acting as a facilitator of communication, it has, through its technical ability and possible shortcomings, created a recognisable aesthetic that further facilitated the growth of subcultures and speaks to some part of the anti-spectacular nature of those subcultural groups and individuals.

In *Visual Vitriol* David Ensminger writes that,

> Xerox art, especially flyers, are meant for endless copying. Most flyer artists did not toil with messy markers, press on letters, and small cut and paste collages in late night binges to make scarce, one off high art statements but to highlight and promote shows for bands.[8]

I have quoted throughout this thesis Dick Hebdige's assertion that 'access to the means by which ideas are disseminated in our society (i.e. principally the mass media) is not the same for all classes.[9]' I have asserted that in the case of punk and the Riot Grrrl movements that the media used to create printed ephemera was not principally chosen because of ideological or

[7] McLuhan '*The Medium is the Message',* p. 26.
[8] Ensminger, p. 4.
[9] Hebdige, p. 14.

stylistic choices but rather because of a functional necessity. The means of mass producing, or reproducing printed materials, as Hebdige asserted, is not the same for everyone, there is a financial cost involved that was beyond the scope of the average individual involved in these subcultures. I have already mentioned the example of Mark Perry's *Sniffin' Glue*, and Tony D's *Ripped and Torn*, both of which utilised materials and methods of production that either cost little or nothing; either though legitimate access or theft. Equally, David Ensminger recounted his father's use of the office photocopier in the production of his punk fanzine. Similarly, in *Adjusted Margins* author Kate Eichhorn writes that the Riot Grrrl movement, which 'took the form of a dispersed network,' relied upon the 'production, distribution, exchange, and eventual collection of photocopier zines,' for the 'movements development,' and for its 'on going legacy.'[10] Eichhorn goes on to say that,

> in the late '90s one could reproduce documents on a copy machine without leaving a trace. This enabled queer activists not only to reproduce materials that might otherwise have been subject to some degree of censorship by outside commercial printers but also frequently to do so for free on copy machines in their own workplaces.[11]

[10] Eichhorn '*Adjusted Margin*', p. 108.
[11] Ibid, p. 116.

While Eichhorn also describes the feminist movement's uses of the copy shops, something I would argue equates to some level of financial means, she also affirms the idea that innately the use of the photocopier arose because of functional necessity. This necessary use of the photocopier resulted in the creation of a certain aesthetic. An innate aspect of the pre-digital copy machines used by many in the punk and Riot Grrrl movements were certain visual markers. This example called *The Most Beautiful Girl is a Dead Girl* written by someone calling themselves Maggie Fingers, is from the Kathleen Hanna Papers, part of the Riot Grrrl archive held at New York University Fales Library and Special Collections, shows how the photocopier leaves evidence of its presence in the process of creation, (fig 15). The title, *The Most Beautiful Girl is a Dead Girl*, suggests an attitude to women which sees them not as worthwhile, valuable people, but as objects. The top image of the half-naked woman with the black rectangle obscuring her posterior suggests a sexual object to be used and discarded. The woman has no other visible features that suggest who she is, her face is hidden, and the black rectangle draws your vision to what it obscures. This grim depiction is starkly contrast against the statuesque figure beneath. We can see the face of the lower figure, her eyes half closed, left hand slightly raised. The figure is reminiscent of Sleeping Beauty, seen in repose, her hair arrayed behind her and the tiara perched on her head, and waiting for her prince to save her. Although this second figure appears more sympathetic than the first, there is also something which suggests the carved figures seen atop elaborate coffins of the type we see in churches. This figure is

somehow removed, an objectified, detached depiction of a woman, innocent, unspoiled, waiting for the right man. The contrast between the two, the sexual object, and the distant statue, seems to comment on society's views of women, depicting them as either sex object or saint, an object to be used or adored, but not human, not a real person. The degrading aesthetic of the photocopier is put to good use here, the fanzines brutal verdict that the most beautiful girl is a dead girl is made all the more severe by both the throwaway nature of its materiality and the photocopier's visually grim aesthetic. The visible marks left by the photocopier, the patchy imprint of the black ink on the bright pink paper mars something clean and unsoiled. While Haloid had claimed that the photocopier could create identical copy of an original this was only in comparison to previous technological methods of office reproduction. The photocopier was vastly superior to spirit duplicators and mimeographs but still had its own aesthetics pointers.

The fanzines, flyers and other ephemera of punk and the Riot Grrrl, although 20 years apart, both demonstrate the photocopier's visual ticks. (fig 42). The early photocopiers degraded images, reduced the vibrancy of the print, and added specks of ink to the paper. In this image, (fig 43), taken from a fanzine called *Dear Daddy* we see the marks of reproduction clearly. We see the aesthetic qualities of the machine, the obviousness of the photocopier's method of copying and reproduction. The partially replicated images are marked by those tell-tale absences of ink, the faint lines that mark the passing of the scanner across the original, and the scattered grey

haze as the photocopier has picked up on the detritus of the paper and the marks on the screen. The aesthetic quality of the fanzine is testament to the subculture's appropriation and subversion of the technology. But the use of the machine and the aesthetic quality of the objects it produces acts as a signifier of a truth much more distressing. While the image by itself seems innocent, the childhood memories of eating together as a family, the use of the photocopier and the degradation of the image that it results in underlines the darker tone of the fanzine. This image, (fig 44), foregrounds the message of the fanzine, one of betrayal, one bringing out into the open the brutality of authority, and a reality experienced by many of the author's 'sisters'. The initial images of childhood appear innocent but they bely the darker truth. The writer details horrific treatment at the hands of male authority figures, characters they call 'the daddyman.' More distressingly there is the suggestion of the ultimate betrayal from the chief daddyman, the who is expected to protect and defend, the one sitting at the table with the young girl. The fanzine speaks of violence, the death of innocence, and the struggle faced by so many of the writer's 'sisters'. From this perspective, then, the degraded photocopied images appear to mimic that degraded sense of childhood innocence. The memories portrayed are not bright and cheerful; with the added perspective of the present those earlier memories fade, and are corrupted or tarnished. Or maybe the degraded nature of the images only now reveal the truth of a childhood the author would like to forget. Paired with the text on the opposite page the eye in (fig 43) appears to stare at the viewer accusingly. Even as a bystander, and one over two decades removed

from the fanzine's creation, there is an accusation of possible apathy, of complicity in doing nothing while these outrages are carried out.

The photocopier, with these visual impairments, and its degraded aesthetic, seemed perfectly matched to the hands-on nature of much of these subcultures' methods of production, and the messages they sought to produce. Both punks and feminists alike utilised immediate methods of creation, using typewriters or handwriting text, including copied or hand drawn materials. They were often badly spelt, layouts cut and pasted together with scribbled corrections, and other errors included in the final versions. (fig 45). This amateur, low quality, and immediate form of communication shows that, as Matthew Fuller, author of *Photocopiers – Interplanetary Saviours From Another Dimension*, writes, 'being multiple and never unique the photocopy is always social.'[12] The photocopier always shows you the inner workings of a fanzine or other subcultural object. You see the author's hand, the seams, the staples, with these creations you can see how it was made. The choices made in production were ones of necessity, DIY carried out by individuals who often had little or no other choice. These photocopied objects were cheap, immediate, displaying an aesthetic that spoke of the individual's place in society.

Another important factor, displayed in the aesthetics of these subcultural creations, is the prominence of destruction, of decay, inherent in their

[12] Matthew Fuller, *Photocopiers – Interplanetary Saviours From Another Dimension* <http://scotoma.org/notes/index.cgi?FlyposterFrenzy> [accessed 02 July 2012]

creation. In using the photocopier these subcultures are rejecting the spectacular and in the use and subversion of spectacular commodities they are ideologically and, on occasion, physically destroying things for the creation of new subcultural objects. In 'The Reaction in Germany: A Fragment of a Frenchman' Michael Bakunin writes,

> Let us therefore trust the eternal Spirit which destroys and annihilates only because it is the unfathomable and eternally creative source of all life. The passion for destruction is a creative passion, too.[13]

Destruction or transformation is necessary; it is inherent in any creative practice. The process of creation requires both the physical and ideological transformation of something. In the creation of subculture, and the production of subcultural ephemera we see the destruction and transformation of the spectacle. The appropriation and subversion of spectacular artefacts and commodities is the destruction of the system, using these objects as raw materials for the creation of subcultural items, subcultures are transformation the materials of a rejected ideology in the process of creating their subcultures.

[13] 'The Reaction in Germany', *The Anarchist Library* <https://theanarchistlibrary.org/library/mikhail-bakunin-the-reaction-in-germany> [accessed 9 May 2018].

In the creation of these subcultural artefacts, rather than trying to hide the methods of creation, subculturalists claimed this destructive practice of transformation. A rough and ready method of transformation would become part of the growing aesthetic for both punks, feminists, and many other subculturalists who chose a similar method of production.

Ensminger writes that,

> the crudeness (of production), to paraphrase Russian poet provocateur Mayakovski, often signifies a slap in the face of public and aesthetic taste.[14]

The photocopier lends itself to this makeshift practice. Its subversion and often illegal usage is an ideological act of destruction, challenging and overthrowing the ideal of the spectacular and the photocopier's connection to the corporate world. Correspondingly, the use of the photocopier's own imperfect form of technology for the creation of crude and scrappy subcultural items highlights the physical transformation of spectacular materials. During the process of photocopying, paper and ink are converted into something else, the material used in the photocopier's reproductive process are in some sense destroyed and remade. Also within the act of photocopying something of the original is destroyed, the imperfect method of copying may lose colour, definition, or clarity. But at the same time

[14] Ensminger, p. 5.

something new is created, the photocopier adding is own visual ticks to the creative choices made by the individual creator. Ultimately a photocopied object is not just about the visual and creative decisions made by the individual but is also about the elements added and removed by the photocopier itself. The photocopier imprints an aesthetic upon the items it creates, it leaves a physical stamp creating an aesthetic that begins to be associated not only with subcultures but also with the machine itself.

Part Four: From Necessity to Intentional Ideology

In her book *The Archival Turn in Feminism* author Kate Eichhorn writes that,

> girls and young women across America […] armed with little more than scissors, glue and stolen time on copy machines […] made zines an integral part of their movement. Valuing expedience over posterity, however, their hastily produced publications rarely pointed beyond the moment of production - the temporality of girls' zines was the present.[1]

In a pattern reminiscent of the punks of the previous generation the Riot Grrrl feminist movement of the 1990s valued the speed and ease with which the photocopier allowed engagement with the culture and could foster the creation of new communities and further feminist discourse. In the beginning, the choices made by both groups and the aesthetics of their photocopied zines and flyers initially spoke of the functional necessity which spawned them. But the perceived authenticity of the growing aesthetic became increasingly endowed with a deliberate sense of ideological intentionality, and subsequently established a recognisable aesthetic style, a style that could be adopted to denote authentic subcultural credentials. Eichhorn writes that,

[1] Eichhorn '*The Archival Turn in Feminism'*, p. vii.

> in the 1990s a younger generation of feminists often appears to be more interested in the political efficacy of tactics, which are by definition effective only to the extent that they remain fleeting. In the content the annual march and monthly newspapers started to give way to more ephemeral interventions from flash mobs to zines.[2]

The choices made by individuals associating themselves with the Riot Grrrl scene and others demonstrated a political deliberateness, the creation of zines and other subcultural materials begin to establish an authentic subcultural style. The beginnings of punk and the choices they made were, according to Jon Savage, largely dictated by 'standard teenage stuff; the usual problems that young people have in getting their voice and perception heard.'[3] But according to Russell Bestley, by, what he calls, punk's third wave, the early 1980s, those involved in the punk scene were making a deliberate choice to return to a more a 'authentic punk ideology.'[4] The aesthetic associated with what had once been this functional necessity was now a choice being made to claim association with punk itself, and by extension the photocopier and its associated aesthetic. In correspondence with author and lecturer Russell Bestley, Bestley wrote that,

---

[2] Eichhorn '*The Archival Turn in Feminism'*, p. viii.
[3] Jon Savage, *England's Dreaming: The 'Sex Pistols' and Punk Rock* (United States of America: Faber and Faber, 2001), p. xiv.
[4] Russ Bestley, '*Hitsville UK: Punk Rock and Graphic Design in the Faraway Towns*, 1976-84' (London College of Communication, 2007), p. 14.

> curiously, a lot of punk graphics that look like raw and simple copies were actually litho printed, as it was cheaper than photocopying for any kind of multiple edition.[5]

Teenagers and young people, whether punks or feminists, who were often not art school trained and did not have access to professional equipment, were limited to what they could subversively obtain and appropriate. But the choices made became increasingly about association with a certain aesthetic and recognisable subcultural style rather than necessity. In a discussion with Bestley about design, Bestley, who is a lecturer in graphic design at Central St Martins, says that 'graphic design is more than originating an image – it is a process that takes into account materials, production processes and costs etc.'[6] This is what the creation of a subcultural aesthetic becomes, it is graphic design, choices made that reflect ideology, beliefs, and intentions that are an extension of the maker. In choosing to make use of the photocopier, whether through paid or more subversive means, there was an association being made with a particular subcultural aesthetic activity, which rejected spectacular norms of style and quality. As Ensminger writes,

> Xerox machines allowed for access to media making, access to action, access to subversion, hence supported a basic human need for untrammelled creativity and expression, therefore became a vehicle for bona fide critical thinking. Without it,

[5] Russell Bestley, 'Research', Private Email Correspondence Russell Bestley, David Ensminger and Alex Ogg, 09 July 2012
[6] Bestley, 'Research'.

> punks would have been at the mercy of print shops – the sub-layer of cottage industry capitalist production.[7]

It encouraged involvement, highlighted non-professionalism, and rejected the idea of passive consumption. It also demonstrated something that Marx and Engel wrote, that 'within the old society the elements of a new one have been created.[8] The artefacts of the spectacle, the commodities and ideologies of the spectacular dominant culture laid the foundations for the creation of subcultural spaces. Within these elements, in the choices made, in the technologies used, and the aesthetic consequences of utilising the photocopier were the foundations a recognisable subcultural aesthetic. Increasingly the use of the photocopier would become a deliberate choice, made to invoke an ideological connection to the practices of those who had sought to reject the dominant culture's norms and ideals. McLuhan's claim that the 'medium is the message' encapsulates this deliberate, subversive, choice of using the photocopier, as the use of the photocopier, or the adoption of its aesthetic, is used as a sign of authenticity.[9] The use of the photocopier, for purposes other than those associated with its corporate ownership, enabled the individual or group to associate with a subversive field of activity. The individual and wider subculture could actively undermine the spectacular, and challenge its acceptable standards. The style, or photocopied aesthetic became the message, the aesthetic itself becomes

[7] David Ensminger, 'Punk Research', Private Email Correspondence with David Ensminger, 20 February 2012
[8] Karl Marx and Frederick Engels, *Economic and Philosophic Manuscripts of 1844; and the Communist Manifesto* (New York, Prometheus Books, 1998), p. 229.
[9] McLuhan '*The Medium Is the Message*', p. 5.

the marker of authenticity and an aesthetic which can be replicated by both those joining its ranks, or subsequently by the dominant media that recognises the aesthetic and replicates it for its own ends. As the author Roger Sabin writes, 'the photocopier […] was […] dominant […] because everybody wanted to be *Sniffin' Glue*.'[10] The author of *Sniffin' Glue* Mark Perry wrote that,

> the punk scene hadn't gone away but there was no need for a magazine like *Sniffin' Glue* anymore. When it started it filled a gap in the market but by the second half of 1977 everyone was writing about punk rock. It was no longer an underground scene. Punk bands were signing up to established labels, had singles in the charts and were playing places like the Rainbow and the Roundhouse. The punks, in a way, had become the new establishment.[11]

The individual's use of the photocopier becomes a choice, one that was initially aimed at an association with a section of subculture,

> this intimate identification of the individual with the commodity is born out of the attempt to escape alienation: the

[10] Roger Sabin. Personal Interview with Roger Sabin, London, 26 April 2012
[11] Perry, p. 5.

> search for some unity and meaning in the midst of increasing fragmentation and isolation.[12]

But its use, or implied use, would eventually be adopted by the spectacle in an attempt to replicate that same subcultural aesthetic. This repurposing by the spectacle is as always aimed at subsuming the aesthetic within the spectacular and building new markets for spectacular commodities. There is a cycle, 'leading from opposition to diffusion, from resistance to incorporation [which] encloses each successive subculture.'[13] This example taken from the *NME* and their Sex Pistols Anniversary edition (2013) shows how the association of a style, of an aesthetic, would be used to induce connotations of the subculture. (fig 46). The figure of Johnny Rotten seems to perfectly evoke the essence of punk. The photograph depicts a youthful, energetic figure with a wide-eyed stare, mid musical assault. Despite the fact that the *NME* would have access to countless colour images of Rotten the choice of black and white places the image in a previous age, its grimy and degraded quality evoking punk fanzines like *Sniffin' Glue* and the use of the photocopier in their creation. In Perry's fanzine black and white images were used out of necessity, and were an interpellation of a particular time and place, lived and experienced by its author and often its readers. Whereas the use of black and white in this cover seeks to provoke a visual scintilla in the mind of its readers, acting as a simulacrum of a particular time and place, and in doing so to tie those experiential perceptions to this more

[12] Plant, p. 25.
[13] Hebdige, p. 100.

modern music magazine. The punk DIY aesthetic that was part and parcel of the fanzines the subculture produced is present in the nod to the cut-up letters often used by fanzine makers, only in this instance the letters themselves are not cut out blocks so do not obscure the image of Rotten, another professional touch. Also, the use of the bright yellow splashes of colour against the black and white image is reminiscent of Jamie Reid's work for the Sex Pistols. The deliberate choices made in the production of this front cover demonstrates those markers, those signifiers of punk's 'authenticity' to which later adherents would mimic. By creating a magazine cover, using the most professional tools and printing methods, that imitates the degraded and haptic response punks had to their time and situation, the *NME* are demonstrating the lasting legacy that the punk' photocopied, DIY aesthetic has had, and affirming the association of this aesthetic to subculture.

The photocopier demonstrates its nature as a complicated substance, something which cannot be solely understood as a corporate machine, without agency, but equally can not be singularly associated with subcultural activity and spectacular rejection. The photocopier represents different things to different sections of the society. It is situationally different, not different dependent upon the situation of the photocopier, but different dependent on the situation of the individual. The complex nature of the photocopier reflects the needs of the user and is approached differently because of this. The experience of using it, the individual's perception of

their situation and perception of the photocopier's previous output mean that each individual approaches the machine differently and it reflects back to each individual their perceived situation.

Chapter Four:
Art and Machine

Section One – Environment, Institution and Substance

Part One: Environment

In the previous chapter I sought to examine the photocopier's use in the realm of subculture. I argued that the photocopier enabled and facilitated the growth of subcultural groups and allowed for increased communication and the development of community. I argued that the photocopier facilitated in the creation of a particular subcultural aesthetic that has been subsequently utilised by both subcultural and spectacular culture alike in the creation of objects that denote or position themselves within the realm of certain heterodox ideologies. I argued that the photocopier used in such a way further demonstrated that our overarching cultural perception of the photocopier as a singularly bureaucratic office technology is too simplistic and overlooks the significance of the photocopier role within subculture. In this next section my intent is to demonstrate the photocopier's use as a method of artistic production and examine our understanding of art and art's use of a supposedly uncreative technology. In this first subsection I will be giving a general overview of our perception of technology as environmental, using Marshall McLuhan's idea of environment and media. My intention is to establish the photocopier as a product, as facet of our electronic

environment, and as an environmental medium used by certain artists to define their place within that environment. I will then proceed to look at the concept of the institution, particularly the institution of art, our cultural perception of art, and what constitutes an artwork. This discussion will tie into my previous examination of Latour's substance, and in this context, the shifting field of references that form our cultural perception of what constitutes an artwork. I will then recap Latour's idea of substance and the agency of technology, this time exploring the artist's use of technology, which as facets of our environment imprint their own cultural baggage upon the resultant works. My concern throughout this thesis echoes McLuhan's in that to ignore the media, in this case the photocopier, its creation, function, and cultural influence, will lead us to misunderstanding the device and its subsequent influence. As Miller's writes in the introduction to *Materiality*,

> the surprising conclusion is that objects are important not because they are evident and physically constrain or enable, but often precisely because we do not see them. The less we are aware of them, the more powerfully they can determine out behaviour, without being open to challenge.[1]

Or as Kenneth Allan writes in *Marshall McLuhan and the Counterenvironment: "The Medium Is The Massage"*, 'in any given

[1] Miller, p. 5.

situation, individuals are constrained and shaped by the active processes of the hidden environment.'[2]

I have argued throughout this thesis that our dominant cultural perception of the photocopier is overly simplistic, and its influence minimised particularly in the study of art history and visual culture. But I have constantly rejected this view demonstrating the photocopier's differing situational nature, situational both in terms of the photocopier's physical situation or location, and the situation or state of the individual operating it. The physical location of the device, the photocopier, and the situation of the user come together in what McLuhan calls 'a single complex pattern.'[3] The individual interaction with the photocopier is not passive, but a complex pattern of exchange and interchange, speaking again to Latour's description of the formation of a substance. For this reason, I have argued throughout for a more nuanced examination of the photocopier. It is in the interaction between the product and the individual that the heterogeneous nature of the photocopier is most clearly visible, something I demonstrated by its appropriation by both Xeroxlore practitioners and members of difference subcultures. But equally we also get a more delineated understanding of the photocopier's active influence upon Western culture. It is here, with this demonstration of multiple points of agency, human and machine, that McLuhan's environment takes shape. McLuhan argues that our environment is created, consisting of a 'social drama,' an interaction between individuals, created,

[2] Kenneth R. Allan, 'Marshall McLuhan and the Counterenvironment: "The Medium Is The Massage"', *Art Journal*, 73.4 (2014), p. 27.
[3] McLuhan '*Understanding Media*', p. 246.

mediated and shaped by an ever-expanding electronic media.[4] In McLuhan's environment there is a complex interchange between individuals mediated by machines. Those devices, which McLuhan claims are extensions of human senses, have an agency that shapes the process and outcome of that mediation. So, in as much as we have created our electronic environment, our environment exerts an active influence upon us. There are definitely correlations to be drawn between McLuhan's description of our environment and Debord's view of the spectacular. Debord argued that the spectacle is a system of mass production, mediating social relationships through the mass media and the promotion of commodities.[5] In *Understanding Media* McLuhan writes, 'the environment that we create becomes the medium we use to define our role in it.'[6] Debord believed that the spectacle exists, in McLuhanian terms, as 'the medium that shapes and controls the scale and form of human association and action.'[7] McLuhan goes further when he writes that we are in danger of,

> surrender[ing] our sense and nervous systems to the private manipulation of those who would try to benefit from taking a lease on our eyes and ears and nerves, we don't really have any rights left […] We have leased these "places to stand" to private corporations.[8]

[4] McLuhan '*Understanding Media'*, p. 10.
[5] Debord, s. 37.
[6] McLuhan '*Understanding Media*', p. 156.
[7] Ibid. p. 9.
[8] McLuhan '*Understanding Media*', p. 75.

Mass media, those technological forms of mass communication, which Debord believed were responsible for mediating all human relationships, can be understood to act as McLuhan's environment, and which McLuhan believed had to be resisted.[9] These media are the extension of our 'central nervous system,' and these same media 'involve us in the whole of mankind and to incorporate the whole of mankind in us.'[10] Through these media, through the global spectacle, we have become a global village, an environment experienced by each individual, isolated and given direction, in a global village. To understand the change brought about by new media, McLuhan argued that we must understand how 'media work as environments.'[11] And the only way to rightly grasp this is to look at 'the consequences of the new environment on the old environment before you know what the new environment is.'[12] McLuhan goes on to write that,

> media, by altering the environment, evoke in us unique ratios of sense perceptions. The extensions of any one sense alters the way we think and act - the way we perceive the world. When these ratios change, men change.[13]

Our environment influences the way we think, the way we act; when we speak we speak the language of our environment, our environment which comprises all electronic media. Or to borrow from Debord,

---

[9] Allan, p. 30.
[10] McLuhan '*Understanding Media*', p. 4.
[11] Ibid. p. 26.
[12] Allan, p. 33.
[13] McLuhan '*Understanding Media*', p. 41.

> one speaks, to some extent, the language of the spectacular itself in the sense that one moves through the methodological terrain of the very society which expresses itself in the spectacle.[14]

This is why any examination of the photocopier must be more than a one-dimensional reading of the technology. The photocopier is part of our created environment, it is an expression of the spectacle. It is also, as a functionary of our media environment, an extension of our central nervous system, a tool for both spectacle and counterculture. But the photocopier has also altered the pattern of work, and our perception in doing so. For some it is a facilitator of necessary employment, and epitomises the boredom of work. For others it has been used to express their individuality, undermine environmental constraints, and its creative function used to foster community and subversive or contrary cultures. According to Schwartz 'copying makes us what we are,' therefore there is some sense in which the photocopier is an extension of that most human function.[15] The photocopier has altered daily activity and perception, altered how the corporate world handled information, helped shape the social and historical trajectory of subculture and counterculture. If, as McLuhan writes, that 'the extensions of any one sense alters the way we think and act – the way we perceive the

[14] Debord, s. 11.
[15] Schwartz, p. 211.

world,' then the photocopier, as an extension of our bodies, could be understood to have altered the way we perceive the world.[16]

McLuhan wrote that while we might 'be disposed to say that it was not the machine, but what one did with the machine, that was its meaning or message,' actually 'the environment that man creates becomes his medium for defining his role in it.'[17] The environment, the network of information technologies and technological media, enables us, according to McLuhan, to define our role in it. I would add a caveat that, to some extent, media controls not just how we define our role but also more importantly may shape how an individual defines themselves. Him writes that 'the environment is […] analogous to the ground that allows for the thing or figure to come to attention.'[18] McLuhan gives an example of a society 'dependent upon one or two major staples like cotton or grain.'[19] He writes that this dependence is 'going to have some obvious social patterns of organisation as a result.'[20] The society that is largely dependent upon such staples and is configured accordingly will 'accept them as a social bond.'[21] This he says acts upon the 'psychic life of the community,' and he argues how,

[16] McLuhan '*Understanding Media'*, p.41.
[17] Ibid, p. 7.
Ibid '*The Medium Is the Message*', p. 156.
[18] Allan, p. 26.
[19] McLuhan '*Understanding Media*', p. 21.
[20] Ibid.
[21] Ibid.

> our human senses, of which all media are extensions are also fixed charges on our personal energies, and that they also configure the awareness and experiences of each one of us.[22]

Whether we are consciously aware of it or not the media we are surrounded by, which is an aspect of our social bond, and surround ourselves with, imprint themselves upon our conscious and subconscious life. Our environment is not passive, it is not banal, devices such as the photocopier influence us in ways that we may be consciously unaware of. While at the same time these same bonds, this same environment will alter our perception of the photocopier and our understanding of its influence. This is why McLuhan can say that,

> environments are not just containers, but are processes that change the content totally. New media are new environments. That is why the media are the message.[23]

Ultimately 'the "message" of any medium or technology is the change of state or pace or pattern that it introduces into human affairs,' and the photocopier has had a radical influence upon our 'human affairs.'[24]

[22] McLuhan '*Understanding Media'* p. 21.
[23] Allan, p. 31.
[24] McLuhan '*Understanding Media'*, p. 8.

Part Two: Institution

I have just given a brief overview and discussion of McLuhan's concept of our environment and its agency in mediating and altering our perception. McLuhan argued that the environment as created electronic media creates interactions between individuals, and mediates those same interactions. This mediation imposes a state of existence upon the individual and alters the pattern of human affairs. I have argued throughout that this must be our understanding when we consider the photocopier, that it exists as part of that created environment and has altered the pattern of human experience in the realms of business, counter-culture and subculture. From this interpretation of our created environment and its mediating effect on our perception I will now argue for an understanding of art as a created cultural institution, as a mass cultural belief. This examination will be grounded in my previous examination of Debord's spectacular, and McLuhan's environment. This will lead me to an examination of the uses of the photocopier within the sphere of a tradition of artistic practice that gives a primacy to originality and the predominant status of authorship. In the final section of this chapter I will look at those uses of the photocopier in Xerographic and copy art, which exists within an environment that perceives the photocopier as the preeminent reproducer of copies.

Debord believed that any discussion about our culture and our environment is moderated by the language of the spectacle. In his book *Theory of the Avant-garde* the author Peter Bürger writing about the practice of historians,

says that 'the perspective from which they view their subject is determined by the position they occupy among the social forces of the epoch.'[1] Culturally we are all 'positioned' within our environment, artists and art historians amongst all others are mediated in their relationships and understanding; individual understanding is partly arbitrated by the mediating force of technological media, by environment. In the book *Conceptual Art: A Critical Anthology*, the authors of *A Media Art (Manifesto)* write that, 'in a mass society, the public is not in direct contact with cultural activities but is informed of them through the media.'[2] It is through a complex historical mix of experience, understanding, media, tradition, and a host of other influencing factors that the individual is affected, although Bürger does give a pre-eminence to tradition. In his discussion concerning the avant-garde and artistic practice Bürger writes that initially 'understanding ultimately comes to mean submission to the authority of tradition.'[3] In understanding we recognise that we are initially influenced by the dictate of tradition, shaped and directed by mass cultural beliefs. This is why Debord could write that 'passing into the spectacle […] the agent renounces all autonomous qualities in order to identify himself with the general law of obedience to the course of things.'[4] We might read this with a pessimistic belief in the process of historical inevitability, arguing that we are nothing more than that which our environment dictates.

[1] Peter Bürger, *Theory of the Avant-Garde* (Minneapolis, University of Minnesota Press, 2004), p. 6.
[2] Eduardo Costa, Raul Escari and Roberto Jacoby, 'A Media Art (Manifesto)', in *Conceptual Art: A Critical Anthology* (Cambridge Massachusetts, The MIT Press, 1999), pp. 2–5. (p,2).
[3] Bürger, p. 5.
[4] Debord, s. 61.

But Bürger also argues that 'in contrast […] the "power of reflection" […] makes transparent the structure of prejudice in understanding' as shaped by historical tradition 'and thereby can also break the power of prejudice.'[5] Bürger gives the possibility of a break, of rejecting the power of historical prejudice. This is echoed by Debord when he writes that,

> it is obvious that no idea can lead beyond the existing spectacle, but only beyond the existing ideas about the spectacle. To effectively destroy the society of the spectacle, what is needed is men putting a practical force into action.[6]

This is the knife edge that art comes to rest upon time and time again. The institution of art can act as both a functionary of the spectacle, as a mediator or facilitator of tradition, but also by reflection art can offer the power of a break, of spectacular critique, or what McLuhan would argues is the creation of a counterenvironment.[7] Bürger gives an example of this possibility in his discussion of the avant-garde, he writes that 'Dadaism,' which was 'the most radical movement within the European avant-garde, no longer criticises schools that preceded it, but criticises art as an institution.[8] Dada sought to challenge, not the schools or artworks themselves, but the established traditions of art as the font of those activities, but doing so speaking the language of the historical institution of art. Dada was not

[5] Bürger, p. 5.
[6] Debord, s. 203.
[7] Allan, p. 32.
[8] Bürger, p. 22.

concerned about just creating challenging artwork, but sought to challenge the institution of art itself. Bürger writes that,

> When Avant-Gardists demand that art become practical once again, they do not mean that the contents of works of art should be socially significant. The demand is not raised at the level of the contents of individual works. Rather it directs itself to the way art functions in society.[9]

I am neither advocating for or against this particular reading of the avant-garde and its demand for art to once again become practical, but I would argue alongside Boris Groys, author of *The Topology of Contemporary Art*, that 'the recognition of the iconoclastic, of the creative, of the new requires therefore, *a permanent comparison with the traditional*, with the old. [Emphasis added]'[10] Using Dada as an example, art as an institution, as a substance – even the most revolutionary art – falls within the tradition of art and consciously or subconsciously compared against the old. Even in its most revolutionary moments, art always speaks the language of the institution. I make this point because I am concerned with the institution of art, with our cultural perception of art and our belief in what constitutes an artwork. Bürger writes that this 'model provides the important theoretical insight that works of art are not received as single entities, but within

[9] Bürger, p. 49.
[10] Boris Groys, 'The Topology of Contemporary Art', in *Antinomies of Art and Culture: Modernity, Postmodernity, Contemporaneity* (Durham: Duke University Press, 2008), p. 72.

institutional frameworks.'[11] I would argue that artworks cannot be separated from their cultural framework, from our cultural perception of what constitutes an artwork. Bürger writes that it is this framework that dictates that,

> the organic work of art is constructed according to the syntagmatic pattern; individual parts and the whole form a dialectical unity. As adequate reading is described by the hermeneutic circle: the parts can be understood only through the whole, the whole only through the parts.[12]

Art as an institution is a dialectical unity not just comprising its own present parts and intentions but correspondingly comprising cultural perceptions and traditions. To utilise Latour's word again, art is a substance. In *Pandora's Hope* Latour writes that 'the word "substance" does not designate what "remains beneath," impervious to history, but what gathers together a multiplicity of agents into a stable and coherent whole.'[13] A substance is organic, constructed of 'individual parts' which form a 'dialectical unity.'[14] In *A Cultural Conjunction in India: Art into Documentary* Geeta Kapur describes art as,

[11] Bürger, p. 12.
[12] Ibid. p. 79.
[13] Latour, p. 151.
[14] Bürger, p. 79.

> an index (of the rapid process of globalization), as symbolic (of persistently hypothesized national cultures), and as a sign (of surplus value and, with it, the unsolicited pleasures generated beyond commodity exchange).[15]

In this way then the artwork can be partially viewed as the embodiment, or indexing of, the institution of art as a cultural creation. Art must be partially understood as the result of our cultural perception of what art is. In *What is a Book? The Study of Early Printed Books* the author Joseph Dane describes 'the book and its representative book-copies' as a 'function of the institution of printing,'[16] I would argue that the artwork is a function of the institution of art, as both index and consequence. Art functions as art, is a result of our cultural concept of art, the artist exists, because we have a cultural concept of art. The creation of artwork happens because we as a culture continue to hold to an abiding tradition or belief in the institution of art, art speaks the language of institution.

I have argued for a complex reading of the photocopier, its creation, function, and individual interactions combining to form a complex substance, in much the same way I would argue that the artwork is a complex substance arising from the Western cultural institution of art, it is perceived in a certain way because of our cultural perception, because of its

[15] Geeta Kapur, 'A Cultural Conjunction in India: Art into Documentary', in *Antinomies of Art and Culture: Modernity Postmodernity Contemporaneity* (Durham: Duke University Press, 2008), p. 32.
[16] Dane, p. 10.

histories, the artists, its means of creation, individual interactions and more. In *Reconsidering Conceptual Art, 1966 - 1977* the author Alexander Alberro, discussing the Artists' Meeting for Cultural Change in New York, writes that 'the ideological conditions of the institution of art [are] fundamental to the validation of artworks.'[17] Alberro goes on to write that 'the invisible institutional mechanisms […] structure and define art in advanced capitalist society.'[18] He recognises that

> the work of art's status as such arises not from characteristics of its own inner logic, nor from the nominal act of autonomous agent in absolute control of his creative impulses, but, in the first place, from the "relative ideological frame" of the privileged social group that constitutes the art audience and administers the discourse of art in our society, and second, from the gallery-museum power nexus that bestows value upon a work of art.[19]

An artwork, as presented by Alberro, is not an isolated object, does not exist independent of culture but, to adopt a phrase from Bakhtin, 'it acquires a relationship – in one form or another, to one degree or another, to the

[17] Alexander Alberro, 'Reconsidering Conceptual Art, 1966 - 1977', in *Conceptual Art: A Critical Anthology*, ed. by Alexander Alberro and Blake Stimson (Cambridge Massachusetts, The MIT Press, 1999), p. xiv.
[18] Ibid, p. xiv.
[19] Ibid.

ongoing event of current life in which we […] are intimately participating.'[20]

I discussed in the introduction my particular approach to the idea of an institution as socially recognised, an artwork is framed by an ideological framework that arises from our Western recognition and understanding of art. This enframing of the artwork is the institution, it is the social identification that goes beyond the artwork's immediate physical or material presence. Because of the social nature of the institution of art it is framed by interdependent relationships within a social system and significant within a particular culture.[21] Debord argued that we speak the language of the spectacle, that in discourse, or rebellion, we still use the language of the culture. The institution of art is historically intricate and dialectically complex, it cannot be separated from the historical changes in religious belief, political revolutions or international conflicts, it is always a facet of a much wider, much more complex institution. It is within this complex framework that the use of the photocopier must be positioned when considering it as a tool of artistic creation. It is significant that we have a tradition of art, that we have institutionalised a practice of creation, whether through physical means or intellectual, and it is within this context that I will be arguing for another facet of the photocopier's substance as a tool of artistic creation.

[20] Mikhail Mikhailovich Bakhtin, *The Dialogic Imagination: Four Essays*, ed. by Michael Holquist, trans. by Caryl Emerson and Michael Holquist (Michigan: University of Texas Press, 1981), p. 30.
[21] Pinch, p. 479.

Part Three: Substance

In the previous subsection of this chapter I sought to briefly deal with the notion of the institution of art. I argued that art as an institution exists in a hegemony of perceptions and that the artwork exists as a result of our cultural belief in the institution of art. The dialogue between art and artwork, and the historical tradition of art as institution is a topic so complex and vast that it would take more time and space than any one art historian could ever commit. But in this next section I want to continue to expand on the notion of art as an institution and the artwork as a substance. I want to demonstrate that the construction of an artwork is not just as an object but as an embodiment of historical time and individual interactions – to paraphrase Pinch, artworks are made from things as well as people.[1] My intention is to argue for the use of the photocopier as an aspect of that substance and for the artworks to be included as part of the photocopiers own substance.

I have throughout this thesis drawn upon the work and writing of Bruno Latour and his book *Pandora's Hope*. Latour's primary concern is with science studies and in *Pandora's Hope* he is principally dealing with the creation of the scientific substance. But I have argued that Latour's description of a substance is one that can be utilised more broadly then just Latour's own usage and is not as obdurate as Latour's himself might argue. In *Pandora's Hope* Latour, writing about a particular scientific expedition, notes that space is needed to chart and collate the relevant information

[1] Pinch, p. 479.

relating to the findings and results of that expedition. In doing so he writes that the 'space becomes a table chart, the table chart becomes a cabinet, the cabinet becomes a concept, and the concept becomes an institution.'[2] He argues that the collection of pieces of information and their formation into a concept ultimately becomes an institution, an established cultural construct. While Latour's idea is a useful tool, and one I have heavily drawn upon in this thesis, I want to take a moment to point out that we need to be careful to not make exact equivalences between Latour's idea about the creation of a scientific institution, which is framed within a constructivist account of science, and the institution of art. When writing about the work of Frédéric Joliot-Curie's with nuclear fission he writes that,

> he (Joliot) […] cannot by himself transform the statement he is proposing into a scientific fact that the others accept; by definition, he needs the others to bring about this transformation.[3]

It is in these discursive constructions that Joliot's statements become 'real', accepted by the scientific community. Whereas when discussing the mechanisms of the institution of art Alberro writes that it is 'the invisible institutional mechanisms [that] structure and define art in advanced capitalist society,' they do not transform the artwork into fact.[4] In the *Theory of the Avant-Garde* Peter Bürger writes that 'works of art are not

[2] Latour, p. 36.
[3] Ibid, p. 94.
[4] Ibid, p. xiv.

received as single entities, but within institutional frameworks and conditions that largely determine the function of the works.'[5] Artworks are, argues Bürger, received within an already established culturally accepted framework, the socially recognised institution of art. As Alberro argues,

> any form art takes, however unconventional, is acceptable because the institutional network or structure of art has so thoroughly taken hold of the development of culture that even the most avant-garde gestures are immediately appropriated.[6]

This institutional network, or our Western concept of art is a comparatively recent construct. In *The Invention of Art* author Larry Shiner writes that,

> The modern system of art is not an essence or a fate but something we have made. Art as we have generally understood it is a European invention barely two hundred years old.[7]

The Western 'tradition' of art is a collection of historical moments. Our current Western beliefs about art and artwork flow from a history of actions and traditions, of people and things. Vasari's *Lives of the Artists*, Daguerre's discovery of photography, or Duchamp's creation of the *Fountain*, each of these moments manifest themselves within the Western cultural perception

[5] Bürger, p. 12.
[6] Alberro, xxv.
[7] Larry Shriner, *The Invention of Art: A Cultural History* (Chicago, The University of Chicago Press, 2001), p. 3.

of art. These ideas, which began as a concept, have subsequently become culturally defined, socially recognised, have acted with an agency upon our cultural beliefs about art, artworks, and the artist. They do not become fact in the way Latour argues for the understanding of a scientific fact, but each new idea is shaped by, and shapes the institution of art. The institution of art is not static, our concept of art is not eternally true, and as Shiner has argued those beliefs continually change. Latour writes that 'the more connected a science, the more accurate it may become.'[8] I would argue that this is equally useful for a fuller understanding of art and the institution we have created and maintain. Latour argues that there 'does not exist true statements that correspond to a state of affairs and false statements that do not, but only a continuous or interrupted reference.'[9] The process of creating and maintaining art as an institution is a continuous or interrupted reference; we either purposefully maintain or change. This is why we can also say along with Latour that it is important that we 'retrace our steps, retaining both the history of humans' involvement in the making of scientific facts and the sciences' 'involvement in the making of human history.'[10] The institution of art and artworks and the role of the artist are not passive, they exist as part of our culture, our tradition. McLuhan, writing about the artist, says that 'the artist is always engaged in writing a detailed history of the future because he is the only person aware of the nature of the present.'[11] This awareness of the nature of the present is vital, because the present is

[8] Latour, p. 95.
[9] Ibid.
[10] Ibid. p. 96.
[11] McLuhan '*Understanding Media*', p. 71.

founded upon the past, and upon on-going conscious and subconscious agents. Latour gives us an example of this in the speed bump. He writes that,

> the speed bump is ultimately not made of matter; it is full of engineers and chancellors and lawmakers, commingling their wills and their story lines with those of gravel, concrete, point, and standard calculation.[12]

The idea that an artwork is somehow an autonomous entity, a privileged space cut off from other disciplines or traditions is demonstrably untrue. To paraphrase Latour, the only way for us to realistically speak truthfully about art is to connect through as many relations and vessels as possible.[13] This is why I find Latour's idea about the substance is so useful. He argues that, 'the essential point I am trying to make is that "construction" is in no way the mere recombination of already existing elements.'[14] He argues that 'nothing more happens in the history of science than the discovery of what was already there all along.'[15] He writes this in the midst of a discussion about Pasteur's experiments with yeast: 'in the course of the experiment Pasteur and the ferment mutually exchange and enhance their properties.'[16] This is the beginning of what he calls a substance. The difference when we come to the discussion of the creation of an artwork is that I wouldn't

[12] Latour, p. 190.
[13] Ibid, p. 113.
[14] Ibid, p. 124.
[15] Ibid, p. 126.
[16] Ibid.

consider the artist work as the 'discovery of what was already there all along,' rather the artist adds to, or challenges the already existing institution.[17] In the act of creation, in the manifestation of an artwork we see not only the institution of art, of the histories and traditions that have come together to create what we think of as art, but we also see the effect that the manifestation has on the institution and its creator. Latour argues that science and technology are not passive, that there is a mutual exchange that takes place. This should make us ask a question, if,

> the experiment creates two planes: one in which the narrator is active, and a second in which the action is delegated to another character, a nonhuman one. An experiment shifts our action from one frame of reference to another. Who is the active force in this experiment? [18]

Who is the active force? The answer Latour gives is 'both Pasteur and his yeast.'[19] Pasteur's experiments with yeast, its acceptance by the wider scientific community, and the subsequent notoriety this bought Pasteur, demonstrate the mutual exchange Latour argues for. If we are looking for an art historical example we might make a comparison with and Marcel Duchamp and *Fountain*. Duchamp authored *Fountain* in 1917 when he chose the readymade urinal to function as an artwork, and although he did not sign *Fountain* with his own name, he is now revered for that work. In

[17] Latour, p. 126.
[18] Ibid, p. 129.
[19] Ibid.

Object Choice: Marcel Duchamp's Fountain and the Art of Queer Art History, author Paul B. Franklin writes that *Fountain* was 'one of the most significant and radical contributions to the history of modern art.'[20] Keeping in mind what I previously discussed, the creation of art not being equitable to a scientific 'fact' but as a function of the institution of art, the mutual exchange taking place between Duchamp and Fountain is the change in perception and judgement it provoked. *Fountain,* although originally rejected and destroyed, stands as one of the pivotal moments in modern art history, since replicated many times, and a copy of which is currently on display in Tate Modern, one of the UK's preeminent art galleries.[21] *Fountain* embodies Duchamp's choice, the academy's reaction, the shift it brought about in our understanding of art, and so much more. *Fountain* had a marked influence upon Duchamp. Shiner comments that 'few twentieth-century gestures have achieved the notoriety of Marcel Duchamp's *Fountain* [...] Duchamp knocked fine art off its pedestal and erased the distinction between art and life.'[22] Duchamp understood its resonance when, near the end of his life, he speculated that 'I will have (later) only a public toilet or underground W. C. in my name.'[23] Shiner notes that *Fountain* is Duchamp's creation, it is his work, its notoriety now forever linked with the choices made by Duchamp in its creation. To paraphrase Latour again,

[20] Paul B. Franklin, 'Object Choice: Marcel Duchamp's Fountain and the Art of Queer Art History', *Oxford Art Journal*, 23.1 (2000), p. 26.
[21] 'Marcel Duchamp: Fountain 1917, Replica 1964', *Tate*, 2016 <http://www.tate.org.uk/art/artworks/duchamp-fountain-t07573> [accessed 15 September 2016].
[22] Shriner, p. 290.
[23] Franklin, p. 26.

Duchamp authorises *Fountain*, but *Fountain* authorises Duchamp.[24] Latour goes on to write that,

> the word "substance" does not designate what "remains beneath," impervious to history, but what gathers together a multiplicity of agents into a stable and coherent whole.[25]

I would argue that this claim can be made about an artwork. The manifestation moves from a series of attributes to become a substance, an object that is more than just its physical manifestation. As Latour says, it is something that gathers together a host of agents, its resulting agency affecting author, viewer and culture.[26] Latour writes that 'the best word to designate a substance is 'institution,' and ultimately claims that 'we are never limited to social ties. We are never faced only with objects.'[27] This is why I would argue, with the caveat is have already made, alongside Latour, for a 'history of things'.[28] Both art and the photocopier are substances, institutions that are more than just their physical manifestations. They are both substances, hosting a multitude of agents, factors and tradition. They have an agency that affects author, viewer and culture, 'mediating between mediators.'[29]

[24] Latour, p. 132.
[25] Ibid, p. 151.
[26] Ibid.
[27] Ibid, p. 151, 214.
[28] Ibid, p. 126.
[29] Ibid, p. 214.

I have argued throughout that the photocopier is a substance, that it is ultimately, to borrow from Latour again, 'full of engineers and chancellors and lawmakers,' and influenced its inventor Chester Carlson, the Haloid Corporation, its users, and the wider culture; the photocopier is an institution with agency.[30] Likewise I have argued that art is not passive, not an isolated moment. In the example of Duchamp and *Fountain* not only is the creator changed by its creation, but the viewer, the culture, and the institution of art is changed. Latour writes that 'everyone agrees that science grows through experiment,' something I would argue is true for the institution of art.[31] He goes on to say that,

> the point is that Pasteur also is modified and grows through this experiment, as does the Academy, and yes, the yeast too. They all leave their meeting in a different state from the one in which they entered.[32]

There is a mutual exchange of properties taking places between Pasteur, the yeast and the Academy. This is important because, as I will discuss further in a subsequent subsection, artworks and the photocopier demonstrate that truth, leaving their meeting in a different state from the one in which they entered.[33]

[30] Latour, p. 190.
[31] Ibid, p. 126.
[32] Ibid.
[33] Ibid.

Section Two – Aura, Intention, and Choice

Part One: Benjamin's Aura and the Machine Made

I ended the previous section with the argument that the photocopier and art are both institutions, both 'continuous and interrupted reference[s],' and it will be worth taking a moment to clarify at this point this comparison between an artwork and the photocopier as institutions.[1] In the sense of their similarities they are both social constructions, they both arose as part of ongoing historical narratives. As I have argued for, an understanding of an artwork is a function of the historical institution of art; an artwork itself may also be an institution, but part of its social recognised status arises from its position within the institution framework of art. Similarly, the photocopier as an institution sits within the broader historical institution of copying machines. Both art and the photocopier have ever evolving meanings, as developments are made within their respective broader institutional settings and as they are confronted by and confront the individual. Where art and the photocopier differ as institutions most importantly is in their perceived function. The function or purpose of art is self-contained, its social function is itself, as an institution it is self-contained. Whereas the function or

[1] Latour, p. 95.

purpose of the photocopier is not itself but rather its functional utility. The photocopier as an institution is understood as such because of its social role in the making of copies, its purpose in the production of objects which have an existence external to the machine itself; though they do carry with them signifiers which point us back to the idea of the photocopier. I have argued throughout this thesis that the photocopier is a complex substance, an institution, a multifaceted object of history and association. In the context of this chapter my intention is to examine the photocopier in light of its use as a tool of artistic production. In this next section I will discuss Walter Benjamin's theory of the aura and his arguments concerning the genuineness of the artwork. This is will be pertinent in my discussion of the photocopier as a tool of artistic creation, as Benjamin believed that the function of mechanical reproduction would undermine the authority of an artwork. I will then discuss the idea of artistic choice and the idea of intentionality over necessity, arguing that the use of a mechanical means of creation such as the photocopier, when intentionally employed by an artist, becomes part of its authenticity, its genuineness. I will then finally discuss what I am calling the aesthetics of intention, and the idea that the aesthetic imprint of any mechanical means of artistic creation becomes part of the artwork's genuineness.

I have argued that our dominant cultural perception of the photocopier is of a functional facilitator of necessary employment and producer of largely valueless copies. Therefore, any time it is used it imbues its creations with a

set of preconceived cultural perceptions. In *High Tech: Art and Technology from the Machine Aesthetic to the Posthuman* author R. L. Rutsky writes that Benjamin appeared to view the 'idea of technological reproducibility […] as inherently functional.'[2] He also believed that 'any object made using such techniques' carried that same inherency.[3] Benjamin argued that the functionalising aspect of technological mass-production would have a significant effect on what he called the 'ancient industry of the beautiful'.[4] Benjamin realised that the growth in technology, particularly reproductive and visual technologies such as photography, would radically alter the place and role of art in Western culture. There is the possibility of seeing Benjamin's position as a pessimistic one, as fearful that technology would undermine the axiomatic nature of the artwork. This position is exemplified by Pierre Franscastel's description of what he calls the 'art moralist.'[5] In *Art & Technology in the Nineteenth and Twentieth Centuries* the author Franscastel argues that for them,

> a distinction must be made between mass production, which is considered a kind of popular art functioning on a societal level, and the sporadic appearance of masterpieces, which transcend

[2] R L Rutsky, *High Tech: Art and Technology from the Machine Aesthetic to the Posthuman* (Minneapolis, University of Minnesota Press, 1999), p. 11.
[3] Rutsky, p. 11.
[4] Benjamin '*The Work of Art in the Age of Mechanical Reproduction*', p. 1.
[5] Kristine Stiles, 'Art and Technology', in *Contemporary Art: A Sourcebook of Artists'*, ed. by Kristine Stiles and Peter Selz (Berkley, University of California Press, 1996), p. 18.

> time and space, existing in the immutable, eternal realm of pure beauty.[6]

In Franscastel's description of the art moralist, and with only a cursory reading of Benjamin, we might be tempted to draw the conclusion that Benjamin's position was a pessimistic one. Franscastel's moralist would appear to argue that mass production is incapable of ascending to the realm of masterpiece, only ever able to function as a populist form of societal or social art. And it is possible to see in Benjamin the belief that reproductive technologies' functional nature may lead to a debasement of art. It is true that Benjamin did believe that the growth and rapid developments in technology would irrevocably alter our perception of, and the place of, art. But Benjamin's actual belief in the role technology would play in the realm of the beautiful was far more complex than Franscastel's moralist, and decidedly more optimistic. He wrote that 'we must be prepared for such profound changes to alter the entire technological aspects of the arts, influencing invention itself as a result.' [7] Benjamin believed that technology would radically affect the practice of art, would impact artistic practice changing how the artist created. But his belief went beyond that, he believed that technology would not just affect the artist but would affect all aspects of our cultural institution of art. He went on to write that 'eventually, it may be, contriving to alter the very concept of art in the most magical fashion'.[8] Benjamin ultimately believed that because of the rise of technological

[6] Stiles, p. 18.
[7] Benjamin '*The Work of Art in the Age of Mechanical Reproduction*', p. 1.
[8] Ibid.

methods of reproduction art must change, and that it must take on a more political, more functional nature. Benjamin's belief in a more political or practical art all stemmed from his belief that as technology affected and altered our perception of art its most significant influence would be on art's aura. The aura is described by Benjamin as its genuineness, its internal authority, and as methods of technologically reproducing art increased he argued that 'what shrinks in an age where the work of art can be reproduced by technological means is its aura.'[9] According to Benjamin the aura is comprised of 'the genuineness of the thing […] the quintessence of everything about it since its creation,' this spans 'its material duration, to the historical witness that it bears.'[10] We are brought back once again to Latour's description of a substance as this assertion bears striking similarities. Latour writes that 'a substance […] is more like the thread that holds the pearls of a necklace together than the rock bed that remains the same no matter what is built on it.[11] I have already argued that we can view both the artwork and the institution of art as complex historical substances. But what happens when the genuineness of an object is 'removed from human perception' through technological reproduction?[12] Benjamin argued that when this happens the 'authority of the thing' starts to wobble.[13] In Benjamin's view technological reproduction begins to destroy the authority of the original. The reproduction has an autonomy which brings 'the copy of

[9] Benjamin '*The Work of Art in the Age of Mechanical Reproduction*', p. 7.
[10] Ibid.
[11] Latour, p. 151.
[12] Benjamin '*The Work of Art in the Age of Mechanical Reproduction*', p. 7.
[13] Ibid.

the original in[to] situations beyond the reach of the original itself.'[14] Benjamin writes that 'even the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence.'[15] Copies, believed Benjamin, 'detach the reproduced object from the domain of tradition' and substituted 'a plurality of copies for a unique existence.'[16]

But Benjamin's belief in the destruction of the aura has been challenged and, as the editors of *Mapping Benjamin: The Work of Art in the Digital Age* write, the aura 'has actually conquered the field of art's technical reproduction.'[17] In *The Unique Appearance of Distance* the author Dirk Baecker writes that, 'at issue is not the loss of aura attributed by Benjamin to technology, but rather the almost inevitable reappearance of aura.'[18] Baecker ascribes this reappearance to those self-same communication and reproductive technologies Benjamin believed would destroy it.[19] In *The Topology of Contemporary Art* Groys writes that,

> the aura, as described by Benjamin, only comes into being thanks to the modern technique of reproduction. That is, it

[14] Benjamin '*The Work of Art in the Age of Mechanical Reproduction*', p. 6.
[15] Ibid, p. 5.
[16] Ibid, p. 41.
[17] *Mapping Benjamin: The Work of Art in the Digital Age*, ed. by Hans Ulrich Gumbrecht and Michael Marrinan (Stanford< Stanford University Press, 2003), p. xiv.
[18] Dirk Baecker, 'Aura: The Unique Appearance of Distance', in *Mapping Benjamin: The Work of Art in the Digital Age*, ed. by Hans Ulrich Gumbrecht and Michael Marrinan (Stanford: Stanford University Press, 2003), p. 9.
[19] Baecker, p. 9.

> emerges precisely at the very moment it is fading. It is born precisely for the same reason that it disappears.[20]

Both Baecker and Groys argue that the practice of technological reproduction actually reinforces and establishes the aura of the artwork. In *Theories of Contemporary Art* author Richard Hertz writes that the 'meaning of objects' is 'defined within a cultural system.'[21] I have previously argued that the spectacular system, our technological environment, defines our perception, and it is through technological reproduction that the original is dispersed throughout that technological environment altering our perception of it. In this way the cultural perception of the original artwork is reinforced and the authenticity of an artwork is reinforced by the mass culture perception of it. The disappearance of the aura that Benjamin predicted failed to materialise and the increase in methods of technological reproduction actually reiterated the aura as a results of art's mass cultural dispersion.

The artwork as substance, its genuineness, its aura, changed by, and changing, the viewer means that you could argue that the artwork is not a fixed thing, but an ongoing event. This perception of its genuineness demands that the genuineness of the artwork continues to change. If new discoveries are made about the author these will influence our understanding of their work, if the artwork is stolen and years later found

[20] Groys, p. 73.
[21] Richard Hertz, *Theories of Contemporary Art* (New Jersey, Prentic-Hall Inc, 1993), p. 32.

this will affect our perception of the artwork, if the institution of art is radically altered then the artwork's substance must change. The artwork's aura is, as Latour might argue, 'more like the thread that holds the pearls of a necklace together than the rock bed that remains the same no matter what is built on it.'[22]

[22] Latour, p. 151.

Part Two: Benjamin, Genuineness and Designation

I have just discussed Walter Benjamin's concept of the aura and argued for the assertion made by Baecker that the aura reappears as a result of communication and reproductive technologies.[1] The discussions in Benjamin's 'The Work of Art in the Age of Mechanical Reproduction', and its subsequent reassessment, both concern the reproduction of an original and the issue of the aura of the work of art when confronted by its technological reproduction. Benjamin claimed that technological reproduction would destroy the authority of the original, that as the original was separated from individual perception and uprooted from the 'domain of tradition,' through reproduction, that its genuineness would be destroyed.[2] In *A Short History of Photography* Benjamin writes that,

> the prizing of the object from its shell, the destruction of its aura is the mark that the sense of the sameness of things in the world has grown to such an extent that by means of reproduction even the unique is made to yield up its uniqueness.[3]

But as I have already discussed, through technological reproduction the aura, the authenticity of the original has actually been reinforced. In both instances the authors are discussing the aura in connection to the

[1] Baecker, p. 9.
[2] Benjamin '*The Work of Art in the Age of Mechanical Reproduction*', p. 41.
[3] Walter Benjamin, 'A Short History of Photography', *Monoskop* <https://monoskop.org/images/7/79/Benjamin_Walter_1931_1972_A_Short_History_of_Photography.pdf> [accessed 21 August 2016].

reproduction of an original artwork. But what happens to the aura when the original artwork is not just copied using a technological method of reproduction but is actually produced by it? In this thesis I am of course discussing the photocopier as a device that is able to produce a plethora of duplicates, an almost endless procession of seemingly identical reproductions. The dominant cultural perception of the photocopier is of a device with no creative ability, a functional producer of objects which have little perceived value. How do we identify an artwork when created using a device which epitomises the process of technological reproduction? The photocopier is understood to be a device that produces copies, and an image once placed on photocopier's lens can be scanned and replicated endlessly, each copy difficult to distinguish from the one before and the one following. Benjamin argued that copies of an original 'detach the reproduced object from the domain of tradition' and substitute 'a plurality of copies for a unique existence.'[4] But the authors of *Mapping Benjamin* argue that technological reproduction actually causes the aura of the work of art to reappear and they do so arguing that the copy reinforces the originality of the original. In *Aura: The Unique Appearance of Distance* Baecker argues that 'only by being compared to something similar does the uniqueness of a thing become evident.'[5] Is it through the existence of the copy that the original can be compared and its uniqueness reinforced. He goes on to write that 'a work of art becomes incomparable by being compared, and it is

[4] Benjamin '*The Work of Art in the Age of Mechanical Reproduction*', p. 41.
[5] Baecker, p. 12.

unique because something comparable exists.'[6] But how far are we able to take that claim, what happens when an original is an almost identical to the copy, when its material duration is almost indistinguishable from each replication, when the original is in fact just one of 'a plurality of copies' of a non-existent original?[7]

To go some way to answering this question it is worth noting that Benjamin does allow for the possibility of an original copy. In *A Short History of Photography* he discusses the daguerreotype and writes that,

> Daguerre's photographs were iodised silver plates exposed in the dark room which, by being turned about in the correct lighting, would reveal a delicate-grey picture. They were unique copies.[8]

Benjamin also allows for the possibility of 'the very authenticity of photography.'[9] He appears to assign to Daguerre's photographs the status of unique objects. Each of Daguerre's photographs is described by Benjamin detailing the process used and the location of their creation, therefore, Benjamin argues, unique. In *The Intangibilities of Form: Skill and Deskilling in Art After the Readymade* author John Roberts argues that 'art

[6] Baecker, p. 12.
[7] Benjamin '*The Work of Art in the Age of Mechanical Reproduction*', p. 41.
[8] Benjamin, 'A Short History of Photography'.
[9] Ibid.

for Benjamin is itself a form of production.'[10] Part of an artwork's genuineness are the artist's choices made in the means of production, and it is in this process of production that new modes of 'interaction between humans and technology' are established.[11] If then a thing's genuineness is tied to its physical materiality and the processes employed by the artist then its genuineness must be tied to the nature of that material process of creation. The technological means of creation employed by the artist becomes part of the artwork's physical and ideological essence. In the intentional decisions made by the artist, the intentionality displayed in their use of methods of technological reproduction, an important facet of the artwork's authenticity, its genuineness, is formed.

I have previously touched upon the idea of necessary versus intentional machine usage in a previous chapter. I explored the subcultural uses of the photocopier and noted that the use of the photocopier by punks and members of the Riot Grrrl movement was often predicated upon necessity. In *High Tech* Rutsky writes that,

> in this sense, high technology continues to maintain a distinction between a "high" and a "low" culture, between those who have a "high" level of access to technology and

[10] Roberts, p. 22.
[11] Ibid.

> those who do not [...] high technology remains a “tool” for distinguishing social classes.[12]

I subsequently noted that although the use of the photocopier may have originally stemmed from necessity, the resultant aesthetic established by its use shifted that necessary use to one of intentionality. The photocopier became associated with a particular aesthetic, with a visual style that located the material it produced within a particular realm of meaning, a claim that still holds with Rutsky’s claim that ‘high technology remains a “tool” for distinguishing social classes.’[13] The aesthetic results of certain technologies would become associated with the cultural uses of them. In this instance the photocopier was deliberately chosen as a means of association with a stratum of society. The photocopier, which I would class during the periods under discussion as high technology due to those restrictions previously examined, initially demonstrated a class’s reliance upon often purloined methods of reproduction. Consequently, uses of the photocopier would denote a deliberate choice made by subculturalists, made with the intention of invoking aesthetic associations with a particular ideal.

This concern with an intentional use of the photocopier is what will underpin my examination of those artworks that were made using the photocopier in the final section of this chapter. But for the moment I would argue that intentionality is always at the core of artistic practice, the

[12] Rutsky, p. 3.
[13] Ibid.

intention of authorship. The choices made in the authoring of an artwork are determined by the artist's intentions and those choices function as one aspect of the genuineness of the work. In *The Contingent Object of Contemporary Art* author Martha Buskirk, writes that,

> whereas the history of period styles once provided the framework within which authorship designated the ultimate stylistic unity, now authorship has become the most significant category.[14]

Authorship, writes Buskirk, 'isolates, frames, and provides the context within which the copy or even the found object can be designated an honorary original.' [15] Although Buskirk is arguing for the artistic act of authorship in relation to the readymade, I would argue that this artistic act of designation is central to the production of all artworks. Buskirk continues by arguing that this

> trend allow[s] the artist's act of making to be replaced by a process of designation, such that selecting and categorizing can become the act of authorship itself.[16]

Through designation, any choice made by the artist, including utilising any mechanical or technological method of artistic production, are thus acts of

[14] Buskirk, p. 10.
[15] Ibid.
[16] Ibid.

authorship and become tied into the artwork's genuineness. Authoring an artwork subsequently includes, not just the artwork's physical or ideological inception, but also the artist's authorisation of any method of production as valid, as authentic. McLuhan claims that 'it has now been explained that media, as the extensions of man, are "making happen" agents.'[17] If, as McLuhan claimed, we have extended ourselves through our technological environment and that media are 'making happen agents,' I would argue we can claim with Roberts that,

> if art is always and already embedded in the technological relations of its time, then the technologies of copying, simulacra and surrogacy are the material basis of art's modern semiosis and not mere stylistic options**.**[18]

Designating the use of methods of technological reproduction as authentic methods of artistic creation 'has a direct bearing on the basis of iterative technique.' [19] In relationship to the uses of technological methods of reproduction or copying in art these things can then no longer be considered 'an inert practice.'[20] The use of copying machines, as designated by the artist, is not just a process of 'flat mimesis,' but through artistic authoring, through designation, copying,

---

[17] McLuhan '*Understanding Media*', p. 53.
[18] Roberts, p. 14.
McLuhan '*Understanding Media*', p. 53.
[19] Roberts. p. 16.
[20] Ibid.

> is able to reanimate the thing replicated. Or, as Kant puts it, mimesis can be divided into two modes: *nachahmen*, which is merely a form of reproduction, and *nachfolgen*, which is transformative and creative.[21]

The intentional designation by the artist in utilising methods of mechanical reproduction argues for copying as assimilation, 're-enactment [as] appropriation, [and] appropriation [as] creation.' or 'put simply […] originality is what we choose" to borrow.[22]

[21] Roberts. p. 16.
[22] Schwartz, p. 246.

Part Three: Aesthetics of Intention and Perception

Benjamin believed that technological methods of reproduction would alter our perception of art, and would begin to destroy art's aura. But as I have discussed, the practice of technological reproduction has actually reinforced art's aura. In the *Intangibilities of Form,* Roberts argued that using methods of technological reproduction in artistic creation is not just a process of passive imitation, but, through the artist's intentional designation, actually authorises as authentic those methods and processes, therefore enabling them to become both transformative and creative.[1] Art's genuineness is then the totality of its materiality, its history, which includes the choices made by the artist in its material production. In light of this concern with the genuineness, or totality, of an artwork I want to give some time to a brief discussion of the significance of the visual and aesthetic perception of technological methods of production, and their place in the unfolding substance of the artwork.

I come back again to Latour's substance, and a co-option of his claim that the artwork is ultimately not made of matter, it is full of artists and theorists and historians, commingling their wills and their story lines with those of paint and brushes and woodwork, and artistic technique.[2] Into this list of things that function as an aspect of the artwork's substance, of its genuineness, I would also include our cultural perception of its visual appearance, and by extension our perception of its method of production.

[1] Roberts, p. 16.
[2] Latour, p. 190.

Do we take into consideration the visual influence of the brush, the pencil, or the screen on our understanding of an artwork, or are they purely a means to an end? In *Beyond the Image Machine: A History of Visual Technologies* author David Tomas writes that,

> we learn from these and similar works that one must always take note of the specificity of each type of perceptual threshold. New media transform, as Walter Benjamin, Marshall McLuhan and others have suggested, the ratios between the senses.[3]

Consequently, I would argue that any media, any technology, any tool or method of production, may consciously or subconsciously alter our sense and perception of an artwork. Therefore, the visual aesthetic or qualities of a method of artistic production are an integral component of its genuineness, and subsequently our perception of those production media form part of the artwork's authenticity. Our aesthetic and visual perception of an object or an artwork is then tied to our environment, histories and individual perceptions. Lev Manovich writes in *Introduction to Info-Aesthetics*,

> what we do, what objects we use, how we communicate and interact with others and the kind of spaces we dwell in or pass

[3] David Tomas, *Beyond the Image Machine: A History of Visual Technologies* (London, Continuum, 2004), p. 23.

> through – all this is bound to change existing cultural patterns and aesthetic preferences as well as create new ones.[4]

When writing about copies Groys argues that 'we are as unable to stabilise a copy as a copy as we are unable to stabilise an original as an original. There are no eternal copies, just as there are no eternal originals.' [5] This he argues is because 'our decision to recognise a certain image as an original or as a copy is dependent on the context,' and that that decision 'is always a contemporary decision, one that belongs not to the past and not to the future but to the present.'[6]I have been attempting throughout this thesis to assert that the photocopier is a complex substance, an index which includes its creation, it roles in shaping the Haloid Corporation, its facilitation of work and the office, and its subverted uses. I have also argued for the idea that both the institution of art and artwork are just as much complex substances, indexes that comprise histories, perceptions, traditions, beliefs and countless other associations and elements. According to Groys our present context is always shifting, these factors which constitute a thing's substance are in constant flux whether that be the photocopier, the copy, or the artwork. They are a heterogeneous amalgamation of experience, of understanding, our cultural belief and perceptions are always in a state of perpetual evolution. But while I do largely agree with their assessment of our understanding of these things to be in a constant state of flux as the reader

[4] Lev Manovich, 'Introduction to Info-Aesthetics', in *Antinomies of Art and Culture: Modernity, Postmodernity, Contemporaneity* (Durham, Duke University Press, 2008), p. 334.
[5] Groys, p. 75.
[6] Ibid.

changes, I disagree that that understanding, although contemporary, can not ever only be contemporary. I would argue that it must also be of the past and the future. Buskirk writes that,

> the method and materials that the artist selects for creating the work are transformed, so that rather than functioning just as the raw matter or vehicle for the artist's aesthetic expression, the materials themselves generate associations that, together with the forms into which they are shaped, establish the subject or content of the work of art.[7]

The materially generated associations that Buskirk describes must, I would argue, always be considered as reflections of our past, present and future. The decisions made by the artist in creation are never isolated from the institution of art, or from the wider environment or spectacle. The artist is not a blank canvas, they are a confluence of influences from without and within, their nature, their own history and beliefs, each of these must be taken into consideration. Equally the viewer is not isolated at a single point, a brain in a jar passively evaluating or regarding an image. Each individual is always an assemblage of their nature, their past, their present and their perceived futures. Our perception of the visual and aesthetic nature of an artwork could be argued to be both environmental and personal, from both the perspective of its author and the viewer. Consequently, both the artist

[7] Buskirk, p. 14.

and viewer will therefore, whether conscious or subconscious, categorise the visual and aesthetic material process of technological reproduction used in the creation of an artwork in light of their experience and perception, which will in turn influence their understanding or perception of the work.

With this understanding of the environmental and personal filter through which an image is read, or recognised, whether copy or original, we can follow this logic through to any use of the photocopier as a process of artistic production. The visual and aesthetic quirks of the photocopier will result in an artwork taking on a certain visual style or aesthetic. This can be understood as a facet of the artist's intentionality, their designation of a particular choice made in utilising this particular method of production. Consequently, how that artwork will then be perceived will, in part, be a result of how the photocopier is perceived. Its use will elicit certain responses depending on the situation of the individual and their interaction and perception of the photocopier. The reading of an artwork that has utilised the electrophotographic process may well result in a functionalist understanding of the piece; or a deliberate subversion of the corporate culture. Rutsky writes that according to Benjamin 'the very idea of technological reproducibility and assemblage come to be seen as inherently functional – as does any object made using such techniques.'[8] If the photocopier is viewed as a functional technology, is perceived as something purely functionally reproductive, and if the viewer, recognising or having

[8] Rutsky, p. 11.

been informed of the artist's method of production, has only experienced the photocopier as a facilitator of functional office or corporate production, this then may be a subjectively valid interpretation of the artwork. Equally, another reading or interpretation may result from a perception of the machine viewed as a 'means [of] dislocation, [or] deterritorialisation.'[9]. If the individual has experience of the photocopier as a tool of liberation, as a means of counter-culturally re-affirming individuality, or subcultural rebellion against spectacular dominance then the artwork may be perceived differently in light of these associations. These two possible readings of the photocopier's use in artistic practice are just two of many possible interpretations. But the central to each interpretation is that 'art's exclusive feature is that it uses perceptions.[10] Whether the perception of the artist or viewer, perception is enmeshed with individual and cultural beliefs, communicating the incommunicable. The use of technological means of production in artistic production, the use of the photocopier as a tool of creation may communicate a host of references that rest entirely on the experience and perceptions of the artist or viewer. But equally as the artist authorises the photocopier to speak, to function as a valid artistic medium this may subsequently alter the individual's original perception of the device. In this way as the photocopier is used in a multitude of ways and for a plethora of alternative practices, its substance is bolstered and made ever more complex.

[9] Groys, p. 73.
[10] Julian Stallabrass, *Art Incorporated: The Story of Contemporary Art* (Oxford, Oxford University Press, 2004), p. 114.

Section Three – Two Perspectives

Part One: Electrophotographic

In the previous sections of this chapter I discussed Benjamin's claim that,

> the genuineness of a thing is the quintessence of everything about it since its creation that can be handed down, from its material duration to the historical witness that it bears.[1]

I argued that this genuineness can be equated to what Latour called a substance, the essence of everything about the artwork, is creator, its histories, it physical nature, and more. I also argued that an aspect of that substance, of the artwork's genuineness, must be the intentional designation of its material methods of creation by the artist. The artist's intentional designation authenticates the artwork's methods of production, in this instance the photocopier, as valid, enabling it to become both transformative and creative.[2]. An artwork is therefore a complex substance with a host of facets garnered from the artist's intentions, cultural traditions, and individual perceptions. With this in mind, in this next subsection I will be

[1] Benjamin '*The Work of Art in the Age of Mechanical Reproduction*' p. 7.
[2] Roberts, p. 16.

discussing the field of artistic endeavour in which those involved have chosen to use the photocopier as the primary tool of creation, purposefully designating that work as copy art or electrographic; although those two terms are by no means the only two used. I have chosen to use the terms the artists and theorists have used when making a direct reference, but I will be using electrophotographic when discussing the subject more broadly. As I will demonstrate, the use of certain terms within the field of electrophotographic art carries, for some, certain partisan overtones. As my intention in this discussion is not to evaluate the actual artworks themselves but is rather to examine the intentional use of the photocopier, my use of electrophotographic to discuss the subject more generally is aimed at disassociating the discussion from any form of art criticism. In this section I will discuss one of the earliest and most significant uses of the photocopier, *The Xerox Book* (1968), as discussed in the Introduction to this thesis, as it highlights the contradictions of the photocopier's use and its general perception as a bland, purely functional technology. I will then discuss the use of the photocopier in copy art and electrography, two diverse and divergent approaches taken by those artists who have chosen to use the photocopier, which highlights the disparity of opinions about the photocopier and its usage.

Artists began to experiment with the electrophotographic process almost as soon as the first photocopiers were created. In 1959 Charles A. Arnold Jr, an artist and photographer at the Rochester Institute of Technology, began to

experiment with the electrostatic process.[3] A collection of his work is held at the University of Rochester and in a retrospective held in 2015 his work was described by Richard Peek, the Director of the Rare Books and Special Collections Library at the University of Rochester:

> Whereas the technology enabled Arnold to capture his images in rich detail and lushness of tone, it was his creative mind that achieved the final results. Arnold's prints (electrostatic images), with their contrasting muted pastels, soft browns, and warm blue-blacks, reveal a complex, imagined world.[4]

Although Arnold appears to have been the first recorded user of the photocopier as an artistic tool, a host of artists followed in his wake and began to explore the new medium. In 1968 one of the most significant works of electrophotographic art was devised by Seth Siegelaub and John Wendler. Although they called it *Untitled*, it became known as *The Xerox Book*. (fig 16). *The Xerox Book* 'was conceived as an exhibition in itself,' and 'is now considered a seminal artist book.'[5] Jack Wendler said in an interview that 'this wasn't a catalogue of work, this was the work.'[6] The work was a joint project, conceived by Siegelaub, in which he 'invited

[3] 'Electrostatic Images at HACC's Rose Lehrman Gallery', *HACC Newsroom* <http://newsroom.hacc.edu/article_display.cfm?article_id=136> [accessed 29 August 2016].
[4] Ibid.
[5] Tiernan Morgan, '7 Artists, 25 Pages Each, 1 Half-Century Later: Revisiting the Xerox Book', *Hyperallergic* <http://hyperallergic.com/240038/7-artists-25-pages-each-1-half-century-later-revisiting-the-xerox-book/> [accessed 29 August 2016].
[6] 'THE XEROX BOOK: The Book That Was an Exhibition That Became an Artwork', *Ambit*, 214 (2013), p.81

seven artists – Carl Andre, Robert Barry, Douglas Huebler, Joseph Kosuth, Sol LeWitt, Robert Morris, and Lawrence Weiner – to contribute 25 pages each' to the project.[7] Each artist was to submit 25 standardised pages, fitting the work to the paper size of the intended production method, the Xerox machine (fig 32). Siegelaub intended to create a 'publication that could be produced and distributed at relatively low cost.'[8] Unfortunately the cost of producing the intended first 1,000 copies of the *Xerox Book* proved to be too expensive and 'would have cost over $20,000.'[9] The book was eventually printed using offset lithography with the financial backing of John Wendler, but 'regardless, artists and art historians continue to refer to the book by its working title,' *The Xerox Book.*[10] At the time that Siegelaub conceived of *The Xerox Book,* artistic practitioners were ever more aware of the structures of the system that connected not 'only the art world but of society itself.'[11] The concept behind the object that Siegelaub envisaged was to create a work that both dematerialised and democratised the art object, making a work, using the latest piece of administrative technology, that was 'as democratic and accessible as possible by standardizing its format.'[12]. This mass-produced work would have an aesthetic that aligned it to a system of administration and officialdom, creating an object that carried a bureaucratic sensibility. Siegelaub wanted an item that appeared to be

[7] Morgan '*7 Artists, 25 Pages Each, 1 Half-Century Later: Revisiting the Xerox Book*'.
[8] 'THIS IS THE WAY YOUR LEVERAGE LIES: The Seth Siegelaub Papers as Institutional Critique', *MoMA* <http://www.moma.org/interactives/exhibitions/2013/siegelaub/>.
[9] Morgan '*7 Artists, 25 Pages Each, 1 Half-Century Later: Revisiting the Xerox Book*'.
[10] Ibid.
[11] Michael Pichler, *Books and Ideas of Seth Siegelaub*, (New York, Sternberg Press, 2016), p. 40.
[12] Ibid, p. 40.

concerned with the conveyance of information. This is particularly demonstrated by the textual nature of some of the works submitted by the artists.

The series of image supplied by Douglas Huebler and Joseph Kosuth demonstrate this administrative aesthetic and the association with the bureaucratic, (fig 47). In Huebler's work the images are a sequence of descriptions that interpret the series of lines and letters sequential across 25 pages. There is the suggestion in Huebler's work of an instruction manual or diagram, each new page building upon the constructive process of the last, interpreting the positions and ways the images can be understood by the viewer. In addition to this, the descriptions are reproduced in three different languages. This use of multiple languages not only suggest the instructive nature of the work, but also in juxtaposing the 'visual information to various language systems […] underscore[es] the consequential role of codes as languages in discerning information.'[13] Kosuth's series, (figs 48-50), is similarly text based, but his work focuses on the production of the work and seeks to catalogue the stages of the work using written language. Each image consists of a single line of text, each one describing a different stage of the work. Kosuth's work seems to interrupt the process of creation, submitting what might amount to a written proposal for a multiple-series rather than the series itself. In the literal approach taken by Kosuth is echoed 'Lewitt's dictum that art should not instruct the viewer but should self-

[13] Alexander Alberro, *Conceptual Art and the Politics of Publicity* (Massachusetts, Massachusetts Institute of Technology, 2003), p. 140.

reflexively present information.'[14] There is also something in the work that might suggest a series of bullet points, or an agenda for a meeting. If we understand the work to have been created using the photocopier, with its strong administrative ties and bland aesthetic, then we could read these works as a quickly copied agenda distributed in advance of a meeting taking place, or in our more contemporary setting, the bullet points of a power-point presentation emailed to the attendees after the meeting or talk has taken place. In both instances the works by Huebler and Kosuth are suggestive of items with little value, the instruction manual and the proposal are usually precursors of something more significant, each one appearing to be ephemeral objects that convey information to the reader and then, once their purpose has been served, are usually disregarded. The aesthetic of the photocopier draws the viewer to certain conclusions about the work. In proposing a multiple work that utilised the photocopier, Siegelaub was purposefully attempting to make use of the aesthetic associations that the artists would conjure through its use. As he claimed in an interview,

> I chose Xerox as opposed to off-set or any other process because it's such a bland, shitty reproduction, really just for the exchange of information […] Xerox just cuts down on the visual aspects of looking at information.[15]

[14] Alberro, p. 148.
[15] Ibid, p. 135.

The photocopier produces ephemeral objects, and I while I agree with Siegelaub in that the quality of its reproduction are not high and its aesthetic markers are significantly less pronounced than other artistic media such as oil paint, and other office copying devices, I would argue that its perceptual associations with work and administration are well-defined, and, rather than simply acting as a bland or silent conveyer of information, is actually a complex machine with associations that shape how its outputs are perceived. In a previous section of this chapter I discussed McLuhan's theory of environment, in which I argued that the photocopier, as an environment medium, and one with strong associations with the office and paid employment, is a part of a complex system of user experience and cultural perception.[16] Therefore, as McLuhan argued, ultimately 'the "message" of any medium or technology is the change of state or pace or pattern that it introduces into human affairs.'[17] In choosing to utilise the photocopier Siegelaub was drawing upon a device with strong associations, not just corporate or bureaucratic, but also individual. The photocopier altered patterns of work, and consequently affected the individual's experience of necessary employment. In using the photocopier Siegelaub was drawing upon a technology that spoke the language of the spectacle, as a device that was a creation of the corporate, helped facilitate the creation of new capitalistic markets, and shaped the individual's experience of work.[18] The photocopier, far from being bland, is part of what McLuhan might call a

[16] McLuhan '*Understanding Media*', p. 246.
[17] Ibid, p. 8.
[18] Debord, s. 11.

'complex pattern.'[19] In addition to this, the photocopier and its reproductive process leaves tell-tale signs of its presence and in doing so layers the work with additional visual information. In the series by Carl Andre, (figs 51-52), he took twenty-five 1" x 1" blocks of cardboard and dropped them one by one onto the photocopier's glass screen and at each stage copied the resulting image. Each time a new piece was on the screen 'he made a photocopy [of each] additional element [as it] was placed on the screen. The work thus addressed the procedure of its own making.'[20] Each time a new block was added the resultant work documented not only the addition but also the electrophotographic copying process involved which records it; the sequential nature of the piece visually alludes to the photocopier's function. But, while the work seeks to address its own making, the work also records the marks left by the photocopier in process. Each box on the screen is marked by a stark black line on each edge, the rest of the page left white. Around the outside and inside edges of the boxes is a light grey haze, a shadowing left by the photocopying process. This mark is a result of the imperfect nature of the photocopying process. During the procedure the paper is given an electrical charge that affixes an invisible image to the paper. The toner is then given an opposing charge and dusted on to the paper. Where the ink makes contact with the inviable impression it sticks to the page, the resulting image is then fixed to the paper using a heated roller. But the process is imperfect; as the charge is given to the paper there is a slight bleeding, around the edges of the image is a slight hazing where the

[19] McLuhan '*Understanding Media*', p. 246.
[20] Alberro, p. 136.

ink is fixed. Also, the dry toner is not always fully removed from the images as it should and this leaves stray marks on the pages. The random marks and shadowing are testament to the photocopying process, and each time Andrea added a new box to the screen and copied the resulting image new, unintentional flecks of ink are added to the proceeding copies. It is partly due to the poor quality of this method of reproduction that these early photocopied items could be visually associated with the system of administration and bureaucracy Siegelaub had intended. Therefore, although he claimed that the photocopier produced such bland reproduction, those reproductions were littered with the tell-tale markers of the process, and consequently the associations that would bring to the work. But of course the contradiction in the work was that the final objects were never produced using the photocopier. While the photocopier had been used in the creation of the artworks by the seven artists, it was never used in the final production of *The Xerox Book* itself.[21] Due to the high cost of production Siegelaub actually had the book produced using an off-set printing method, which was of much higher quality than anything the photocopier could produce. This contradiction is most clearly demonstrated by Kosuth's work. He details the production methods used in *The Xerox Book*'s production but of course the photocopier was never used in its final creation. Because of this Alberro argues that 'since the catalogue-exhibition was produced with the use of regular off-set printing rather than an electrostatic copying machine […]

[21] David Dyment, 'The "Xerox" Book', *Artists Books and Multiples*, 2012 <http://artistsbooksandmultiples.blogspot.co.uk/2012/03/xerox-book.html> [accessed 20 June 2013].

Kosuth's piece ultimately lost much of its relevance.'[22] But I would argue that Kosuth's work is actually a representation of the complex contradictory nature of *The Xerox Book* itself and was presciently in its creation. I have previously discussed that in the USA particularly, the term to 'Xerox something' has become the colloquial term for making a copy. The photocopier has subsumed most other general, non-professional methods of making copies; whether something has or hasn't been Xeroxed the photocopier is generally assumed to be the maker copies. Kosuth's work echoes this contradiction, this assumption that something has been Xeroxed, or photocopied, even if some other method has been employed. Comparatively *The Xeroxed Book*, a photocopier reproduction of *The Xerox Book* by artist Eric Doeringer, was created using the photocopier and demonstrates many of the elements associated with the electrophotographic process.

> As a second generation copy, *The Xeroxed Book* displays the limitations of photocopying as a reproductive technology. Dust, pages edges, distortions, and other familiar Xerox artefacts appear on every page, becoming as much a part of the reading experiences as the original artist's projects.[23]

Siegelaub intention in using the photocopier was to make use of the photocopier's bland and subpar reproductive method, this intention was

[22] Alberro, p. 148.
[23] Pichler, p. 39.

mimicked in Doeringer's *The Xeroxed Book*. Doeringer's reproduction of *The Xerox Book* is, as he claims, 'perhaps closer to Siegelaub's intent than the original book.'[24] And yet, the *The Xeroxed Book* is also something of a contradiction of Siegelaub's desire for *The Xerox Book* to become an object that would hasten the dematerialisation and de-commodification of the art object. As its creator notes, *The Xeroxed Book* is a second-generation copy, a reproduction of an original.[25] The material reproduction of *The Xerox Book* is predicated on it being something with enough cultural heft to make its reproduction artistically significant, and of enough cultural value to make *The Xeroxed Book* commercially viable. Siegelaub chose the photocopier as a tool because of its bland and poor aesthetic reproductive qualities, and in doing so sought to assist in the dematerialisation of the art object and undermine its commodification. In choosing to use the photocopier he also sought to associate with the corporate, making a connection to the photocopier's administrative and bureaucratic function; he even insisted on calling this work *The Xerox Book* despite it not being Xeroxed and that not being its official designation. But the eventual significance of *The Xerox Book* and the association of artists meant that it would defy Siegelaub's intentions. It has since become a highly valued commodified art object, and seems to suggest that the aesthetic quality of the photocopier not only did not undermine the supposedly 'mechanically impersonal [material] nature'

[24] Eric Doeringer, 'The Xeroxed Book', *Eric Doeringer.Com* <http://www.ericdoeringer.com/ConArtRec/Xeroxed%20Book/XeroxedBook.html> [accessed 28 January 2018].
[25] Ibid.

of the object but has become an essential element of its historical substance.[26]

This disparity between the artist's intentions and actual execution highlights an issue I have touched upon on a number of occasions throughout this thesis. The financial cost of the photocopier, particularly for creating a significant number of multiples, or a long production run of objects, places its use beyond the reach of those without significant financial resources. I have previously discussed the use of the photocopier by subculturalists who had to employ covert methods of exploiting the photocopier for the creation of their subcultural materials. In this instance, despite the intended radical nature of this piece of conceptual art, its eventual realisation was dependent upon the financial assistance of art gallery owner John Wendler, an institutional insider. I would argue that *The Xerox Book* and Siegelaub's original intention of using the photocopier once again highlights its institutional spectacular nature. Its capitalistic roots are evident in the prohibitive financial cost which would have been incurred had *The Xerox Book*'s original production method been used. Despite Siegelaub's intention to create a work that would be both democratic and accessible the financial cost of creating multiples using the photocopier automatically assigned each object an objective, commercial value. The photocopier appears to generate the concept of an object that is commodified prior to its creation, and puts it

[26] Alberro, p. 135.

squarely within the realm of the spectacle. The cost becomes a defining factor, and the photocopier the cause.

Part Two: Contrasting Definitions

In 1988, twenty years after the creation of *The Xerox Book*, Christian Rigal, organiser of the *Bienal Internacional: Electrografia y Copy Art*, sought to clarify the use of the photocopier as a tool of artistic creation and define it using the term electrography.[1] He wrote that, 'I had defined electrography as the diverting of the copying machine from its primary function in order to create original works of art.'[2] Rigal acknowledges that in using the photocopier as a tool of artistic creation that the artist is diverting the photocopier from its primary function. Integral to his claim is that the photocopier has a primary function, that it has a primary association from which it can be diverted; one I have argued throughout is that of the corporate, or workplace. Its primary function would appear to be copying, and in the artistic diversion its agency becomes part of a creative process, reiterating Robert's claim that this thing can become 'transformative and creative.' [3] This performance piece, (fig 53), by German artist Jurgen O. Olbrich called *Rock'n'Roll* epitomises Rigal's assertion that in electrography the photocopier is diverted from its primary function; what might be considered its normative pattern of use is turned on its head. In this example performance piece by Olbrich, it is not just the photocopier's reproductive function that is used in the creation of an artwork but also the physical machine which becomes part of Olbrich's performance. In using it as a dance floor Olbrich is subverting the machine and the viewers

[1] Javier Gamero Sanchez, 'MIDECiant', *MIDE. Museo Internacional de Electrografia Digital* <http://www.mide.uclm.es/> [accessed 28 August 2016].
[2] Christian Rigal, *2 Bienal Internacional: Electrografie Y Copy Art* (Valencia: Universidad Politecnica Valencia, 1988).
[3] Roberts, p. 16.

expectations concerning the photocopier's function. Using the photocopier as a stage he is situationally repositioning it, taking it beyond the viewers understanding as a purely functional office machine and asking them to see in it new possibilities, creative possibilities. While Olbrich dances on top of the photocopier the machine captures his footfall, depicting moment by moment the progression of the performance, each step one in a series of still images that reflects Olbrich's movements. Rather than the photocopier's output capturing single sheets of information, during the performance the photocopier reproduces a captured moment in the performance, which along with the visual memory of the performance in the mind of the audience makes the piece both temporal and continuous, incorporeal and physical. Olbrich's piece seems to exemplify Rigal's definition of electrography as something that diverts the 'copying machine from its primary function in order to create original works of art.'[4] It also demonstrates why Rigal chose to define this method of artistic creation as electrography and not copy art. He writes that he devised the term electrography in 1980 in an attempt to stem 'the confusion as to electrograph's nature', which, in his estimate 'had been compounded by a plethora of inappropriate – even downright misleading – terms used to name it.'[5] In 1988 the *Bienal Internacional: Electrografia y Copy Art* was held, (fig 54), and in the exhibition catalogue Rigal writes that one of the reasons for holding the first of what only ever amounted to two of these bienals was that previous

[4] Christian Rigal, *Bienal Internacional: Electrografia Y Copy Art* (Valencia, Universidad Politecnica Valencia, 1988), Introduction.
[5] Christian Rigal, *2 Bienal Internacional: Electrografie Y Copy Art* (Valencia, Universidad Politecnica Valencia, 1988), Introduction.

> electrographic shows have been organized along Mail-Art lines, which usually precludes works above the A3 format or costly ones, such as electroradiographs. Thus, they offer a very incomplete view of electrography's richness and potential.[6]

There is an unspoken criticism of those artists who restrict themselves to, whether through choice or necessity, the photocopier's prescribed format of a single sheet of paper, reproduced using the photocopier's myopic lens. Rigal writes that

> such shows [...] amount to a de facto segregation of many types of electrography, but they also reinforce the prejudice, prevalent among a general public familiar with the normal use of copiers, of electrographic art being akin in appearance to ordinary copies. [7]

Rigal even goes so far as to write that,

> certain electrographic art publications, consisting of compendium of works sent by artists, suffer from the same

[6] Rigal '*Bienal Internacional: Electrografia Y Copy Art*'.
[7] Ibid.

> liability; therefore, despite their good intention they do a disservice to this art.[8]

In coining the term electrography, and in his attempts to disassociate electrographic art from the public perception of mail-art and other forms of electrophotographic art Rigal appears to be concerned with two things. First, he is attempting to define electrographic art as a distinct art form, such as painting, drawing, or sculpture. He writes that

> electrography is neither a mere technique or an art movement […] it is an art form that uses various specific techniques and through which any art movement can express itself.[9]

Rigal's first concern is with legitimising electrography as a distinct art form, and to achieve this he sought to adumbrate those characteristics which are necessary for the creation of an electrographic artwork. He divides the electrographic process into three categories, 'fundamental, technological and format.'[10] Rigal unpacks his three categories: first he claims that an electrographic artwork should 'integrate a specific characteristic of the copying machine and its process;' although he does not go so far as to ascribe which characteristics are necessary.[11] Second, he writes that those

[8] Rigal '*Bienal Internacional: Electrografia Y Copy Art*'.
[9] Rigal '*2 Bienal Internacional: Electrografie Y Copy Art*', Introduction
[10] Ibid.
[11] Ibid.

works must 'necessitates the use of the copier.'[12] In this he claims that for an artwork to be electrographic is could only have been made using the photocopier. Third, he argues that the appearance of those works should 'betray, at first glance their electrographic nature.'[13] Each of the three seeks to emphasise the creative function of the photocopier, of the electrographic process, and the photocopier's central place in the creation of these artworks.

Rigal's second concern is inextricably linked to the first. In emphasising the creative characteristic of electrography he is attempting to disassociate electrography from the public perception of the photocopier as a creator of copies. I have touched upon this previously and noted that he wrote in the *2 Bienal Internacional* that 'I had defined electrography as the diverting of the copying machine from its primary function in order to create original works of art.'[14] Through this claim we can begin to see his concern with disassociating electrography from the dominant public perception of the photocopier. For Rigal electrography is not copying, in fact he goes so far as to claim that 'electrography has to do with creation as opposed to reproduction: it is, in fact, the very antithesis of the copy.'[15] There is, he claims, no reproduction involved in the electrographic art form 'because the artwork does not exist until after the copying machine's use,'[16] therefore the electrographic process is creative and not reproductive. He adds that the

[12] Rigal '*2 Bienal Internacional: Electrografie Y Copy Art*'.
[13] Ibid.
[14] Ibid.
[15] Ibid.
[16] Ibid.

aesthetic and visual quirks associated with the process means that 'electrography's techniques cannot produce a copy as all these techniques, such as the degeneration process, involve some measure of 'formal change.'[17] For Rigal it is in the deliberate diversion of the photocopier that the electrographic process is born. The electrographic process is one that can act, echoing McLuhan's claim, 'as a filter, a new medium to carry the codes of a new vision.'[18]

While Rigal championed the idea of the electrographic art form he, as I have already mentioned, sought to disassociate it from other artistic practices and terms that utilised the photocopier as an artistic tool. He wrote that,

> copy art, which literally means art of the copy, is the most catchy and common of these. Alas, it is also the worst; first, it can be seen as a contradiction in terms (does the copy really merit to be elevated to the exalted rank of an art?); second, it is a misnomer worthy of Orwell's newspeak as it signifies the exact opposite of what it describes: electrography, as we have seen, is the antithesis of the copy.[19]

Although he fails to directly name or give as an example, we can assume that he had something akin to *The International Society of Copier Artists*, a

[17] Rigal '*2 Bienal Internacional: Electrografie Y Copy Art*.
[18] Ibid, Introduction.
[19] Ibid.

society and publication founded by artist Louise Neaderland in 1982, in mind.

The cover of the first issue affirms the society's interest in, and focus on, the use the photocopier's copying and reproductive function for the creation of copy art, (fig 17). The single human figure repeated multiple time harks back to something Schwartz wrote,

> copying is pedestrian. Copying is peculiar. On the other hand, copying makes us what we are. Our bodies take shape from transcription of protein templates, our language from the mimicry of privileged sounds, our crafts from the repetition of prototypes.[20]

Copying is ingrained in humanity, reproduction, the repetitious use of sounds and physical movement, the creation of written language, each of these things depends on copying, on reproduction. The first issue of the *ISCA* make the society's interest in that pedestrian peculiarity clear, the replicate of the human figure connecting the very human need to copying, to the artistic need to create. The *ISCA* was founded by artist Louise Neaderland who had been trained in printmaking and photography. She describes her discovery of the photocopier as an artistic medium. Schwartz, quoting Neaderland writes that,

[20] Schwartz, p. 211.

> [I] just happened to put my photo of a High Falls diver on the Xerox machine, and realized I had found my true art form – an art of unique greys and saturated blacks, of tantalizing distortions from a shallow depth of field, and of intriguing immediacy in the (de)generation of images.[21]

Neaderland believed that by utilising the photocopier the artist was meditating 'upon the original image,' and creating something 'greater than the sum of the parts.'[22] Neaderland is clear in her belief that the artistic practice, the creation of copy art, owed 'its inspiration, facilitation and implementation to the ubiquitous office copier,' a device, she pointed out that was 'most often thought of as an instrument of deadening repetition.'[23] Neaderland, and the *ISCA*'s, subsequent approach to creating electrophotographic artworks appears to have been the antithesis of Rigal's. The *ISCA* consisted of self-published works of art, (fig 55), largely restricted to the A4 sized piece of paper that Rigal so disliked. This piece from the first issue of the *ISCA Quarterly* shows the artist's face having been photocopied. It encloses the artist Mary Brownlow's face using the frame of the photocopier's glass screen as it borders. In the process of creating the work the artist seems to be examining the machine, watching the device as it scans her face and hand. With the artist peering off to one

[21] Schwartz, p. 238.
[22] Louise Neaderland, 'Multiple and Mantras', in *Artist Yearbook* (Stanmore, Magpie Press, 1995), p. 74.
[23] Ibid, p. 74.

side there might be the suggestion that they are looking at something specific, something within the machine. But when the image is finally produced it is reversed and the artist, along with a macabre line of skeletons, looks outward, past the viewer with that sideways stare seemingly looking for something beyond the frame, beyond the confines of the page. There are comparisons we can make between this image and one of the Xeroxlore images I discussed in a previous chapter. (fig 36). In that image an office worker had written on their hand, 'SEND HELP! I'M TRAPPED IN THIS XEROX MACHINE,' and photocopied the result. Creators of both of these pieces have copied parts of themselves, reproduced something of their identity, which then extends beyond the machine and beyond themselves. The creators of both images appear to be constrained by the device they have employed and yet through its use have extended their physical presence. Neaderland writes that in utilising the photocopier the artist, 'a more active mediator, bent on creating and communicating with a viewer, manipulates the repeated image to create a narrative, extended in both place and time.'[24]

Neaderland's argument and the artwork challenges Rigal's belief that restricting the artist to the A4 or A3 undermines electrography's richness and potential. In this instance while the A4 page may act as a frame, that frame ties the piece back to the device, and through subject matter back to the author. The choices made in adopting the constraints of the frame

[24] Neaderland '*Multiple and Mantras'*, p. 72.

become part of the structure of the work, and in doing so the use of the photocopier is deliberately foregrounded. The *ISCA Quarterly* ran from April 1982 to April 2003 and carried echoes of Siegelaub's initial intention for *The Xerox Book.* In the first issue Neaderland writes that 'I see the copier as a tool for creating fine prints and bookworks and the quarterly as a vehicle for those works to be widely disseminated.'[25] The inherent aesthetic quality and choice of format appears to have been aimed at highlighting the thing that Rigal rejected, the ephemeral aesthetic and nature that dominated the cultural perception of the photocopier. The quality of the production is cheap and the production of the *ISCA* itself, utilising a cheaper spiral bind, all highlighted the aesthetic ephemeral nature of the work. In the *ISCA* and in Neaderland's intention there is the implied belief that the use of the photocopier by the artist offers the possibility of making art 'as democratic and accessible as possible by standardizing its format.'[26] Financial restraints may have had something to do with the *ISCA*'s ephemeral production methods, as demonstrated by Neaderland when she writes that 'as our membership increases so does the financial burden of our contributing artists. With the number of self-published copies tied to the number members.'[27] Neaderland sought to alleviate the burden on the artists by offering a membership of $50 which

[25] Louise Neaderland, 'International Society of Copier Artists', *ISCA*, 1.1 (1982), p. 4.
[26] Morgan '7 *Artists, 25 Pages Each, 1 Half-Century Later: Revisiting the Xerox Book*'.
[27] Neaderland '*International Society of Copier Artists'*, p. 4.

> entitles the patron to a one year feast of Quarterlies [...] The revenue from these memberships will be used to help defray the printing costs of artists whose work appears in the Quarterly.[28]

Financial considerations had to be taken into account when using the photocopier and were equally an issue acknowledged by Rigal and those creating electrographic artworks. As part of holding the *Bienal Internacional* one of the things Rigal sought to offer was 'workshops to provide artists with a constraint-free environment.' He acknowledged that

> direct access to top of the line copiers is often problematic for electrographers. Very few are rich enough to own a colour copier and copy-services usually do not offer the freedom of use of their machines required by electrographic art: fiddling with the innards of a copier is often prohibited […] (to say nothing of dancing the rock'n'roll on top of a copier's glass plate, as did a German artist in a famous performance).[29]

In both cases financial considerations were an aspect of the eventual realisation of these forms of electrophotographic art works. In the discussion and arguments made by Rigal there is the inherently fixed situational location of the workshop, of the art exhibition, the gallery or the museum. For Neaderland and the *ISCA* that situation becomes unfixed. Through the

[28] Neaderland '*International Society of Copier Artists'*, p. 4.
[29] Rigal '*Bienal Internacional: Electrografia Y Copy Art*', Introduction.

creation of the *ISCA* and the choices made in production, these artist multiples become as 'democratic and accessible as possible.'[30]

In the previous section I spent time arguing for the intentional designation of the artist, the deliberate choices made in media and methods of production. In the divergent directions taken by Rigal and Neaderland this idea of intentional designation once again comes to the forefront. When Rigal describes the subversion of the photocopier for the purpose of creating electrographic artworks the intentionality of the artist is paramount. In Neaderland's decision to found the *ISCA* she did so purposefully choosing to highlight the photocopier's democratic possibility through a standardised format of production, and production predominantly perceived as inherently workplace bound. I do not have the space or the time to give to a further discussion of the history of the electrophotographic art form, and the merits or disadvantages of Rigal and Neaderland's positions, and that is not actually the concern of this thesis, although it does deserve further considerable exploration. What I will draw from this brief discussion is that the photocopier once again demonstrates that our dominant cultural perception of it as a banal, functionally passive technology is remarkably short sighted, and fails to consider the multitude of uses to which the photocopier has been put. In the conclusion I will draw together the differing facets that each section of my discussion of this remarkably unremarked on technology have demonstrated and again make the argument

[30] Morgan '7 *Artists, 25 Pages Each, 1 Half-Century Later: Revisiting the Xerox Book*'.

that the photocopier deserves further academic consideration from both art history and visual culture.

Conclusion

Conclusion

My intention for this thesis has been to challenge the dominant cultural assumptions that surround the photocopier and give a grounding for a better understanding of its significance for art history and visual culture. I have argued that the photocopier, despite the prevailing perception of it as a functionally banal and singularly office-based facilitator of corporate or workplace ephemera, is a much more complex substance. I began to unpack this in Chapter One by demonstrating the photo photocopier's place in the history of printing and copying technology, and showing that it is an object of history, not just in the sense of its physical material duration, but as an object that exists as a part of a historical tradition of copying and printing machines. We understand, in some sense, what role the photocopier plays because we have a tradition of copying and printing, and the items that the photocopier creates and the function they have are similarly recognised. The photocopier's function as a device for copying was and continues to be its primary designation, and its place in the office it's primary location. This exploration of the photocopier's corporate roots shows that not only does the photocopier have an important cultural role in facilitating the corporation, but it also has a significant relationship with those who use it in that sphere. In Chapter Two I touched upon the role of the office worker and the perceived drudgery of office work. This perception of the office, and more specifically office work, is the primary lens through which the

photocopier is assessed, its use and output bound up with that sphere. The photocopier would come to epitomise the banality of office work, would reflect the demeaned nature of office work, and its function would be tied to that same space and those same perceptions. I have argued that this is the predominant reason for our prevailing cultural perception of the photocopier as a banal, functionally passive technology. But I have argued that this also demonstrates the photocopier's complex substance. Although the photocopier may be viewed somewhat simplistically, this perception overlooks the complexity of its creation, function, individual interaction and experience, the social status of work, women, class, and so much more. Just examined through the realm of work and the office the photocopier is an objectively complex device.

Throughout the thesis I have maintained that this is the foundation of the photocopier's as a substance, its roots in corporate capitalism, and perception as a corporation facilitator. I have argued for a reading of the photocopier that is based upon Bruno Latour's theory of a substance. Latour describes the substance as something that 'does not designate what "remains beneath," impervious to history, but what gathers together a multiplicity of agents into a stable and coherent whole.'[1] In the Introduction I wrote that the development, construction and use of any object is the confluence of social, historical, political, and scientific factors which are themselves part of wider cultural and historical factors. This approach in examining the

[1] Latour, p. 151.

photocopier has been aimed then at gathering together historical, social, and a multiplicity of other agents, which, when combined, give us a more nuanced and complex picture of the photocopier. With this approach I have sought to build a framework for a more nuanced understanding of the photocopier, one that engages with and seeks to understand more fully its substance and its cultural agency. I have argued that we must first establish the photocopier's place in the traditions of printing, capitalism, and corporate culture if we want to more fully understand its subsequent subversions and appropriation.

In Chapter Two I then began to explore the subversion and appropriation of the photocopier. I discussed Xeroxlore, an office-based subset of folklore, arguing that Xeroxlore challenges the perception of the photocopier as banal, while still entrenched within the corporate office environment. In Xeroxlore we see how the photocopier offers the possibility of protest, that utilising the photocopier in the production of objects of urban folklore offers the individual the possibility of creating a corporeal object in the midst of incorporeal commodified labour. This action allows the individual to regain some small semblance of control, the photocopier offering a moment of liberation. Urban folklorists, in creating objects of Xeroxlore are putting the photocopier through a process of détournement, diverting the photocopier and subverting it to alternative ends. *Détournement* is dependent upon some 'conscious or vague recollection of the original contexts of the elements.'[2]

[2] Guy Debord and Gil J Wolman, 'Directions for the Use of Detournement', in *Appropriation* (London, Whitechapel Gallery and The MIT Press, 2009), pp. 35–39, p. 35.

In using the photocopier urban folklorists are deliberately subverting a device that is dominated by a perception of corporate facilitation, and seemingly enforces a pattern of workplace isolation. In this way I have argued that the photocopier cannot be understood as a singularly hegemonic technology, defined by the office alone. Xeroxlore demonstrates the possibility of the photocopier's creative ability. In Xeroxlore the photocopier functions as a tool of individual expression, it allows for parodic and satiristic possibilities, and allows for 'the celebration of the commodified employee transformed into the subversive agent.'[3] Through Xeroxlore the photocopier can, in the hands of the individual, be utilised in such a way that it offers the possibility of the reaffirmation of individuality amidst workplace hegemony, and the chance at critiquing that same environment. In Chapter Three I explored the photocopier appropriation further as I examined it's use in subculture. Through the photocopier's subversion by punks and Riot Grrrl feminists we can see that the photocopier has enabled both individuals and groups to deal with the culturally enforced control of mass production and communication by subverting the photocopier in acts of appropriation. The use of the photocopier by these groups, and its own aesthetic quirks, has helped create recognisable subcultural styles. The photocopiers use in these subcultural creations demonstrates the photocopier's own agency in the elements it adds and removes. It helped shaped an aesthetic that increasingly became associated with subculture, an aesthetic that became a signifier of

[3] Roemer, p. 136.

subcultural ideology. Through an act of appropriation and subversion the photocopier was given a new meaning, it was given a new social position. Therefore, we can see that the photocopier can appear to represent different things to different people. I have argued that the photocopier has a situational fluidity that is not solely dependent on its location or physical position, but a fluidity that it shaped by the subjective experience and understanding of the individual user. To use the example given by Bruno Latour in *Pandora's Hope*,

> you are different with a gun in your hand; the gun is different with you holding it. You are another subject because you hold a gun; the gun is another object because it has entered into relationship with you.[4]

Latour describes the gun and the individual as 'propositions', which when articulated 'join into new propositions. They become "someone, something" else.'[5] This is why I have argued that the photocopier is situationally different; as the individual and the photocopier interact they 'exchange competences, offering one another new possibilities, new goals, new functions.'[6]

McLuhan argued that electronic media are an extension of the human nervous system, extending our human faculties beyond the immediacy of

[4] Latour, p. 179.
[5] Ibid, p. 180.
[6] Latour, p. 182.

the individual. In this way I argued that the photocopier then becomes an extension of the human creative instinct and its use and function must be understood to embody, not just its function within the office space, but its role as a facet of 'the environment that man creates' which then 'becomes his medium for defining his role in it.'[7] The photocopier, in altering and influencing the directions of business, folklore, and subculture, has, as a facet of our environment, altered the way we think and act, even if subconsciously. The photocopier has an agency that is reflective of the human creative instinct. If, as McLuhan argued, 'the "message" of any medium or technology is the change of state or pace or pattern that it introduces into human affairs,' we must fully consider the photocopier's role in altering our human affairs, and, as McLuhan claimed, often the first people to examine and explore these new human affairs is the artist.[8] I argued in Chapter Four that any use of the photocopier as a tool of artistic creation communicates a host of cultural references depending upon the individual. The photocopier's use as a means of artistic creation may have begun as a seemingly functionally passive technology but its use as a tool of creation challenges our belief in its impassive function. Our perception of the device can be utilised by the artist to convey meaning without language, while at the same time our own history and preconceptions will then alter our perception of any object created using this technology. Artists have located the subversion of the photocopier as both a means of creating original artworks, and as purposefully choosing to highlight its democratic

[7] McLuhan 'Medium is the Massage', p. 156.
[8] McLuhan '*Understanding Media*', p. 8.

possibilities by foregrounding the standardising nature of the device. In both instances the artist designates the use of the machine, drawing upon their own perception, and the perception of the culture, in deciding how to use the device and the merits of its use. In doing so they highlight the dominant Western cultural perception of the photocopier as an office technology and recontextualise its function and situation.

Marshall McLuhan wrote that 'all media are active metaphors in their power to translate experience into new forms.'[9] It is possible to see the photocopier as an active metaphor, not fixed, but 'continuous or interrupted reference.'[10] The photocopier can be perceived as a banal office and workplace technology, as a facilitator of corporate expansion, replicating the factory in the office, deskilling, specialising and isolating individuals. It can also be understood as a facilitator of counter-culture, enabling a partial reclamation of individualism amidst the confines of necessary employment. The photocopier can also be perceived as a liberator; when diverted from its corporate, commercial occupation, it has assisted in the development of subcultures, and the creation of a subcultural aesthetic. In creating subcultural artefacts the photocopier has expedited a diverse host of subcultural ideologies and beliefs. It has allowed individuals to reclaim their labour, turning it from a means of isolation into a means of creating community. It can also be seen as tool of artistic production, and through the intentional designation of the artist transformed from a purely reflexive

[9] McLuhan '*Understanding Media*', p. 63
[10] Latour, p. 95.

technology into a creative one. The photocopier is a complex substance, a multifaceted object with a heterogeneous material and conceptual nature. Each of its facets is interwoven with each other, its material history, individual experience and cultural perception must all be explored to be able to properly understand the photocopier's essence and influence upon our Western culture. I would argue with Latour for the study of a 'history of things'.[11] As Hertz writes,

> a viewer responds to meanings of objects that are defined within a cultural system and social organization and which are mediated by the use of symbols. Through classification of these symbols one carries with them the knowledge and associations experienced when encountering these images.[12]

How can we rightly understand an object like the photocopier if we restrict its examination to a single field of study? Particularly if we want to truly understand its significance for art history or visual culture, we must examine it in its totality. If we only examine the photocopier as a facilitator of the bureaucratic, as just another development in the history of copying machines, or as a tool for counter-culturalists, subculturalists, or artists, then we do the device a disservice. But more significantly, in restricting our scope of study we may also miss the particular significance for the creator or author who has chosen to use this culturally significant piece of

[11] Latour, p. 126.
[12] Hertz, p. 32.

technology. To paraphrase Latour, the only reasonable, realistic way for us to speak truthfully about the photocopier is to reconnect through as many relations and vessels as possible.[13]

Bürger

[13] Latour, p. 113.

Bibliography

Archives

‘Kathleen Hanna Papers’, New York University: Fales Library and Special Collection:
‘Louise Neaderland Papers’, The University of Iowa: Libraries Special Collections & University Archives
‘SPX Collections’, The Library of Congress: Newspapers and Periodicals
‘The Fredric Wertham Collection’, The Library of Congress: Manuscript Division
‘Xerographic Material’, The Library of Congress: American Folklife Center

Books

Adams, Scott, *Journal to Cubville: A Dilbert Book* (Great Britain: Boxtree, 1998)
Adorno, Theodor, *Aesthetic Theory*, ed. by Gretel Adorno and Rolf Tiedemann (London: Bloomsbury, 1997)
Ake Nilsson, Nils, ‘Spring 1918: The Arts and the Commissars’, in *Art, Society, Revolution Russia 1917 – 1921*, ed. by Nils Ake Nilsson (Stockholm: Almqvist & Wiksell International, 1979), pp. 9–53
Alberro, Alexander, ‘Reconsidering Conceptual Art, 1966 - 1977’, in *Conceptual Art: A Ciritcal Anthology*, ed. by Alexander Alberro and Blake Stimson (Cambridge Massachusetts: The MIT Press, 1999), pp. xvi – xxxvii
Allen, Gwen, *Artists’ Magazines: An Alternative Space for Art* (Cambridge Massachusetts: The MIT Press, 2011)
Angel, Jen, and Jason Kucsma, eds., *The Zine Yearbook* (Brooklyn: Soft Skull Press), VII
Anievas, Alexander, and Kerem Nisancioglu, *How the West Came to Rule: The Geopolitical Origins of Capitalism* (London: Pluto Press, 2015)
Anon, ‘The Richard Mutt Case’, in *Appropriation* (London: Whitechapel Gallery and The MIT Press, 2009), p. 26
Armstrong, Nancy, ed., *Notes From the Underground: The Most Outrageous Stories from the Alternative Press* (New York: Chamberlain Bros, 2005)
Artist’s Book Yearbook 1994-95
Atkins, Peter, *Four Laws That Drive the Universe* (Oxford: Oxford University Press, 2007)

Baecker, Dirk, ‘Aura: The Unique Appearance of Distance’, in *Mapping Benjamin: The Work of Art in the Digital Age*, ed. by Hans Ulrich Gumbrecht and Michael Marrinan (Stanford: Stanford University Press, 2003), pp. 9–23
Bakan, Joel, *The Corporation: The Pathologocal Pursuit of Profit and Power* (London: Constable, 2005)
Barber, Fionnaa, ‘Shifting Practices: New Trends in Representation since the 1970s’, in *Investigating Modern Art*, ed. by Liz Dawtrey, Toby Jackson, Mary Masterton, Pam Meecham, and Paul Wood (Italy: Yale University Press, 1996), pp. 155–68
Barthes, Roland, *Camera Lucida*, trans. by Richard Howard (London: Vintage Books, 2000)
Bartscherer, Thomas, and Roderick Coover, eds., *Switching Codes: Thinking through Digital Technology in the Humanities and the Arts* (Chicago: University of Chicago Press, 2009)
Batchelor, David, ‘Modernity & Tradition; Warhol & Andre’, in *Investigating Modern Art*, ed. by Liz Dawtrey, Toby Jackson, Mary Masterton, Pam Meecham, and Paul Wood (Italy: Yale University Press, 1996), pp. 129–42
Bates, David, *Photography: The Key Concepts* (Oxford: Berg Publishers)

Batterham, Ian, *The Office Copying Revolution: History, Identification and Preservation* (Australia: National Archive of Australia, 2008)
Benjamin, Walter, *The Work of Art in the Age of Mechanical Reproduction* (London: Penguin, 2008)
Berger, John, *Ways of Seeing* (London: Penguin Books, 1972)
Berger, Peter, and Thomas Luckman, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (London: Penguin Books, 1991)
Bestley, Russ, and Alex Ogg, *The Art of Punk: Posters + Flyers + Flyers + Fanzines + Record Sleeves* (Australia: Elephant Book Company Limited, 2012)
Beuys, Joseph, 'Untitled Statement (c. 1973)', in *Contemporary Art: A Sourcebook of Artists'*, ed. by Kristine Stiles and Peter Selz (Berkley: University of California Press, 1996), pp. 633–44
Bizup, Joseph, *Manufacturing Culture: Vindications of Early Victorian Industry* (Charlottesville: University of Virginia Press, 2003)
Bloch, Ernst, Georg Lukacs, Bertolt Brecht, Walter Benjamin, and Theodor Adorno, *Aesthetics and Politics* (London: Verson Editions, 1980)
Bodman, Sarah, *Creating Artist's Books* (New York: Watson-Guptill Publications, 2005)
Bowie, Andrew, *Aesthetics and Subjectivity* (Manchester: Manchester University Press, 2003)
Brake, Mike, *The Sociology of Youth Culture and Youth Subcultures: Sex and Drugs and Rock 'n' Roll?* (London: Routledge & Kegan Paul, 1980)
Breton, Andre, *Manifestoes of Surrealism*, trans. by Richard Seaver and Helen Lane (United States of America: The University of Michigan Press, 1972)
Bronner, Simon J., ed., *The Meaning of Folklore: The Anyalytical Essays of Alan Dundes* (Utah: Utah State University Press, 2007)
Bürger, Peter, *Theory of the Avant-Garde* (Minneapolis: University of Minnesota Press, 2004)
Bury, Stephen, *Artist's Books: The Book as a Work of Art, 1963 - 1995* (England: Scolar Press, 1995)
———, *Artist's Multiples: 1935 - 2000* (USA: Ashgate Publishing, 2001)
———. , ed., *Breaking the Rules: The Printed Face of the European Avant-Garde 1900 - 1937* (London: The British Library, 2007)
Buskirk, Martha, *The Contingent Object of Contemporary Art* (Cambridge: The MIT Press, 2005)

Calinescu, Matei, *Five Faces of Modernity; Modernism, Avant-Garde, Decadence, Kitsch, Postmodernism* (Durham: Duke University Press, 1987)
Castells, Manuel, *The Rise of the Network Society* (United Kingdom: Wiley-Blackwell Publishing, 2010)
Chandler, Annmarie, and Norie Neumark, eds., *At A Distance: Precursors to Art and Activism on the Internet* (Cambridge Massachusetts: The MIT Press, 2006)
Cogan, Brian, *The Encyclopedia of Punk* (New York: Sterling Publishing, 2008)
Cohen, Stephen F., *An End to Silence: Uncensored Opionion in the Soviet Union* (New York: W.N. Norton & Company, 1982)
Copiers and Duplicators (California: Creative Strategies International, 1980)
Costa, Eduardo, Raul Escari, and Roberto Jacoby, 'A Media Art (Manifesto)', in *Conceptual Art: A Ciritcal Anthology* (Cambridge Massachusetts: The MIT Press, 1999), pp. 2–5
Crowley, David, and Paul Heyer, *Communication in History: Technology, Culture and Society* (Boston: Allyn and Bacon, 2011)

Dane, Joseph A., *Out of Sorts: On Typography and Print Culture* (Philadelphia: University of Pennsylvania Press, 2011)
———, *What Is a Book?: The Study of Early Printed Books* (Notre Dame: University of Notre Dame Press, 2012)
Danzin, Andre, 'New Office Technology: Human and Orgnaizational Aspects', in *New Office Technology*, ed. by Harry J. Otway and Malcolm Peltu (London: Frances Pinter Publishers, 1983), p. 19
Datapro Reports on Office Copiers (New Jersey: Datapro Research Corporation, 1974)
Davids, Betsy, and Jim Petrillo, 'The Artist as Book Printer: Four Short Courses', in *Artists Books: A Critical Anthology and Sourcebook* (New York: Gibbs M. Smith, Inc and Visual Studies Workshop Press, 1985), pp. 149–66
Debord, Guy, *Society of the Spectacle* (Detroit: Black and Red, 2010)
Debord, Guy, and Gil J Wolman, 'Directions for the Use of Detournement', in *Appropriation* (London: Whitechapel Gallery and The MIT Press, 2009), pp. 35–39
Derksen, Jeff, 'Times and Places of Critique', in *Judgement and Contemporary Art Criticism*, ed. by Jeff Khonsary and Melanie O'Brian (Canada: Artspeak, 2010), pp. 101–8
Dessauer, John H, *My Years with Xerox: The Billions Nobody Wanted* (New York: Doubleday & Company, 1971)
———, *Xerograhy and Relatd Processes*
Dessauer, John H, and Harold E Clark, eds., *Xerography and Related Processes* (London: The Focal Press, 1965)
Dickens, Charles, 'A Christmas Carol: In Prose Being a Ghost Story of Christmas', 2018 <https://www.ibiblio.org/ebooks/Dickens/Carol/Dickens_Carol.pdf> [accessed 3 November 2018]
Diederichsen, Diedrich, 'Judgement, Objecthood, Temporality', in *Judgement and Contemporary Art Criticism*, ed. by Jeff Khonsary and Melanie O'Brian (Canada: Artspeak, 2010), pp. 84–99
Dreyfus, Hubert, 'Heidegger on Gaining a Free Relationship to Technology', in *Readings in the Philosophy of Technology* (Oxford: Rowman & Littlefield Publishers, Inc, 2004), p. 54
Drucker, Johanna, *The Century of Artist's Books* (New York City: Granary Books, 1995)
Duncombe, Stephen, *Zines: Notes from Underground and the Politics of Alternative Culture* (London: Verso, 1997)
Dundes, Alan, and Carl R. Pagter, *When You're Up to Your Ass in Alligators: More Urban Folklore from the Paperwork Empire* (Detroit: Wayne State University Press, 1987)
———, *Work Hard and You Shall Be Rewarded: Urban Folklore from the Paperwork Empire* (Bloomington: Indiana University Press, 1975)

Edeen, Susan, and Carol Flatt, *Instant Graphics: Getting Creative with Copy Machines* (Belmont: Pitman Learning, 1984)
Eichhorn, Kate, *Adjusted Margin: Xeroxgraphy, Art, and Activism in the Late Twentieth Century* (Cambridge Massachusetts: The MIT Press, 2016)
———, *The Archival Turn in Feminism: Outrage in Order* (Philadelphia: Temple University Press, 2013)
Eisenstein, Elizabeth L., *Divine Art, Infernal Machine: The Reception of Printing in the West from First Impressions to the Sense of an Ending* (Philadelphia: University of Philadelphia Press, 2011)
Electroworks (USA: International Museum of Photography, 1979)
Ellis, Charles D., *Joe Wilson and the Creation of Xerox* (Hoboken, N.J: John Wiley & Sons, 2006)

Ensminger, David, *Visual Vitriol: The Street Art and Subcultures of the Punk and Hardcore Generation* (United States of America: University Press of Mississippi, 2011)
Evans, David, ed., *Appropriation* (London: Whitechapel Gallery and The MIT Press, 2009)
———, 'Introduction', in *Appropriation*, ed. by David Evans (London: Whitechapel Gallery and The MIT Press, 2009), pp. 12–23

Finch, Christopher, *From Mickey Mouse to the Magic Kingdom and Beyond* (New York: 2011)
Fox, Nicols, *Against the Machines: The Hidden Luddite Tradition in Literature, Art and Individual Lives* (Washington: Island Press, 2004)
Franscastel, Pierre, *Art & Technology: In the Nineteenth and Twentieth Centuries* (New York: Zone Books, 2000)
Fuller, Matthew, *Flyposter Frenzy: Posters from the Anticopyright Network* (London: Working Press, 1992)

Gabor, Andrea, *The Man Who Discovered Quality* (United States of America: Random House, 1990)
Galloway, Lee, *Office Management Its Principles and Practice* (New York: The Ronald Press Company, 1922)
Garland, Marie, *The Chicksaw Loves and Allied Familes* (Oklahoma: Admore Photocopy Co, 1970)
Green, Thomas A, ed., *Folklore: An Encyclopedia of Beliefs, Customs, Tales, Music, and Art* (Santa Barbara: ABC-CLIO, 1997), 1: A-H
———. , ed., *Folklore: An Encyclopedia of Beliefs, Customs, Tales, Music, and Art* (Santa Barbara: ABC-CLIO, 1997), 2: I-Z
Groys, Boris, 'The Topology of Contemporary Art', in *Antinomies of Art and Culture: Modernity, Postmodernity, Contemporaneity* (Durham: Duke University Press, 2008), pp. 71–82
Gumbrecht, Hans Ulrich, and Michael Marrinan, eds., 'Aesthetics/Perception', in *Mapping Benjamin: The Work of Art in the Digital Age* (Stanford: Stanford University Press, 2003), pp. 1–8
———. , eds., 'Editor's Preface', in *Mapping Benjamin: The Work of Art in the Digital Age* (Stanford: Stanford University Press, 2003), pp. xi–1
———. , eds., *Mapping Benjamin: The Work of Art in the Digital Age* (Stanford: Stanford University Press, 2003)
Gunerloy, Mike, and Janice, eds., *The World of Zines* (United States of America: Penguin Books, 1992)

Hager, Steven, *Art After Midnight: The East Village Scene* (New York: St Martin's Press, 1986)
Hainke, Wolfgang, Ann Noel, and Jurgen O Olbrich, *Copy Art: Its a Copy World* (Die Pfalgzgalerie, 1993)
Hall, Stuart, and Tony Jefferson, *Resistance through Rituals: Youth Subcultures in Post-War Britain* (London: Taylor & Francis, 2006)
Harris, Craig, *Art and Innovation: The Xerox Parc Artist-in-Residence Program* (Massachusetts: Massachusetts Institute of Technology, 1999)
Haslan, Dave, *Young Hearts Run Free* (London: Harper Perennial, 2007)
Hebdige, Dick, *Hiding in the Light: On Images and Things* (London: Routledge, 1988)
———, *Subculture: The Meaning of Style* (London: Routledge, 1988)
Heidegger, Martin, *The Question Concerning Technology*, trans. by William Lovitt (New York: Garland Publishing, 1977)

Heilbroner, Robert, 'Do Machines Make History?', in *Readings in the Philosophy of Technology*, ed. by David M. Kaplan (Lanham: Rowman & Littlefield Publishers, Inc, 2004), pp. 7–15
Helpman, Elhanan, *Mystery of Economic Growth* (Cambridge: Harvard University Press, 2004)
Henry, Tricia, *Break All Rules: Punk Rock and the Making of A Style* (London: U.M.I Research Press, 1989)
Hesmondhalgh, David, *The Cultural Industries: 3rd Edition* (Los Angeles: Sage, 2013)
Home, Stewart, *Cranked Up Really High* (Hove: Codex, 1995)
House, Suda, *Artistic Photographic Processes* (New York: Amphoto Books, 1981)
Hubert, Renee Riese, and Judd D Hubert, *The Cutting Edge of Reading* (New York: Granary Books, 1999)
Huemer, Peter, *Image in Motion: Photocopy Medium Work 1987 - 2002* (Germany: Ritter Verlag, 2002)

Indirect Electrostatic Reprographic Equipment: A Report on the Supply of Indirect Electrostatic Reprographic Equipment (UK: Her Majesty's Stationary Office, 1976)

Jackson, Sarah, and Doug Barron, eds., *International Mail/Copier Art Exhibition: Arts and Technology Festival 85* (Halifax: Technical University of Nova Scotia, 1985)
Jacobson, Gary, and John Hillkirk, *Xerox: American Samurai* (New York: Macmillan Publishing Company, 1986)
Johnstone, Stephen, ed., *The Everyday* (London: Whitechapel Gallery and The MIT Press)
Jones, Michael Owen, *Exploring Folk Art* (Utah: Utah State University Press, 1987)
jurgens, Martin C., *The Digital Print Identification and Preservation* (Los Angeles: The Getty Conservation Institute, 2009)
———, *The Digital Print: Identification and Preservation* (Los Angeles: The Getty Conservation Institute, 2009)

Kakar, Joseph, *Groupe A-Z: Art Electrogro-Images Paris: Elektrograpfikak* (Budapest: Groupe A-Z, 1991)
Kaplan, David M., 'Early Philosophy of Technology', in *Readings in the Philosophy of Technology* (Lanham: Rowman & Littlefield Publishers, Inc, 2004), pp. 1–5
———. , ed., *Readings in the Philosophy of Technology* (Lanham: Rowman & Littlefield Publishers, Inc, 2004)
Kaprov, Susan, *Flyer Art in America*, 1981
Kennedy, Brian P, ed., *The Art of Sonia Landy Sheridan* (Hanover: Hood Museum of Art)
Kilgour, Frederick G., *The Evolution of the Book* (USA: Oxford University Press, 1998)
Klima, Stefan, *Artists Books: A Critical Survey of the Literature* (New York: Granary Books, 1998)
Klingender, Francis D., *Art and the Industrial Revolution* (England: W & J Mackay & Co, 1968)
Knabb, Ken, *Situationist International Anthology* (California: Bureau of Public Secrets, 1981)
Kobayashi, Y, *Fuji Xerox: The First 20 Years 1962 - 1982* (Japan: Senshu Printing, 1983)
Kostelanetz, Richard, 'Book Art', in *Artists Books: A Critical Anthology and Sourcebook* (New York: Gibbs M. Smith, Inc and Visual Studies Workshop Press, 1985), pp. 27–30

Kramer, Hilton, *The Age of the Avant-Garde: 1957 – 1972* (New York: Transaction Publishers, 2009)
Krauss, Rosalind, 'Some Rotten Shoots from the Seeds of Time', in *Antinomies of Art and Culture: Modernity, Postmodernity, Contemporaneity* (Durham: Duke University Press, 2008), pp. 60–70

Larvin, Irving, 'High and Low Before Their Time: Bernini and the Art of Social Attire', in *Modern Art and Popular Culture: Readings in High and Low*, ed. by Kirk Varnedoe and Adam Gopnik (New York: Harry Abrams INC, 1990), pp. 19–50
Latour, Bruno, *Aramis or the Love of Technology* (Cambridge: Harvard University Press, 1996)
———, *Pandora's Hope: Essays on the Reality of Science Studies* (Cambridge: Harvard University Press, 2000)
———, *Reassembling the Social: An Introduction to Actor-Network Theory* (Oxford: Oxford University Press, 2005)
Lee, Christopher, *This Sceptred Isle* (London: Penguin, 2000)
LeWitt, Sol, 'Paragraphs on Conceptual Art', in *Conceptual Art: A Ciritcal Anthology* (Cambridge Massachusetts: The MIT Press, 1999), pp. 12–16
Lichty, Ron, ed., *The Do-It-Yourself Guide to Alternative Publishing* (New York: Alternative Press Syndicate, 1976)
Lippard, Lucy, 'Conspiciuous Consumption: New Aritst's Books', in *Artists Books: A Critical Anthology and Sourcebook* (New York: Gibbs M. Smith, Inc and Visual Studies Workshop Press, 1985), pp. 49–58
———, 'The Artist's Book Goes Public', in *Artists Books: A Critical Anthology and Sourcebook* (New York: Gibbs M. Smith, Inc and Visual Studies Workshop Press, 1985), pp. 45–58
Lippard, Lucy, and John Chandler, 'The Dematerialization of Art', in *Conceptual Art: A Ciritcal Anthology* (Cambridge Massachusetts: The MIT Press, 1999), pp. 46–50
Lloyd, Ginny, *Copy Art Exhibition* (The Carbon Alternative Press, 1980)
Lutticken, Sven, 'A Tale of Two Criticisms', in *Judgement and Contemporary Art Criticism*, ed. by Jeff Khonsary and Melanie O'Brian (Canada: Artspeak, 2010), pp. 45–55
Lyons, John, 'Introduction', in *Artists Books: A Critical Anthology and Sourcebook* (New York: Gibbs M. Smith, Inc and Visual Studies Workshop Press, 1985), pp. 1–10

Manovich, Lev, 'Introduction to Info-Aesthetics', in *Antinomies of Art and Culture: Modernity, Postmodernity, Contemporaneity* (Durham: Duke University Press, 2008), pp. 333–44
Manschot, Peter J, ed., *Pierluigi Vannozzi: La Copia Infedele* (Copy Duplicating Products)
March, James G., ed., *Handbook of Organizations* (Abingdon: Routledge, 2013)
Marcus, Greil, *Lipstick Traces: A Secret History of the Twentieth Century* (London: Faber and Faber, 2001)
Marcuse, Herbert, 'Social Implication of Technology', in *Readings in the Philosophy of Technology*, ed. by David M. Kaplan (Lanham: Rowman & Littlefield Publishers, Inc, 2004), pp. 63–79
Marsh, Isabel Morse, *Genealogical Workbook: Descendants of Peter Heal circa 1700 - 1748* (Belmont: Bel's Photocopy Serive, 1988)
Marshall, Jennifer Jane, *Machine Art 1934* (Chicago: University of Chicago Press, 2012)
Marx, Karl, *Capital: A Critique of Political Economy*, ed. by Frederick Engles, trans. by Samuel Moore and Edward Aveling (Moscow: Progress Publishing, 2010)
———, *Grundrisse* (London: Penguin, 1973)

———, *Selected Writings: The Economics: 1857 - 1867* (Oxford: Oxford University Press, 1977)
McLellan, David, and Karl Marx, eds., *Karl Marx: Selected Writings* (Oxford: Oxford University Press, 1977)
McLuhan, Marshall, *From Cliché to Archetype* (New York: The Viking Press, 1970)
———, *Understanding Media* (London: Routledge, 2009)
McLuhan, Marshall, and Quentin Fiore, *The Medium Is the Message* (London: Penguin, 2008)
Mills, C Wright, *White Collor: The American Middle Class* (London: Oxford University Press, 1977)
Moran, Terence P, *Introduction to the History of Communication: Evolution and Revolution* (New York: Peter Lang Publishing, 2010)
Morgan, Robert, 'Systematic Books by Artists', in *Artists Books: A Critical Anthology and Sourcebook* (New York: Gibbs M. Smith, Inc and Visual Studies Workshop Press, 1985), pp. 207–22
Morris, William, ed., *Arts and Crafts Essays* (London: Rivington Percival & Co, 1893)
Mort, J, *The Anatomy of Xerography: Its Invention and Evolution* (North Carolina: McFarland and Company, 1989)
Morton, Tom, 'Three or Four Types of Intimacy', in *Judgement and Contemporary Art Criticism*, ed. by Jeff Khonsary and Melanie O'Brian (Canada: Artspeak, 2010), pp. 33–43
Muggleton, David, *Inside Subculture: The Postmodern Meaning of Style* (Oxford: Berg, 2000)
Muhleck, Georg, ed., *Medium: Photocopy - Canadian and German Copygraphy* (Canada: Centre Copie Art Inc, 1987)
Mumford, Lewis, *The Golden Day: A Study in American Literature and Culture* (New York: Dover Publications, 1953)
Munari, Bruno, *Xerografie Origianli: Un Esempio Di Sperimentazione Systematic Strumentale* (Bologna: Zanichelli, 1977)
Museo De Arte Abstracto Espanol/Museo Internacional De Electrografia (Cuenca: Publicaciones de la Excma, 1999)

Neaderland, Louise, 'Multiple and Mantras', in *Artist Yearbook* (Stanmore: Magpie Press, 1995), pp. 72–74
Nelson, Elizabeth, *The British Counter-Culture, 1966 - 1973: A Study of the Underground Press* (New York: St Martin's Press, 1989)
Nietzsche, Friedrich, *Basic Writings of Nietzsche* (New York: Random House, 2000)
Noble, David F, *America by Design: Science, Technology and the Rise of Corporate Capitalism* (New York: Alfred A. Knopf, 1977)
Norris, Wayne B, *The Big Book of Photocopy Humor: A Treasury of High-Tech Graffiti, Left-Brain, Witticisms, and Generic Humor* (United States of America: Norris Associates Press, 1984)

Oakes, Kaya, *Slanted and Enchanted: The Evolution of Indie Culture* (New York: Henry Holt and Company, 2009)
O'Hara, Craig, *The Philosophy of Punk: More than Noise* (Edinburgh: AK Press, 1999)
Orvell, Miles, *After the Machines: Visual Art and the Erasing of Cultural Boundaries* (United States of America: Univerity Press of America, 1996)
Osborne, Harold, *Theory of Beauty: An Introduction to Aesthetics* (New York: Philosophical Library, 1953)
Otway, Harry J., and Malcolm Peltu, eds., *New Office Technology: Human and Organizational Aspects* (London: Frances Pinter Publishers, 1983)

Owen, David, *Copies in Seconds: How a Lone Inventor and an Unknown Company Created the Biggest Communications Breakthrough since Gutenberg - Chester Carlson and the Birth of the Xerox Machine* (New York: Simon Schuster, 2004)

Papallo, George, *What Makes It Work* (New York: Arco Publishing Company, 1976)
Pauline, Mark, 'Technology and the Irrational', in *Contemporary Art: A Sourcebook of Artists'*, ed. by Kristine Stiles and Peter Selz (Berkley: University of California Press, 1996), pp. 415–20
Perneczky, Geza, *The Magazine Network: The Trends of Alternative Art in the Light of Their Periodicals 1968 – 1988* (Koln: Soft Geometry, 1993)
Perry, Mark, *Sniffin' Glue: And Other Rock and Roll Habits* (London: Omnibus Press, 2009)
Phillpot, Clive, 'Some Contemporary Artists and Their Books', in *Artists Books: A Critical Anthology and Sourcebook* (New York: Gibbs M. Smith, Inc and Visual Studies Workshop Press, 1985), pp. 97–132
Plant, Sadie, *The Most Radical Gesture: The Situationist International in a Postmodern Age* (London: Routledge, 1992)
Poster, Mark, ed., *Jean Baudrillard: Selected Writings* (Oxford: Polity Press, 1988)
———. , ed., *Jean Baudrillard: Selected Writings* (Oxford)
Preston, Cathy Lynn, and Michael J Preston, eds., *The Other Print Tradition: Essays of Chapbooks, Broadsides, and Related Ephemera* (New York: Garland Publishing, 1995)

Raymond, Bryan, and Christopher Miller, *Fucked Up + Photocopied: Instant Art of the Punk Rock Movement* (USA: Gingko Press, 2004)
Reid, Jamie, and Jon Savage, *Up They Rise: The Incomplete Works of Jamie Reid* (London: Faber and Faber, 1987)
Rhodes, Barbara, and William Wells Steeter, *Before Photocopying: The Art and History of Mechanical Copying 1780 – 1938* (Delaware: Oak Knoll Press & Heraldry Bindery, 1999)
Rigal, Christian, *2 Bienal Internacional: Electrografie y Copy Art* (Valencia: Universidad Politecnica Valencia, 1988)
———, *Bienal Internacional: Electrografia y Copy Art* (Valencia: Universidad Politecnica Valencia, 1988)
———. , ed., *International Electrographic: Special Issue: Electrographic Centers Winter 1991* (Association Media Nova, 1991)
Roberts, John, *The Intangibilities of Form: Skill and Deskilling in Art after the Readymade* (London: Verso, 2007)
Roberts, Peter, *British Fanzine Bibliography: Part 1 - 3* (Roberts, 1979)
Rosler, Martha, 'Martha Rosler: Bringing the War Home', in *Appropriation* (London: Whitechapel Gallery and The MIT Press, 2009), pp. 58–63
Rowe, Chip, ed., *The Book of Zines: Reading from the Fringe* (New York: An Owl Book Henry Holt and Company, 1997)
Ruggiero, Greg, and Stuart Sahuika, eds., *The Progressive Guide to Alternative Media and Activism* (New York: Seven Stories Press, 1999)
Rutsky, R L, *High Tech: Art and Technology from the Machine Aesthetic to the Posthuman* (Minneapolis: University of Minnesota Press, 1999)
Rycroft, Simon, *Swinging City: A Cultural Geography of London 1950-1974* (London: Ashgate Publishing, 2011)

Sabin, Roger, *Punk Rock: So What?* (London: Routledge, 2009)
Saunders, George, *Samizdat: Voice of the Soviet Opposition* (New York: Monad Press, 1974)

Savage, Jon, *England's Dreaming: The 'Sex Pistols' and Punk Rock* (United States of America: Faber and Faber, 2001)
———, *Punk: No One Is Innocent* (Nurnberg: Kunsthalle Wien, 2008)
Saval, Nikil, *Cubed: A Secret History of the Workplace* (New York: Anchor Books, 2015)
Schaffert, R. M., *Electrophotography* (London: The Focal Press, 1965)
Schwartz, Hillel, *The Culture of the Copy: Striking Likenesses, Unreasonable Facsimiles* (New York: Zone Books, 1996)
Senefelder, Alois, *The Invention of Lithography*, trans. by J. W. Muller (New York: The Fuchs & Lang Manufacturing Company, 1911)
Sheppard, Richard, *Modernism – Dada – Postmodernism* (Illinois: Northwestern University Press, 2000)
Shriner, Larry, *The Invention of Art: A Cultural History* (Chicago: The University of Chicago Press, 2001)
Sladen, Mark, and Areilla Yedgar, *Panic Attack: Art in the Punk Years* (London: Merrell, 2001)
Smith, Adam, *The Wealth of Nations* (USA: Electric Book Company, 2001)
Smith, Paul, *The Complete Book of Office Mis-Practice* (London: Routledge & Kegan Paul, 1984)
Smith, Terry, Okui Enwezor, and Nancy Condee, eds., *Antinomies of Art and Culture: Modernity Postmodernity Contemporaneity* (Durham: Duke University Press, 2008)
Spencer, Amy, *DIY: The Rise of Lo-Fi Culture* (Great Britain: Marion Boyers Publishing, 2008)
Stallabrass, Julian, *Art Incorporated: The Story of Contemporary Art* (Oxford: Oxford University Press, 2004)
Starbuck, William H., 'Organization Growth and Development', in *Handbook of Organizations* (Abingdon: Routledge, 2013), pp. 451–533
Stassen, Manfred, *Philosophical and Political Writings, Volume 76: Martin Heidegger* (London: Continuum International Publishing, 2003)
Steiner, Uwe, *Walter Benjamin: An Introduction to His Work and Thought*, trans. by Michael Winkler (Chicago: University of Chicago Press, 2010)
Stiles, Kristine, 'Art and Technology', in *Contemporary Art: A Sourcebook of Artists'*, ed. by Kristine Stiles and Peter Selz (Berkley: University of California Press, 1996), pp. 384–96
———, 'General Introduction', in *Contemporary Art: A Sourcebook of Artists'*, ed. by Peter Selz and Kristine Stiles (Berkley: University of California Press, 1996), pp. 1–9
———, 'Material Culture and Everyday Life', in *Contemporary Art: A Sourcebook of Artists'*, ed. by Kristine Stiles and Peter Selz (Berkley: University of California Press, 1996), pp. 282–95
———, 'Process', in *Contemporary Art: A Sourcebook of Artists'*, ed. by Kristine Stiles and Peter Selz (Berkley: University of California Press, 1996), pp. 577–87
Stimson, Blake, 'The Promise of Conceptual Art', in *Conceptual Art: A Ciritcal Anthology* (Cambridge Massachusetts: The MIT Press, 1999), pp. xxxviii–xxxix
Storr, Robert, 'No Joy in Mudville: Greenberg's Modernism Then and Now', in *Modern Art and Popular Culture: Readings in High and Low*, ed. by Kirk Varnedoe and Adam Gopnik (New York: Harry Abrams INC, 1990), pp. 161–90

Taylor, Marvin, ed., *The Downtown Book: The New York Art Scene: 1974 – 1984* (Princeton: Princeton University Press, 2006)
The Mott Collection, *Loud Flash: British Punk on Paper* (London: Haunch of Venison, 2010)

The U.S. Copying and Duplicating Market (New York: Frost and Sullivan, 1975)
The Use of Xerography in Libraries (Colorado: Colorado A & M College Library, 1952)
Thum, Reinhard. H., *Studies on Themes and Motifs in Literature: The City: Baudelaire, Rimbaud, Verhaeren* (New York: Peter Lang Publishing, 1994)
Todd, Mark, and Pearl Watson, *Whatcha Mean What's A Zine?: The Art of Making Zines and Mini-Comics* (Boston: Graphia, 2006)
Tomas, David, *Beyond the Image Machine: A History of Visual Technologies* (London: Continuum, 2004)
Turner, Alwyn W., *Crisis? What Crisis? Britain in the 1970's* (London: Aurum Press, 2008)

United States Patent Digest (Massachusetts: The Boston Patent Company, 1978)
United States Patent Digest: Xerox (Massachusetts: The Boston Patent Company, 1979)
——— (Massachusetts: The Boston Patent Company, 1979)

Walker, John, *Cross-Over: Art into Pop/Pop into Art* (London: Methuen, 1987)
Walker, John A., *Art Since Pop* (London: Thames and Hudsom, 1975)
———, 'Copy This! A Historical Perspective On the Use of the Photocopier in Art', *Plagiary: Cross-Disciplinary Studies in Plagiarism, Fabrication, and Falsification*, 2006 <http://hdl.handle.net/2027/spo.5240451.0001.003>
Walsh, David, *The Growth of the Liberal Soul* (Columbia: University of Missouri Press, 1997)
———, *The Modern Philosophical Revolution: The Luminosity of Existence* (Cambridge: Cambridge University Press, 2008)
Webster, Edward, *Print Unchained: Fifty Years of Digital Printing, 1950 - 2000 and beyond a Saga of Invention and Enterprise* (Dover: DRA of Vermont, 2000)
Whitaker, Cathy Seitz, ed., *Alternative Publications: A Guide to Directories, Indexes, Bibliographies, and Other Sources* (North Carolina: McFarland and Company, 1990)
Whyte, JR, William, *The Organization Man* (Philadelphia: University of Pennsylvania Press, 1956)
Williams, Edgar M., *The Physics and Technology of Xerographic Processes* (New York: John Wiley & Sons, 1984)
Willis, Paul E., *Profane Cultures* (London: Routledge & Kegan Paul, 1978)
Wood, William, 'Notes on the Demise and Persistence of Judgement', in *Judgement and Contemporary Art Criticism*, ed. by Jeff Khonsary and Melanie O'Brian (Canada: Artspeak, 2010), pp. 57–71

Xerox Strategies for Office Automation (California: Creative Strategies International, 1981)

Zannos, Susan, *Chester Carlson and the Development of Xerography* (Delaware: Mitchell Lane Publishing, 2003)

Emails

Bestley, Russ, 'Punk Research', 23 April 2012
Bestley, Russ, David Ensminger, and Alex Ogg, 'Punk Research and Private Correspondence',
09 July 2012
Ensminger, David, 'Punk Research and Private Correspondence', 20 February 2012

Interviews

Pawson, Mark, Interview With Mark Pawson, 2012
Sabin, Roger, Interview With Roger Sabin, 2012

Journal/Magazine/Newspaper Articles

Adamson, Glenn, 'Art and Copyright', *Art in America*, 100 (2012), 77–79
Adato, Allison, 'Camera at Work', *Life*, 20 (1997), 90
———, 'Camera at Work', *Life*, 20 (1997), 90
Adnan, Hamedi M., 'Xerox Makes Everybody a Publisher: Problems of Book Photocopying and Ways to Control It in Malaysia', *Science and Business Media*, 27 (2011), 268–76
Arbeiter, Joan, 'Chance and Change in the Art of Sari Dienes', *Woman's Art Journal*, 7 (1986), 27–31 <https://doi.org/10.2307/1358302>
Arnason, Johann P., 'Theorizing Capitalism: Classical Foundations and Contemporary Innovations', *European Journal of Social Theory*, 18 (2015), 351–67
'Artist Experiments with Office Copy Machine', *Art Business News*, 28 (2001), 30–30
Atkinson, Paul, 'Do It Yourself: Democracy and Design', *Journal of Design History: Special Issues: Do It Yourself*, 19 (2006), 104

Barnden, Saskia, 'How to Be Who Your Are, Not What You Are', *The Guardian*, 7 June 1979
Beckman, R S, 'Electrographics'
Belitt, Ben, 'Xerox', *Salmagundi*, 87 (1990), 58
Bennett, Clive, 'Clash', *The Times*, 11 May 1977
Bergin, Paul, 'Andy Warhol: The Artist as Machine', *Art Journal*, 26 (1967), 359–63 <https://doi.org/10.2307/775065>
Bestley, Russ, 'From "London's Burning" to "Sten Guns in Sunderland"', *Punk & Post-Punk*, 1 (2012), 41–71
Bliss, Anna Campbell, '"New Technologies of Art: Where Art and Science Meet": Conference Report', *Leonardo*, 19 (1986), 311–17 <https://doi.org/10.2307/1578377>
Boyce, K. T., '"Art in Outerspace": Gauging Public Response to High-Technology Art', *Leonardo*, 24 (1991), 553–56 <https://doi.org/10.2307/1575659>
Bugler, Jeremy, 'How Punk Became A Four-Letter Word', *The Observer*, 5 December 1976
Butera, V F, 'Susan Kaprov', *Arts Magazine (USA)*, 56 (1981), 10
Butt, Ronald, 'The Grubby Face of Mass Punk Promotion', *The Times*, 9 December 1976

Cains, Phyllis, 'The Other Times: A Bimonthly Newsletter Published by Pembroke Press' (Pembroke Press, 1987)
Carroll, Noël, 'The Ontology of Mass Art', *The Journal of Aesthetics and Art Criticism*, 55 (1997), 187–99 <https://doi.org/10.2307/431263>
Cherry, Brigid, and Maria Mellins, 'Negotiating the Punk in Steampunk: Subculture, Fashion & Performative Identity', *Punk & Post-Punk*, 1 (2012), 5–25
'Chester F. Carlson Dead at 62; Invented Xerography Process', *New York Times* (New York, N.Y., United States, 20 September 1968) <http://search.proquest.com/artbibliographies/docview/118349713/citation/141D01D050254E0BECC/3?accountid=8018> [accessed 18 November 2013]
Chlebowski, Ilana, '[Original Xerographies]', *Afterimage*, 36 (2009), 31–31
'Constructivist, Constructed, Colored, and Copied', *Art Journal*, 39 (1980), 208–9 <https://doi.org/10.2307/776359>

Cowen, Gemma, 'Generative Systems: Sonia Landy Sheridan as Artist/Master of the Machine', *Visual Resources: An International Journal of Documentation*, 22 (2011), 325–42
Cunningham, John, 'Rock-A-Bye Punk', *The Guardian*, 16 July 1977

Dambrofsky, Gwen, 'Sarah Jackson Uses Photocopier to `paint' Her Highly Original Works: [FINAL Edition]', *The Gazette* (Montreal, Que., Canada, 1 December 1990), section BOOKS: BOOKS AND ART, p. I4
De Jongh, Nicholas, 'History Is Punk', *THe Guardian*, 21 February 1978
Denselow, Robin, 'Memoirs of a Punk Fagin', *The Guardian*, 17 May 1980
———, 'The Intelligent Reflections of a Banshee', *The Guardian*, 3 January 1979
DeVuono, Frances, 'Jeffry Mitchell at the Henry Art Gallery', *Artweek*, 32 (2001), 24–25
Downey, Greg, 'Virtual Webs, Physical Technologies, and Hidden Workers: The Spaces of Labor in Information Internetworks', *Technology and Culture*, 42 (2001), 209–35
Duncan, Ann, 'High-Tech War Sparks High-Tech Artwork; Faxes, Copiers Speed Pacifist Messages: [FINAL Edition]', *The Gazette* (Montreal, Que., Canada, 23 March 1991), section ART, p. J4/BREAK
Dunn, Lloyd, 'Psychoanalysis', *Photostatic*, 1985
Dunning, Christie L., 'Creating with a Copying Machine', *Idea, Image, Transfer: Workshop at the Surface Design Conference, Portland, Oregon*, 21 (1997), 32

Eichhorn, Kate, 'Copy Machines and Downtown Scenes', *Cultural Studies*, 29 (2015), 363–78
Ensminger, David, 'Art in Print', *Art in Print*, 1 (2012), 63

Farkas, Shelly, and Henry P. Raleigh, 'A Review of the Use of Photo Mixed Media in the U.S.A.', *Leonardo*, 13 (1980), 129–31 <https://doi.org/10.2307/1577984>
Feaver, William, 'Print Show', *The Observer*, 17 September 1978
Fesci, Sevim, and Ray Johnson, 'An Interview with Ray Johnson, 17 April 1968', *Archives of American Art Journal*, 40 (2000), 17–27
Fireside, Harvey. "The Conceptualization of Dissent: Soviet Behavior in Comparative Perspective." *Universal Human Rights*, vol. 2, no. 1, 1980, pp. 31–45.
'From Inky Fingers to the Photocopier', *The Guardian*, 28 September 1993

Gafu, Cristina, and Mihaela Badea, 'A Case Study on Using Xeroxlore in Teaching English at Academic Level', *Procedia - Social and Behavioral Sciences*, 128 (2014), 134–39 <https://doi.org/10.1016/j.sbspro.2014.03.132>
'Glenn Ligon and Adam Pendleton', *Flash Art International*, 44 (/// Jul), 84–88
Gonzalez, Marisa, 'Copiers, Motion and Metamorphosis', *Leonardo*, 23 (1990), 295–300 <https://doi.org/10.2307/1578627>
Gracyk, Theodore, 'Kid'sre Forming Bands: Making Meaning in Post-Punk', *Punk & Post-Punk*, 1 (2012), 73–85
Grossman, Henryk, 'The Beginnings of Capitalism and the New Mass Morality', *Journal of Classical Sociology*, 6 (2006), 201–13

Harron, Mary, 'The Hot Tip Is a Cool Flavour', *The Guardian*, 23 October 1981
Hennessy, Val, 'A Girl with a Punk Crew Cut Nudged Her Friend on the Shin with a Laced-Up Boot. 'Bit Old Entcha? She Observed', *The Guardian*, 21 September 1979
Het Reve, Van, 'Samidat', *The Observer*, 20 May 1970
Hillmore, Peter, 'Record Sales Rocket After Tv Row', *The Guardian*, 4 December 1976

Hornborg, Alf, ‘Technology as Fetish: Marx, Latour, and the Cultural Foundations of Capitalism’, *Theory, Culture & Society*, 31 (2014), 119–40
Hosseini, Hamid, ‘From Communist Manifesto to Empire: How Marxists Have Viewed Global Capitalism in History’, *Review of Political Economies*, 38 (2003), 7–23
‘How A Desparing Young Punk Saw the Writing on the Wall’, *THe Guardian*, 31 May 1979, p. 11
Howe, Nicholas, ‘Further Thoughts on Clone’, *American Speech*, 58 (1983), 61–68 <https://doi.org/10.2307/454758>

Ingham, Geoffrey, ‘Schumpeter and Weber on the Institutions of Capitalism: Solving Swedberg’s “Puzzle”’, *Journal of Classical Sociology*, 3 (2003), 297–309

Jackson, Sarah, ‘Reflections Behind the Mirror: Copier Art as Metaphor’, *Leonardo*, 28 (1995), 245–46
———, ‘Reflections Behind the Mirror: Copier Art as Metaphor’, *Leonardo*, 28 (1995), 245–46
Jordan, Philip, ‘Grundy Banned - Today Team Accused’, *The Guardian*, 3 December 1976

Kaneda, Shirley, and Saul Ostrow, ‘Diana Cooper’, *Bomb*, 2003, 47–49
Kieran, Michael, ‘Machine Made for Office Allows Copyart Freedom’, *The Globe and Mail* (Toronto, Ont., Canada, 1 December 1980), p. P.20
Kirkpatrick, Diane, ‘Sonia Landy Sheridan’, *Woman’s Art Journal*, 1 (1980), 56–59 <https://doi.org/10.2307/1358020>
Kiszely, Philip, and Alex Ogg, ‘Editorial’, ed. by Philip Kiszely and Alex Ogg, *Punk & Post-Punk*, 1 (2012), 3–4

Lambert, Nicholas, William Latham, and Frederic Fol Leymarie, ‘The Emergence and Growth of Evolutionary Art — 1980—1993’, *Leonardo*, 46 (2013), 367–75
Large, Peter, ‘Artist’s Dream - and a Forger’s Delight’, *The Guardian*, 16 September 1987
Lashua, Brett, and Sara Cohen, ‘“A Fanzine of Record”: Merseysound and Mapping Liverpool’s Post-Punk Popular Musicscapes’, *Punk & Post-Punk*, 1 (2012), 87–104
Latour, Bruno, ‘Some Experiments in Art and Politics’, *E-Flux*, 2011, 1–7
Lehmann, Henry, ‘Xerox Art Show Raises Fundamental Questions: [FINAL Edition]’, *The Gazette* (Montreal, Que., Canada, 8 February 1992), section ART, p. K1/BREAK
Lerner, Evan, ‘[Fanzines]’, *Print*, 65 (2011), 85–85
Lovejoy, Margot, ‘Art, Technology, and Postmodernism: Paradigms, Parallels, and Paradoxes’, *Art Journal*, 49 (1990), 257–65 <https://doi.org/10.2307/777117>
Lydiate, Henry, ‘Appropriation Art and Fair Uses: Cariou v Prince’, *Art Monthly*, 2009, 41–41

MacKenzie, Donald, ‘Marx and the Machine’, *Technology and Culture*, 25 (1984), 473–502 <https://doi.org/10.2307/3104202>
Marks, Laurence, ‘Our Short Hot Summer of Discontent’, *The Guardian*, 12 July 1981
Mays, John Bentley, ‘Xerography: The Art of the Stat’, *The Globe and Mail* (Toronto, Ont., Canada, 31 May 1980), p. E.11
McLuhan, Marshall, ‘McLuhan’s Laws of the Media’, *Technology and Culture*, 16 (1975), 74–78 <https://doi.org/10.2307/3102368>
Moore, Jason W., ‘Capitalism as World-Ecology: Braudel and Marx on Environmental History’, *Organization and Environment*, 16 (2003)

<http://oae.sagepub.com.ezproxy.library.qmul.ac.uk/content/16/4/514.full.pdf+html> [accessed 30 August 2016]

Neaderland, 'International Society of Copier Artists', *ISCA*, 1 (1982), 4
Neustatter, Angela, 'Punktuation', *The Guardian*, 23 September 1977, p. 11.

O'Brien, Lucy, 'Can I Have A Taste of Your Ice Cream?', *Punk & Post-Punk*, 1 (2012), 27–40
Odom, Mike, 'A Painting of a Picture of a Photocopy: Dallas Artists Ride the Slippery Slope between Painting and Photography', *Art Papers*, 28 (2004), 22–27

Parker, Robert, 'Revolution Call at the Pier Pavillion', *The Times*, 4 May 1977
Perkins, Stephen, and Lloyd Dunn, 'Copy Culture: Barbarians in the Copy Shop', *101 New Observations*, 1994, 3–30
Phillpot, Clive, 'All Things Lowbrow', *Art Monthly*, 1999, 45–46
'Photocopy Art', *The Guardian*, 6 September 1994
'Photostatic: Psychoanalysis'
Poissant, Louise, 'New Media Dictionary', *Leonardo*, 35 (2002), 91–98 <https://doi.org/10.1162/002409402753689399>
Preston, Michael, 'Xerox-Lore', ed. by Bonita Freeman-Witthoft and John Santino, *Keystone Folklore*, XIX.1 (1974), 11–26

Rauch, Jennifer, 'Hands-on Communication: Zine Circulation Rituals and the Interactive Limitations of Web Self-Publishing', *Popular Communications*, 2 (2004), 153–69
Reynolds, Stanley, 'After Seeing Undergraduates Posing, I'll Take Punk Rock Before Madrigals on a May Morning', *The Guardian*, 4 June 1977
Roemer, Danielle M., 'Photocopy Lore and the Naturalization of the Corporate Body', *The Journal of American Folklore*, 107 (1994), 121–38 <https://doi.org/10.2307/541076>
Rosen, Michael J., 'Phaethon at the Photocopier', *Salmagundi*, 1990, 59–64

Sabin, Roger, 'Interview With Stephen Duncombe and Maxwell Tremblay, Editors of White Riot: Punk Rock and the Politics of Race', *Punk & Post-Punk*, 1 (2012), 105–10
Sartorius, Tara Cady, 'Modern Printmaking Options', *Arts & Activities*, 124 (1998), 16
———, 'Printmaking Options', *Arts and Activities*, 1998, 16–43
Sheridan, Sonia Landy, 'Generative Systems versus Copy Art: A Clarification of Terms and Ideas', *Leonardo*, 16 (1983), 103–8 <https://doi.org/10.2307/1574794>
———, 'Image Generation Survey: Electrostatics', *Leonardo*, 23 (1990), 251–53 <https://doi.org/10.2307/1578616>
———, 'Mind/Senses/Hand: The Generative Systems Program at the Art Institute of Chicago 1970-1980', *Leonardo*, 23 (1990), 175–81 <https://doi.org/10.2307/1578602>
'Shop Man Clear on Pistols Charge', *The Guardian*, p. 1
'Southern Illinois University Press Author's Questionaire', 1972, The Library of Congress: The Fredric Wertham Collection, Box 156
'Southern Illinois University Press: Press Release', 1973, The Library of Congress: The Fredric Wertham Collection, Box 156
Stavans, Ilan, 'Xerox Man', *Agni*, 2000, 145–51
Stephen, Andrew, 'Johnny Rotten Is Nice', *The O*, 18 June 1977

Tapley, Erin, 'Scrutinized Art: The Many Faces of Visual Art Censorship', *Art Education*, 55 (2002), 48–52 <https://doi.org/10.2307/3193979>

Teurlings, Jan, 'From the Society of the Spectacle to the Society of the Machinery: Mutations in Popular Culture 1960s-2000s', *European Journal of Communication*, 28 (2013), 514–26

Thomason, John, 'Copy Art Exhibit Ongoing at Library; Providing Medical Services to Local Low-Income Families', *South Florida Sun - Sentinel* (Fort Lauderdale, Fla., United States, 10 October 2010), section CommNews <http://search.proquest.com/docview/761037628/1432B3FE3C06BBF4BF2/49?accountid=12084> [accessed 24 January 2014]

Thornber, Robin, 'The Punk Poet Had Left His Poems at Home. He Went Round the Back to Write One. He's on in Ten Minutes', *The Guardian*, 23 January 1980, p. 9

Tom, Willard K., 'THE 1975 XEROX CONSENT DECREE: ANCIENT ARTIFACTS AND CURRENT TENSIONS', *Antitrust Law Journal*, 68 (2001), 967–90

Triggs, Teal, 'Scissors and Glue: Punk Fanzines and the Creation of a DIY Aesthetic', *Journal of Design History: Special Issues: Do It Yourself*, 19 (2006), 104

Turner, Steve, 'The Anarchic Rock of the Young and Doleful', *The Guardian*, 3 December 1976

———, 'The Anarchic Rock of the Young and the Doleful', *The Guardian*, 3 December 1976, p. 13

Valesco, Frances, and Suzanne Fried, 'Combining Color Xerography with the Techniques of Silkscreen and Intaglio', *Leonardo*, 17 (1984), 27–32 <https://doi.org/10.2307/1574854>

Verbeek, Peter-Paul, 'Cyborg Intentionality: Rethinking the Phenomenology of Human-Technology Relations', *Phenomenology and the Cognitive Sciences*, 7 (2008)

Wagner, Peter, 'Modernity, Capitalism and Critique', *Thesis Eleven*, 66 (2001), 1–31

Walker, John A., 'Copy This! A Historical Perspective On the Use of the Photocopier in Art', *Plagiary: Cross-Disciplinary Studies in Plagiarism, Fabrication, and Falsification*, 2006 <http://hdl.handle.net/2027/spo.5240451.0001.003>

Wilson, Joseph C., 'Technology and Society', *Proceedings of the Academy of Political Science*, 30 (1970), 158–65 <https://doi.org/10.2307/1173334>

'Xerox Sutra Editions: 84 - 85' (Xerox Sutra Editions, 1985)

Zabel, Barbara, 'The Avant-Garde Automaton, Two Collages by Stuart Davis', *Archives of American Art Journal*, 32 (1992), 11–15

PhDs

Bestley, Russ, 'Hitsville UK: Punk Rock and Graphic Design in the Faraway Towns, 1976-84' (London College of Communication, 2007)

Clarke, Robert Flanders, 'The Impact of Photocopying on Scholarly Publishing' (Rutgers, 1966)

Mitchell, Elizabeth Kathleen, 'Mechanical Reproduction and the Mechanical Philosophy: The Idea of Originality in Eighteenth-Century British Printmaking' (unpublished Ph.D., University of California, Santa Barbara, 2006) <http://search.proquest.com/docview/305348424/abstract/1432B5D2F0768D85933/2?accountid=12084> [accessed 24 January 2014]

Videos

First Xerox Commercial Ever, 1959 <https://www.youtube.com/watch?v=ZBt6gSGRZ-Y> [accessed 15 September 2016]

Gervais, Ricky, *The Office*, The Office (London: Entertain Video, 2004)

Ultimate Go To Market Strategy for Success Xerox George Lois, 1960 <https://www.youtube.com/watch?v=ckinspFk2iI> [accessed 17 September 2016]

Wetzel, John, *The Action Office: The Secret History of the Cubicle* (Notre Dame, 2014) <https://www.youtube.com/watch?v=RgDHifV62WI> [accessed 17 September 2016]

Wilder, Billy, *The Apartment* (USA: Mirisch Corporation, 1960)

Xerox 914 - The World's First Plain Paper Copier, 1959 <https://www.youtube.com/watch?v=9xZYcWsh8t0> [accessed 15 September 2016]

Webpages

19, Lincoln Cushing October, and 2010, 'Cranking It Out, Old-School Style: Art of the Gestetner', *AIGA | the Professional Association for Design* <http://www.aiga.org/cranking-it-out-old-school-style-art-of-the-gestetner/> [accessed 28 January 2015]

'Academia.Edu', *Revaluing Mimeographs as Historical Sources*, 2015 <https://www.academia.edu/7400451/Revaluing_Mimeographs_as_Historical_Sources> [accessed 1 December 2015]

'Action Office 1 (A01)', *George Nelson Foundation* <http://www.georgenelsonfoundation.org/george-nelson/works/action-office-1-a01-132.html> [accessed 9 July 2016]

Adams, Scott, 'Friday July 15, 2011', 2011 <http://dilbert.com/strip/2011-07-15> [accessed 17 September 2016]

'Antique Copying Machines', *Early Office Museum*, 2000 <http://www.officemuseum.com/copy_machines.htm>

'ArchiveGrid : The Development of Xerox Copying / by Chester F. Carlson and J.J. Ermenc.' <http://beta.worldcat.org/archivegrid/collection/data/35826219> [accessed 15 November 2013]

'Arnyekkotok', 1990 <http://www.arnyekkotok.hu> [accessed 5 March 2015]

Baer, Drake, 'A Brief History of How the Cubicle Took Over Offices Everywhere', 2014 <http://www.businessinsider.com/a-brief-history-of-how-the-cubicle-2014-4?IR=T> [accessed 9 January 2016]

Benjamin, Walter, 'A Short History of Photography', *Monoskop* <https://monoskop.org/images/7/79/Benjamin_Walter_1931_1972_A_Short_History_of_Photography.pdf> [accessed 21 August 2016]

Bleus, Guy, '15 Copy Art Evidences', *Mail Art* <http://www.mailart.be/copy.html> [accessed 31 January 2014]

'Carl Andre, Robert Barry, Douglas Huebler, Joseph Kosuth, Sol LeWitt, Robert Morris, Lawerence Weiner AKA the Xerox Book', *Primary Imformation* <http://www.primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/>

Carlson, Chester Floyd, and Joseph J Ermenc, 'The Development of Xerox Copying', *WorldCat*, 1965 <http://www.worldcat.org/title/development-of-xerox-copying/oclc/35826219> [accessed 15 November 2013]

'Cinématographe | Film Technology', *Encyclopedia Britannica* <https://www.britannica.com/technology/Cinematographe> [accessed 1 May 2018]

‘Copy Art’, *Revolvy* <http://broom02.revolvy.com/main/index.php?s=Copy%20art&item_type=topic> [accessed 26 August 2016]
‘Creating an Undergroun Press: Samizdat in the Soviet Union and the Eastern Bloc’, *Tavaana*, 2016 <https://tavaana.org/en/content/creating-underground-press-samizdat-soviet-union-and-eastern-bloc> [accessed 9 December 2016]
Dyment, David, ‘The “Xerox” Book’, *Artists Books and Multiples*, 2012 <http://artistsbooksandmultiples.blogspot.co.uk/2012/03/xerox-book.html> [accessed 20 June 2013]
‘Electrostatic Images at HACC’s Rose Lehrman Gallery’, *HACC Newsroom* <http://newsroom.hacc.edu/article_display.cfm?article_id=136> [accessed 29 August 2016]
‘George Stephenson | British Inventor’, *Encyclopedia Britannica* <https://www.britannica.com/biography/George-Stephenson> [accessed 1 May 2018]
Gualtieri, Dev, ‘PARC Turns Forty’, *Tikalon Blog*, 2010 <http://tikalon.com/blog/blog.php?article=PARC>
H, Jonathn, ‘Frank Lloyd Wright and His Forgotten Larkin Building’, *Bearings*, 1903 <http://www.terrastories.com/bearings/frank-lloyd-wright-and-his-forgotten-larkin-building> [accessed 17 September 2016]
‘History & Heritage’ <https://www.ford.co.uk/experience-ford/history-and-heritage> [accessed 1 May 2018]
Hockney, David, ‘Smithsonian: Fruit in Bowl’ <http://americanart.si.edu/collections/search/artwork/?id=34943>
‘Hungarian Electrographic Art Associations’, *Elektroprafia*, 2016 <http://www.elektrografia.hu/cms/index.php?option=com_content&view=article&id=286:hungarian-electrographic-art-association-heaa&catid=8:english&Itemid=16> [accessed 21 September 2016]
‘Internal-Combustion Engine | Definition & Facts’, *Encyclopedia Britannica* <https://www.britannica.com/technology/internal-combustion-engine> [accessed 1 May 2018]
Lewis, C.S., ‘The Four Loves Quotes’, *Goodreads* <https://www.goodreads.com/work/quotes/14816053-the-four-loves> [accessed 9 September 2016]
‘Louise Neaderland - New York’, *Vamp & Tramp, Booksellers, LLC* <http://www.vampandtramp.com/finepress/n/Louise-Neaderland.html#distress> [accessed 28 January 2014]
‘Marchel Duchamp: Fountain 1917, Replica 1964’, *Tate*, 2016 <http://www.tate.org.uk/art/artworks/duchamp-fountain-t07573> [accessed 15 September 2016]
Melville, Herman, ‘Bartleby, the Scrivener: A Story of Wall-Street’, *The Project Gutenberg EBook of Bartleby, The Scrivener, by Herman Melville*, 2004 <http://www.gutenberg.org/cache/epub/11231/pg11231-images.html> [accessed 8 August 2016]
Miller, Daniel, ‘Materiality: And Introduction’, *UCL Anthropology*, 2014 <http://www.ucl.ac.uk/anthropology/people/academic_staff/d_miller/mil-8> [accessed 25 September 2014]
Morgan, Tiernan, ‘7 Artists, 25 Pages Each, 1 Half-Century Later: Revisiting the Xerox Book’, *Hyperallergic* <http://hyperallergic.com/240038/7-artists-25-pages-each-1-half-century-later-revisiting-the-xerox-book/> [accessed 29 August 2016]
‘National Museum of American History: Xerox 914’ <http://americanhistory.si.edu/collections/search/object/nmah_1085916>

'On Some Limits of Materiality in Art History' <http://www.academia.edu/168260/On_Some_Limits_of_Materiality_in_Art_History> [accessed 25 September 2014]
'Pati Hill: Photocopier', *Arcadia University Art Gallery*, 2015 <http://gallery.arcadia.edu/pati-hill-photocopier/> [accessed 26 August 2016]
Pawson, Mark, 'Comic & Zine Reviews', *Variant* <http://www.variant.org.uk/pdfs/issue32/Pawson32.pdf>
'Photographs by Charlie Arnold Showcased in New Exhibition', *University of Rochester* <http://www.rochester.edu/news/show.php?id=2606> [accessed 29 August 2016]
'Printed Matter Inc', *Printed Matter Inc* <https://printedmatter.org> [accessed 28 January 2014]
'Puerperal Fever | Infection', *Encyclopedia Britannica* <https://www.britannica.com/science/puerperal-fever> [accessed 1 May 2018]
Reverend, 'Xeroxlore: Folklore in the Age of Mechanical Reproduction', *Bavatuesdays*, 2007 <http://bavatuesdays.com/xeroxlore-folklore-in-the-age-of-mechanical-reproduction/> [accessed 13 August 2016]
Riedel, Sam, 'Chapbooks: A Short History of the Short Book', *The the Poetry Blog* <http://www.thethepoetry.com/2012/02/chapbooks-a-short-history-of-the-short-book/> [accessed 10 February 2014]
Rigal, Christian, 'L'electrographie', *Biennale De Paris Archives* <http://archives.biennaledeparis.org/fr/1980/sec/annexes/rigal.html> [accessed 28 August 2016]
'Samuel F.B. Morse | American Artist and Inventor', *Encyclopedia Britannica* <https://www.britannica.com/biography/Samuel-F-B-Morse> [accessed 1 May 2018]
Sanchez, Javier Gamero, 'MIDECiant', *MIDE. Museo Internacional de Electrografía Digital* <http://www.mide.uclm.es/> [accessed 28 August 2016]
Sansom, Ian, 'Huffington Post: Why Paper Is Not Dead', *Huffington Post*
———, 'Why Paper Is NOT Dead', *Huffington Post*, 2013 <http://www.huffingtonpost.com/ian-sansom/why-paper-is-not-dead_b_3239640.html#prclt-h1hmEr1> [accessed 25 June 2013]
Saval, Nikil, 'The Cubicle You Call Hell Was Designed To Set You Free', *Wired*, 2014 <https://www.wired.com/2014/04/how-offices-accidentally-became-hellish-cubicle-farms/> [accessed 17 September 2016]
Sellers, Meredith, 'The Personal and Poetic Prints of a Female Pioneer of Copier Art', *Hyperallergic*, 2016 <http://hyperallergic.com/292378/the-personal-and-poetic-prints-of-a-female-pioneer-of-copier-art/> [accessed 26 August 2016]
Shaw, Hank, '"Xeroxgraphy" Art Exhibition Looks at Unconventional Use of Copiers', *Forbes*, 2013 <http://www.forbes.com/sites/xerox/2013/10/22/art-exhibition-celebrates-the-humble-copier/#746517ef2943> [accessed 19 September 2016]
'Smithsonian: The Invisible Inventor' <http://invention.smithsonian.org/resources/online_articles_detail.aspx?id=571>
'Some of the World's Most Boring Jobs', *BBC News*, 2016 <http://www.bbc.co.uk/news/magazine-36902572> [accessed 17 August 2016]
Stevens, Payson R., 'Electrographic Art' <http://energylandscapes.com/galleries/Electrographic-Art/index.html> [accessed 29 August 2016]
Tansey, 'Smithsonian: American Kaleidoscope Article'
'The Xerox Machine: Printing Press of the People | HTMLGIANT' <http://htmlgiant.com/random/the-xerox-machine-printing-press-of-the-people/> [accessed 10 February 2014]

‘THIS IS THE WAY YOUR LEVERAGE LIES: The Seth Siegelaub Papers as Institutional Critique’, *MoMA* <http://www.moma.org/interactives/exhibitions/2013/siegelaub/>

Urbons, Klaus, ‘Live Is Xerox: You Are Just a Copy’, *Klaus Urbons: Copymuseum*, 2016 <http://www.urbons.de> [accessed 13 July 2016]

Wood, Cathrine, ‘David Wojnarowicz’, *Frieze*, 2006 <http://www.frieze.com/issue/review/david_wojnarowicz/> [accessed 2 October 2014]

‘Xerox Art’, *Calhoun Press*, 2015 <https://calhounpress.net/blogs/blog/48053955-xerox-art> [accessed 19 September 2016]

‘Xerox, Staples, Starving Artists: An Oral History of Indie Komiks’ <http://digitaledition.philstar.com/newspaper/showArticle/17249/share/Xerox-staples-starving-artists-An-oral-history-of-indie-komiks/> [accessed 10 February 2014]

Illustrations



Figure.01: Seth Siegelaub and others, *Untitled*, 1968, <http://www.primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/> [accessed 15 September 2016].



Figure.02: Seth Siegelaub and others, *Untitled*, 1968, <http://www.primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/> [accessed 15 September 2016].



Figure.03: Xerox® VersaLink®, 2018,
https://www.xerox.co.uk/office/multifunction-printer/multifunction-under-30ppm/versalink-b7025-b7030-b7035/engb.html
[accessed 30 December 2017]



Figure.04: HP Color LaserJet Enterprise Flow MFP M681z Network printer, 2018,
http://store.hp.com/UKStore/Merch/Product.aspx?id=J8A13A&opt=B19&sel=PRN
[accessed 30 December 2017]



Figure.05: Xerox 914, 1959, <http://xeroxnostalgia.com/copiers/xerox-914/> [accessed 16 September 2016]



Figure.06: Photocopying, 2018, https://mdnc.org.au/fax-photocopy/ [accessed 13 November 2017]



Figure.07: Women Using Photocopier, 2018,
https://wearetop10.com/best-small-business-photocopy-machines/
[accessed 13 November 2017]



Figure.08: Women with Copier, 2018,
http://cf.ltkcdn.net/scrapbooking/images/std/131417-425x281-woman-with-copier.jpg
[accessed 13 November 2017]



Figure.09: Some of the World's Most Boring Jobs, 01 August 2016 <http://www.bbc.co.uk/news/magazine-36902572> [accessed 17 September 2016].



Figure.10: Xerox, New way of office copying, 1960, https://www.xerox.com/en-us/digital-printing/insights/custom-poster-prints [accessed 20 April 2018]



Figure.11: Networking, 2018, http://www.astat.co.uk/services-solutions/environment/
[accessed 23 April 2018]



Figure.12: Would You Give Way at the Photocopier?, 2016, https://digest.bps.org.uk/2009/01/26/would-you-give-way-at-the-photocopier/
[accessed 23 April 2018]



Figure.13: Alan Dundes and Carl R. Pagter, *Work Hard and You Shall Be Rewarded: Urban Folklore from the Paperwork Empire* (Bloomington, Indiana University Press, 1975).



Figure.14: Mark Perry, *Sniffin' Glue and Other Rock and Roll Habits* (London, Omnibus Press, 2009)



Figure.15: Maggie Fingers, *The Most Beautiful Girl Is a Dead Girl*, 1992, Fales Library and Special Collection: Kathleen Hanna Papers, Series: 1 Box: 1 Folder: 6.



Figure.16: Seth Siegelaub and others, *Untitled*, 1968 <http://www.primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/> [accessed 15 September 2016].



Figure.17: Neaderland, 'International Society of Copier Artists', *ISCA*, 1.1, 1982.
The University of Iowa Special Collections: International Society of Copier Artists Records: ISCA Quarterly



Figure.18: Árnyékkötők, 1.1, 1990, http://www.arnyekkotok.hu/CD-lap1/No01/slides/Aaa01.html. [accessed 01 July 2018]



Figure.19: James Watt Copying Press 1780 Patent Diagram, 1780, <http://www.officemuseum.com/copy_machines.htm> [accessed 28/01/2015]



Figure.20: First Xerographic Print, 1938, Chester Carlson, <http://www.xerox.co.uk/about-xerox/history-timeline/1930-decade/engb.html> [accessed 07 September 2012]



Figure.21: First Xerox Commercial Ever, 1959, <https://www.youtube.com/watch?v=ZBt6gSGRZ-Y> [accessed 15 September 2016].



Figure.22: First Xerox Commercial Ever, 1959, <https://www.youtube.com/watch?v=ZBt6gSGRZ-Y> [accessed 15 September 2016].



Figure.23: First Xerox Commercial Ever, 1959, <https://www.youtube.com/watch?v=ZBt6gSGRZ-Y> [accessed 15 September 2016].



Figure.24: Billy Wilder, The Apartment (USA: Mirisch Corporation, 1960).



Figure.25: Frank Lloyd Wright and His Forgotten Larkin Building, 1903, <http://www.terrastories.com/bearings/frank-lloyd-wright-and-his-forgotten-larkin-building> [accessed 17 September 2016



Figure.26: Action Office 1, 1964, <http://www.georgenelsonfoundation.org/george-nelson/works/action-office-1-a01-132.html> [accessed 17 September 2016].



Figure.27: Action Office 2, 1967, <http://www.georgenelsonfoundation.org/george-nelson/works/action-office-1-a01-132.html> [accessed 17 September 2016].



Figure.28: The Action Office II in Action. Courtesy of Herman Miller, 1969, <https://www.wired.com/2014/04/how-offices-accidentally-became-hellish-cubicle-farms/#slide-3> [accessed 17 September 2016].



Figure.29: Scott Adams, Friday July 15, 2011, 15 July 2011, <http://dilbert.com/strip/2011-07-15> [accessed 17 September 2016].



Figure.30: Billy Wilder, *The Apartment* (USA, Mirisch Corporation, 1960).



Figure.31: Billy Wilder, *The Apartment* (USA, Mirisch Corporation, 1960).



Figure.32: Ultimate Go To Market Strategy for Success Xerox George Lois, 1960, <https://www.youtube.com/watch?v=ckinspFk2iI> [accessed 17 September 2016].



Figure.33: Photocopier Engineer, 2017,
https://www.midshire.co.uk/photocopiers/service-maintenance-and-repairs/photocopier-engineer/
[accessed 09 June 2018]



Figure.34: Fax and Photocopier Technician, 2016,
https://schools.look4.net.nz/careers/australian-careers/australian-careers-descriptions/electrical_engineering/fax_and_photocopier_technician
[accessed 09 June 2018]



Figure.35: Alan Dundes and Carl R. Pagter, *Work Hard and You Shall Be Rewarded: Urban Folklore from the Paperwork Empire* (Bloomington, Indiana University Press, 1975).



Figure.36: Alan Dundes and Carl R. Pagter, *Work Hard and You Shall Be Rewarded: Urban Folklore from the Paperwork Empire* (Bloomington, Indiana University Press, 1975).



Figure.37: Achtung, 1974, *Keystone Folklore*, XIX:1 - Xerox-Lore.



Figure.38: Send Help!, 1986, *Photocopy Lore and the Naturalization of the Corporate Body*: Paul Smith Collection.



Figure.39: Fraternal Leaftlet, 1964,
https://samizdat.library.utoronto.ca/content/bratskii-listok
[accessed 21 April 20168.



Figure.40: NME: Bowie's Back, 1976, *NME: New Musical Express*



Figure.41: *Olympia Summer*, 1996, Fales Library and Special Collection: Kathleen Hanna Papers, Series: 1 Box: 1 Folder: 1.



Figure.42: *Olympia Summer*, 1996, Fales Library and Special Collection: Kathleen Hanna Papers, Series: 1 Box: 1 Folder: 1.



Figure.43: *Dear Daddy Master*, Fales Library and Special Collection: Kathleen Hanna Papers, Series: 1 Box: 1 Folder: 1.



Figure.44: *Dear Daddy Master*, Fales Library and Special Collection: Kathleen Hanna Papers, Series: 1 Box: 1 Folder: 1.



Figure.45: *Olympia Summer*, 1996, Fales Library and Special Collection: Kathleen Hanna Papers, Series: 1 Box: 1 Folder: 1



Figure.46: NME: Sex Pistols Anniversary Special, 2012, *NME: New Musical Express*, 03 March 2012



Figure.47: Seth Siegelaub and others, *Untitled*, 1968, <http://www.primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/> [accessed 15 September 2016].



Figure.48: Seth Siegelaub and others, *Untitled*, 1968, <http://www.primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/> [accessed 15 September 2016].



Figure.49: Seth Siegelaub and others, *Untitled*, 1968, <http://www.primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/> [accessed 15 September 2016].



Figure.50: Seth Siegelaub and others, *Untitled*, 1968, <http://www.primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/> [accessed 15 September 2016].



Figure.51: Seth Siegelaub and others, *Untitled*, 1968, <http://www.primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/> [accessed 15 September 2016].



Figure.52: Seth Siegelaub and others, *Untitled*, 1968, <http://www.primaryinformation.org/product/siegelaub-carl-andre-robert-barry-douglas-huebler-joseph-kosuth-sol-lewitt-robert-morris-lawrence-weiner/> [accessed 15 September 2016].



Figure.53: Olbrich, Jürgen O, *Rock'n Roll*, 1984, MIDE



Figure.54: Christian Rigal, *2 Bienal Internacional: Electrografie Y Copy Art* (Valencia: Universidad Politecnica Valencia, 1988).



Figure.55: Neaderland, ‘International Society of Copier Artists’, *ISCA*, 1.1 (1982).