Microfilm in the Archives: Past Use, Present Sustainability and Future Transformation

by

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TABLE OF CONTENTS

ABSTRACT

Up to the middle of the twentieth century, microfilm was a cutting-edge recordkeeping technology, much like digital technologies today. Commercial use of this technology changed the face of recordkeeping, ultimately affecting archival practice as well. The use of microfilm by archives has brought losses and gains in terms of materiality, access and preservation. Microfilmed records of the Department of the Interior demonstrate the importance of information being held in this particular medium, as these reels communicate the history of the dispossession of Indigenous communities, and the lack of Indigenous perspectives in the management of the records and the telling of their own story. Understanding the histories of recordkeeping practices of records containing Indigenous experiences allows archivists to update archival theory and practice to include Indigenous perspectives and decolonize records about the colonization of the West, which is achieved through the incorporation of Indigenous memory traditions into the records, and by digitizing the records and reordering them to reflect Indigenous perspectives. Records microfilmed in the early and mid-twentieth century are now prime candidates for digitization, a tool being used for preservation and access. Microfilm digitization projects, such as The Alberta Land Settlement Infrastructure Project and Canadiana Online are creating a new foundation to preserve records of the past and those being created now and in the future. This thesis will link microfilm's past with its future, while discussing its current status in archives in relation to archival theory and practice.

ACKNOWLEDGMENTS

DEDICATION

To my parents, Onkar Singh and Punita Kaur. Without your support and encouragement, I would not be where I am today. Words cannot express my gratitude; I owe it all to you.

LIST OF FIGURES

INTRODUCTION

Microfilm has been a familiar technology for decades, which individuals have come to know as one of the main resources for research in archives and libraries. Throughout time, it has remained valuable in preserving historic records and in ensuring their accessibility. Since microfilm has been a consistent technology within heritage institutions, it is well recognized by many users and even promotes their nostalgic memories of academic or personal research. Some day, I will also have the chance to reminisce about my first encounters with microfilm technology, which involved academic-based research projects and an internship at the Archives of Manitoba. These experiences have forever shaped the way in which I think about archival research and the history of archives.

There remains a lack of literature on the use and maintenance of microfilm, especially since the 1980s. Public Archives of Canada (PAC) and National Archives of Canada (NAC) readily included discussions on the use of microfilm in their annual reports; however, the practice of reporting on microfilm within government archives slowly decreased after the 1980s. A similar decrease in reporting occurred with professional literature that explored the use microfilm technology in other levels of government and various heritage institutions. As technology began to advance after this period, microfilm was steadily moving towards obsolescence. Although records are microfilmed at the present time, such as at the U.S. National Archives and Records Administration (NARA), which has even implemented technical standards for quality assurance, fewer institutions turn to microfilming their records as a way to preserve them today.[1] Digitization is the preferred form of preservation and access on which an abundance of literature exists but there remains a distinct lack of research on concepts related to

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[1] The following source was brought to my attention by Ala Rekrut. "The Selection and Preparation of Records for Publication on Microfilm," National Archives and Records Administration: Archives and Preservation Resources, last modified 1990, https://www.archives.gov/files/preservation/formats/pdf/nara-microfilm-specs.pdf

digitized microfilm. Microfilm forms a large portion of surrogate records that are used to create digital material; hence, digitization techniques and digital management require further research, updated guidelines and scholarly material to pave the way for best possible practices.

Technology has played an increasingly significant role in everyday life for a greater part of the twentieth century and microfilm has held a unique function within the realm of technological use and advancement. Microphotography was one of the technologies that drove the creation of microfilm and is still being used today. The stages through which microphotography passed eventually produced small scaled images for microfilm reels. Kodak, a photography based company founded by George Eastman, was one of the first to commercialize microfilm in the 1920s.[2] After Kodak's unprecedented success with microfilm, other organizations began to take notice of the technology's potential regarding recordkeeping practices. It soon became common practice to preserve records in this format especially, since at the time, it was the only solution to condensing records to a much smaller size with convenience of storage and ease of access, though over the years, microfilm has been subject to criticism fuelled by scholars and researchers who see past its benefits and hope for further development and advancement. Discussion involving experiences provided by microfilm will play a key role in the first chapter of this thesis, as it will formulate advantages and disadvantages of microfilm. Materiality, when explored through firsthand experiences with archival material can be interpreted in connection to disadvantages of microfilm use due to the loss of engagement with material in an organic fashion. Nonetheless, the invention of microfilm has created countless advantages for archives and the public. At its peak, microfilm shifted preservation and access in way that was simpler and convenient, therefore enhancing the use of available information.

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[2] Susan A. Cady, "The Electronic Revolution in Libraries: Microfilm Déjà Vu?" *College and Research Libraries* 51 no. 4 (1990): 376; "Microfilm – A Brief History," *University of California: Southern Regional Library Facility*, accessed May 22, 2017, http://www.srlf.ucla.edu/exhibit/text/BriefHistory.htm

The availability of knowledge and information is what allows us, as individuals, to learn about our past, present and create possibilities to take control of our future. Chapter two explores the Canadian past and how microfilm eventually became a part of it. The history of the Department of the Interior provides an important look into the colonization of the West and how it affected Indigenous populations across the nation. The West was an attractive region for European colonizers who desired possession and control of new territories beyond their own. Unfortunately, the Indigenous peoples paid a heavy price for the fortune of others by being displaced from their own land and forced to assimilate. The implementation of Residential Schools, that lasted until as recent as 1996, was one of the largest efforts created by colonists to rid this new frontier of existing populations and cultures.[3] These schools were unimaginably the worst treatment encountered by Indigenous children, who were ripped away from their families and forced to live through horrific experiences in institutions that only focused on their goals of assimilation and not on a humane and respectful treatment of fellow human beings. Records from the Department of the Interior and its various branches are now being used to tell the history behind the settlement of the West, which include pieces of the tragic stories of Residential School survivors. Microfilmed and digitized records of Interior Department are being used in a way that can begin the process of reconciliation and healing of those affected by the Canadian government's actions. Archival-based institutions like the National Centre for Truth and Reconciliation (NCTR) are home to digital records that can begin to provide further information and truth about what happened during the settlement process. Digitized microfilm records are a significant part of this process, as they provide details about the survivors and the schools they attended. Access to these records is carefully being determined by archivists at

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[3] "Archived – Microform Digitization," Library and Archives Canada, http://www.collectionscanada.gc.ca/microform-digitization/006003-130-0002-e.html?PHPSESSID=e3rjdmo72icr2nsl9rhg0134t3#aa

NCTR to ensure no further harm is done to survivors or their families, as information contained in the records is highly sensitive. NCTR has also implemented a survivor centric approach to decolonizing the records in order to gain perspectives of Indigenous communities about their experiences, creating a wholesome record set that does not only include Eurocentric approaches.[4] Digitized microfilm has helped in the progression of the work being done at NCTR, but the practice is also being implemented in various other projects that are helping to advance preservation and access to archival records.

In the present day, as society moves towards a digital era, digitization of records has become increasingly popular in archival institutions and though microfilm continues to be used in research and academia, digitization of such records has begun in order to create different avenues of access. Chapter three will explore case studies related to newspaper archives and records of the Department of the Interior, since these projects have made use of microfilm surrogates to digitize this material. Among the changes being made in record formatting, archivists must uphold their role to consciously analyze which method is best for the records themselves and subsequently for those accessing them.

Overall, this thesis serves to provide historical context on how microfilm technology was first introduced to the public, how it has been used by archives and other heritage based institutions since its inception and finally, what lies ahead for the future of microfilm management. An attempt at the analysis of all areas previously mentioned will create a better understanding of microfilm's function in the archival field as a traditional technology, but also one that is an aid for modern technologies.

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[4] This information was kindly provided by Raymond Frogner and Jesse Boiteau from the NCTR.

CHAPTER ONE

THE PAST AND CURRENT USE OF MICROFILM IN ARCHIVES

Introduction

Document preservation and access are integral aspects to the purpose behind archives while the methods in which archivists execute these functions can vary according to document type. Microfilm has been a form of preservation for nearly a century and is a type of technology that has continued to be useful long after its creation. Its lasting stature has proved its extensive functionality, since we continue to see its use in different organizations, libraries and archives today. However, we must ask, how did microfilm reach this level of prominence and utility? To answer this question, the development and subsequent marketing of microfilm as a product will be explored.

Inventors such George Eastman provided the modern world with a type of technology that did not remain unnoticed. One of the most highly coveted technological companies, Kodak went on to commercialize microfilm through development and marketing of the product. As a result, microfilm caught the attention of private organizations and government departments, which took on an important role in information access. As the progression of microfilm is explored, an understanding of this particular technology's potential and improvements will be established according to the work of Vannevar Bush. Bush perceived microfilm as a significant engineering and scientific achievement and in return, allowed his audience to reflect on how far we can push the limits of preservation practices.

Microfilm has been a saviour of records and has impacted the scholarly world in significant ways. Upon its invention, microfilm rose to become a popular medium within archives and libraries, revitalising processes of record preservation and access. Various

individuals, not only from the academic community, but also those working in other professional

fields supported the technology in hopes that it would preserve our history for the future. In

1942, President Roosevelt stated,

> "At this time, and because of the conditions of modern war against which none of us can guess the future, it is my hope that the Society of American Archivists will do all that is possible to build up an American public opinion in favor of what might be called the only form of insurance that will stand the test of time. I am referring to the duplication of records by modern processes like the microfilm so that if any part of the country's original archives are destroyed, a record of them will exist in some other place."[1]

Microfilm was able to preserve information as once hoped, even if it did not make continuous

advancements as a technology. Archives and libraries were able to take advantage of the options

microfilm provided that were not available through paper documentation, while experiencing a

form of analogue technology that felt futuristic and progressive. Microfilm introduced an

effective change to recordkeeping, which has continued to the present day.

The impact felt by microfilm mainly attracted positive reactions by users and scholars;

however, as with any new technology, opinions of disapproval also surfaced along the way. In

addition to the history of microfilm in records management and archives, this chapter will focus

on the use of microfilm in archives and the best practices institutions should implement when

microfilming their records. Regardless of the guidelines followed, there has been heated debate

regarding benefits of microfilm and whether its use is worth the time and effort of archivists or

researchers. Loss of materiality and the removal of firsthand experiences with original records is

part of this discussion, as microfilm copies are just that: they are copies. Nicholson Baker, who

has strongly disparaged the value of microfilm copies, rather than preservation of the originals,

has prompted discussion among other scholars who have responded to Baker's evaluation of the

technology. These discussions extend beyond the question of simply using a roll of microfilm for

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[1] Susan A. Cady, "The Electronic Revolution in Libraries: Microfilm Déjà Vu?" *College and Research Libraries* 51 no. 4 (1990): 376.

research projects or providing a service to researchers who walk through the doors of an archive. Microfilm does not only exist to be used once in a while when searching for information in an archive or library but can also help us realize what it means to preserve data and how we can further develop that process. Given the differing opinions on the use of microfilm, one cannot ignore losses which accompany the increased use of copying technologies like microfilm, which has been a valuable resource in preserving information and preventing the over-handling of fragile paper records; however, there is a price attached to this alternative, raising the question of whether materiality of paper records is sufficiently represented through a medium that does not allow firsthand interaction, such as microfilm. The need to study historical documentation with all the human senses is important, as it provides a range of experiential information. Such discussions create an open dialogue for issues that have been relevant since microfilm made its debut and through its rise into the 1950s and 1960s.[2] With digitization quickly becoming the most adopted form of preservation and data collection, archivists today can effectively learn from advantages and disadvantages microfilm has offered over the years. After all, why study history if we do not allow ourselves to learn from it?

History of George Eastman and Kodak

Kodak has been and continues to be, a leading company in the field of photography and also played a key role in the commercialization of microfilm. Kodak strived to be a company that could provide quality printing and graphics to the public in various formats and was founded at a time when photography was gaining popularity and receiving the attention of not only inventors and opticians, but also the general public. Kodak rose to be a giant in its field, as it was established long before many photographic companies known today, or even the recent past.

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[2] Jamie A. Patrick-Burns, "Archives as Artifacts: Authenticity, Preservation, and Significant Properties in Microfilm and Digital Surrogates," *Provenance, Journal of the Society of Georgia Archivists* 33, no. 1 (2015): 49.

The man behind it all was George Eastman. He was not known to have a great academic background, nonetheless, was a dedicated individual with a knack for business and photography. He has been described as, "…a high school dropout, judged, 'not especially gifted' when measured against the academic standards of the day. He was poor, but even as a young man, he took it upon himself to support his widowed mother and two sisters, one of whom had polio."[3] Even through tough times, Eastman was only in his mid-twenties when he led his Eastman Kodak Company to achieve high entrepreneurial standards and commercial success.

The Eastman Company was formed in 1889 and by 1892 the company had transformed to The Eastman Kodak Company, a name more familiar to the public.[4] Microfilming at Kodak began with its subsidiary, Recordak,[5] a camera developed by bank manager George P. McCarthy, initially created to produce bank checks on 16mm film, which would allow for large-scale microfilming projects. McCarthy licensed his Check-O-Graph camera to Kodak, which was then marketed under its subsidiary, Recordak.

Recordak microfilming was introduced in 1928 as a means for protecting bank records and advertised microfilming functions as, "recording, duplicating, condensing and protecting original business documents."[6] Duplication of active documentation ensured access and safekeeping, where, in the corporate world, people in different departments might require the same files. By creating duplicates on microfilm, employees across any given organization would be granted easy accessibility. Moreover, the practice saved time and expense for executives, employees and customers while librarians were also able to use duplicates for material loans or

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[3] "George Eastman," Kodak, last modified 2018,
https://www.kodak.com/US/en/corp/aboutus/heritage/georgeeastman/default.htm
[4] "George Eastman," https://www.kodak.com/US/en/corp/aboutus/heritage/georgeeastman/default.htm
[5] Susan A. Cady, "The Electronic Revolution in Libraries, 375.
[6] Advertising brochure for Recordak, 1950-1960, G 4632, 240. Microfilming, Director of Lands office files fonds, pg. 5 and 12, Archives of Manitoba, Winnipeg, Manitoba, Canada.

reference. Apart from efficiency, safekeeping became a key motive in microfilm use which

prevented records from becoming lost and damaged.[7] Archivists are well aware of the need for

duplicates when fragile records require minimal contact from users. It is also become common

practice to share material with researchers and colleagues, and duplication on microfilm allows

for the transport of film without fear of loss or damage. Secondly, Recordak revealed the benefits

of condensed information that was made available at a fraction of the original size. Overflow of

storage spaces in businesses was a problem at the time and continues to remain an issue into the

present day. Filing cabinets took up office space that could be used for desks and employees and

the reduction of paper usage became a priority that was handily solved by microfilm. Not only

were desk drawers emptied, but storage spaces contributing to additional overhead were also

cleared while Recordak claimed to have saved its customers hundreds of thousands of dollars

annually.[8]

Subsequently, banks, insurance companies, department stores, and newspapers began

using microfilm technology to maintain and reproduce their records.[9] Kodak became the

company to commercialize microfilming for documents, a technological feat that was successful

for decades thereafter. Recordak microfilming promised to condense and protect records, an idea

archivists are familiar with today. The Recordak system was described as a basic microfilming

machine that could be rented by companies in order to microfilm their records accommodating

16mm, 35mm and 70mm films depending on the size each customer preferred to have their

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[7] Advertising brochure for Recordak, 1950-1960, G 4632, 240. Microfilming, Director of Lands office files fonds, pg. 3, Archives of Manitoba, Winnipeg, Manitoba, Canada.
[8] Advertising brochure for Recordak, 1950-1960, G 4632, 240. Microfilming, Director of Lands office files fonds, pg. 4, Archives of Manitoba, Winnipeg, Manitoba, Canada.
[9] Advertising brochure for Recordak, 1950-1960, G 4632, 240. Microfilming, Director of Lands office files fonds, pg. 4, Archives of Manitoba, Winnipeg, Manitoba, Canada.

documents recorded on.[10] In terms of archival means, the start of this technological process was advantageous, though there remain disagreements on this issue. Nonetheless, microfilming was an increasingly anticipated shift when considering the evolving operational needs of corporations, libraries, and archives and, thanks to Eastman and his company, the change was well-suited and readily welcomed.

At its height, Recordak's goal was to reach consumers by showcasing progressive results that microfilm could provide. Recordak prioritized quality equipment and technical experience to ensure all requirements of their services were being met.[11] They offered convenient solutions for recordkeeping, which helped corporations and heritage institutions to manage their records in an effective manner. For instance, Recordak advertised their product by stating microfilming could reduce the size of an original document, such as a photograph, which would allow managing bulky information easier and reducing storage costs.[12] In 1951 Recordak claimed its technology was being used in 65 different types of businesses.[13] The Recordak Microfilmer promised versatility for diverse applications across a wide variety of industries and organizations including accounting, legal, tax, sales, production and distribution.[14]

Kodak, and its subsidiary Recordak, paved the way for other companies to provide similar services to businesses and institutions. Burroughs Adding Machine Company followed the path of Recordak by enlisting major corporations and government departments as their target

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[10] Advertising brochure for Recordak, 1950-1960, G 4632, 240. Microfilming, Director of Lands office files fonds, Archives of Manitoba, Winnipeg, Manitoba, Canada; Focus on the Future: A Guide to Kodak's Business Units & Products/Eastman Kodak Company fonds, SC 2005.001, Ryerson University Archives and Special Collections, Toronto, Ontario, Canada.

[11] Advertising brochure for Recordak, 1950-1960, G 4632, 240. Microfilming, Director of Lands office files fonds, pg. 1, Archives of Manitoba, Winnipeg, Manitoba, Canada.

[12] Advertising brochure for Recordak, 1950-1960, G 4632, 240. Microfilming, Director of Lands office files fonds, pg. 1, Archives of Manitoba, Winnipeg, Manitoba, Canada.

[13] Advertising brochure for Recordak, 1950-1960, G 4632, 240. Microfilming, Director of Lands office files fonds, pg. 38-39, Archives of Manitoba, Winnipeg, Manitoba, Canada.

[14] Advertising brochure for Recordak, 1950-1960, G 4632, 240. Microfilming, Director of Lands office files fonds, pg. 8, Archives of Manitoba, Winnipeg, Manitoba, Canada.

consumers. In one letter addressed to R.W. Gyles, Director of the Manitoba Lands Branch, from Maurice H. Austin, Manager of Burroughs, a direct effort was made to convince Gyles to purchase new microfilm equipment rather than used rental equipment.[15] Austin enclosed brochures from his company, which listed several advantages of their microfilm equipment, such as: a reduction ratio of 37:1, photographing of both front and back, safety shutters that prevented film from fogging, colour sensitivity, and maximum reader illumination.[16]

It is significant that Gyles' department, Manitoba Department of Mines and Natural Resources, was itself a heavy user of microfilm technology in the 1950s. Library and Archives Canada and provincial archives currently house these reels, which have stood the test of time and continue to be used. Companies such as Recordak and Burroughs aimed their advertising campaigns towards businesses but still reached heritage institutions, archives and libraries because of the well-suited nature the technology offered for records storage especially since organizations requiring archive organizational tools face similar problems as banks and insurance companies described by Recordak and Burroughs. Overflow of paper documentation is inevitable and by adding a lack of space into the equation, most institutions require a solution that will not destroy information but instead make it all more manageable.

Many organizations began microfilming their records once the new technology took hold. More businesses wanted to change their recordkeeping processes and as time went on the scale of microfilming grew according to demand. As with any technology, however, processes and equipment improve over time as operational and consumption needs change; the same idea applied to microfilm technology.

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[15] Correspondence from Maurice H. Austin of Burroughs Adding Machine Company to R.W. Gyles, 3 June 1952, RG 17 Microfilming, internal archives records, Archives of Manitoba, Winnipeg, Manitoba, Canada.
[16] Burroughs: Bell & Howell Microfilming brochure, RG 17, Microfilming, internal archives records, Archives of Manitoba, Winnipeg, Manitoba, Canada.

Vannevar Bush, Microfilm and the Memex

Vannevar Bush was an American engineer, inventor and a science administrator. He was Director of the U.S. Office of Scientific Research and Development at the time he wrote his influential article, "As We May Think," which was published in 1945. Bush was known as an authority in his specialized fields and a leading mind behind new scientific ideas and technologies. "As We May Think" was a fitting treatise not only for the type of work he was trained in but also appeared at a time when technological shifts were being experienced, just not at a rate or application Bush thought to be satisfactory.[17] Bush's main goals focused on applying science and technology to build peace, rather than warfare.

Bush's article begins with the notion that research too often fails to reach those who can completely grasp it and who can harness its capabilities to make advancements in its utility.[18] . Bush then states even if such innovations are made known, they cannot always be used to their full potential. Factors such as economics, labour, cost and complexity hinder advancement of technology.[19] Therefore, a record of newly formed research and ideas must be supported, stored, extended and consulted according to the author, a process paving the way for progress and innovation.

Bush sought to explain the way in which microphotography could be improved in the 1940s believing microphotography had great possibilities by leveraging the reduction of data and efficiency of storage to promote accessibility of information.[20] Bush described what he called the

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[17] Vannevar Bush, "As We May Think," *The Atlantic* 176 no. 1 (July, 1945): 37.
[18] Bush, "As We May Think," 37.
[19] Bush, "As We May Think," 37.
[20] Bush, "As We May Think," 39.

Memex, a mechanized product designed to store books and records on microfilm and to allow researchers to build on each other's work more efficiently.[21]

The Memex – which was conceived by Bush but never built – was designed to be a private file and library, appearing similar to a work desk, with built-in viewing screens and a keyboard.[22] Research materials were to be stored within improved versions of microfilm, which would allow for compact storage of information and room for additional records at the rate of 5000 pages a day for hundreds of years.[23] Pre-recorded information could be entered as microfilm. Additional information could be added using dry-photography or keyboarding and once information has been entered, the user may consult the record by a set form of indexing. The Memex is mnemonically coded for the search process at which time the user taps a key to access desired materials. If the material is in book form, a lever is available to turn its pages either one by one or in set increments.[24]

Bush's concept of indexing was inspired by his understanding of the way human brains function, which he called, associative trails. In Bush's opinion, traditional indexing lacked association, a natural process of the brain. He explained that finding a physical record in a library could be inefficient because it can only be in one place, found by tracing subclass to subclass using set rules that can be difficult to remember. When the item is found, one must re-enter a new path to find associated items.[25] The Memex solves this issue by recording multiple associative trails. Such a mechanism would extend human memory rather than creating additional demands upon it, as in conventional publishing, indexing and information retrieval.

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[21] Bush, "As We May Think," 43-44.
[22] James M. Nyce and Paul Khan, "Epilogue Innovation, Pragmaticism, and Technological Continuity: Vannevar Bush's Memex," *Journal of the American Society for Information Science* 40, no. 3 (1989): 216.
[23] Nyce and Khan, "Epilogue Innovation," 216; Bush, "As We May Think," 43.
[24] Bush, "As We May Think," 44.
[25] Bush, "As We May Think," 43.

Bush's vision for information organization and indexing was undoubtedly impressive and thoroughly advanced for the time period. In the 1930s, analog technologies were the only form of information storage and retrieval and when Bush wrote his article, microfilm was widely used and continually improved upon, a process in which Bush himself was an active participant.[26] The idea of using a form of technology that stores information in a compact format on film, within a retrieval machine that is itself condensed into an office desk anticipates the use of desktop computers. Bush employed microfilm in his machine as it had been done in the previous decades prior to "As We May Think" but with an added twist: He encouraged the use of microfilm technology meant to last for extended periods of time and envisioned integration with a newer technology like the Memex. The development of microfilm technology was to create condensed, accurate, preserved copies of records and by using it in the Memex, the two platforms would obtain a similar goal. The history of microfilm demonstrates the accessibility of numerous records but Bush invented an idea that stores information in one place, displaying not only the traditional use of microfilm, but also an improvement in the system. Furthermore, though Bush had little experience or knowledge of digital computers,[27] his process behind creating associative trails on the Memex is relatable and essentially a precursor to search engines on modern computer systems. Users today are able to create vast amounts of search trails either online or offline and the Memex was meant to do the same, indicating the push towards what soon became possible through digital means.

Bush described the Memex in terms of mechanical and analog technologies and did not make reference to the digital technologies that were under development at the time his article

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[26] Nyce and Khan, "Epilogue Innovation," 218.
[27] Nyce and Khan, "Epilogue Innovation," 218.

was published.[28] If these technologies had been further developed at the time, perhaps the Memex would have become a reality. Another shortcoming of Bush's design is related to his theory of associative trails. Emanuel Goldberg argues that the idea of analog trails is not feasible due to constant change in an individual's knowledge of a given subject, leading to a change in associations and memory.[29] On another note, associations of one individual may not align with another. Bush's concept of trails is, therefore, dependent on perceptions of relevance, which can drastically vary between users. A book or article relevant to one person may not be relevant to the next, but the subject encompassing the two will likely be relevant to both users. Subject-based search takes the lead in such cases and would hinder the efficiency of the Memex.[30] Nonetheless, the Memex was a revolutionary idea at a time when digital technology was only in its early stages and became an idea we still look back on in comparison to technologies being used today, having created an impact on information retrieval without even becoming a reality.

Microfilm has since improved, as Bush predicted. Better cameras, durable and smaller film and advanced viewers were produced. Microfilm has helped researchers and archivists consult various records that would normally be unavailable in their original formats. Access to information is a key factor that was addressed through this invention because as Bush stated, microfilm became a moveable record. Other technological inventions, such as digitization is now at the forefront of records management as we stand within a new era of technology; however, microfilm remains a relevant component of archives.

Microfilm has a long, unexpected history but as we experience technology around us, we may not stop to realize how it all came to be. Technology continues to play an increasingly larger

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[28] Nyce and Khan, "Epilogue Innovation," 218.
[29] Emmanuel Goldberg, "Electronic Document Retrieval, and Vannevar Bush's Memex," *Journal of the American Society for Information Science* 43, no. 4 (1992): 284 – 294, http://people.ischool.berkeley.edu/~buckland/goldbush.html
[30] Goldberg, "Electronic Document Retrieval," 284 -294.

role in the everyday lives of most individuals today with the main goal to make as much use of it as possible with ease, efficiency and speed. The need to evaluate the history of any device is not a priority of the general public and microfilm is an example of such a phenomenon. When using microfilm, the user is mainly interested in locating the desired information and is not concerned with how microfilm technology began and why it is still in existence generations after its inception. Vannevar Bush's article provides in-depth insight into this matter, as critical thinking opens doors to new technological ideas. The history of microfilm is important because it represents the groundwork behind several devices and technologies we use everyday. The innovative thinking of opticians and inventors such as John Dancer and Rene Dagron who created microphotography provided the foundation for creating materials necessary for progress in all fields this society engages in. This foundation allowed individuals such as George Eastman to further develop past knowledge and combine it with the new. Progress can be achieved through a chain reaction and microfilm technology is a prime example of just that. Though advancements to microphotography are no longer being made, as digitization is the new means of preserving and storing information, microfilm remains a strong contender as a reliable form of data storage and access.

Use of Microfilm in Records Management and Archives

F. Gerald Ham describes the time period in which he was writing in the 1980s and up to the present as the "post-custodial era," in which archivists have the ability to actively alter our past behaviour and create strategies to handle issues of today's society.[31] Microfilm is one type of strategy that was used by archivists to cope with preservation and accessibility problems. Archivists directly engage with records, rather than merely acting as custodians thereof. In the custodial era archivists played a passive role in shaping records, without realizing the larger

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[31] Gerald Ham, "Archival Strategies for the Post Custodial Era," *The American Archivist* 44, no. 3 (1981): 207.

framework, which surrounds the work within archives.[32] Ham goes on to say our behaviour in the custodial era isolated us from one another, not allowing for cooperation and exchange of ideas.[33] The "post-custodial era" on the other hand provides more focus on playing an active role in the archival profession where archivists can make educated decisions about the future of records they deal with every day.[34] The process of microphotography is an active form of technological use that created a dialogue between archivists on how best to preserve paper records and create new avenues of access. As Ham writes,

> "…archival microfilm that can be copied and sent anywhere. In short, archivists can make a large portion of their holdings as available as printed books. All it takes is a change in some outmoded ideas about where and by whom resources are used."[35]

Regardless of the differing perceptions on the use of microfilm, we cannot deny the reality that Ham speaks of.

Since the inception of microfilm technology, archivists have experienced many benefits from its use. Microfilm's presence in public and government archives has impacted archival practice. The ways in which this impact was felt clarify the perspective of various figures who either support archives or work within them. As early as 1953, prominent individuals in the archival field, such as then Dominion Archivist W. Kaye Lamb, recognized the need for new technology in this profession.[36] In his annual reports, Lamb referred to microfilm in a positive light, especially at a time when the technology was not always preferable. Lamb was able to recognize this issue and addressed it in his report by asserting,

> "I am well aware that few people like to use microfilm, but this is largely because they are usually faced with poor films and poor equipment. We have found by experience that

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[32] Ham, "Archival Strategies," 207.
[33] Ham, "Archival Strategies," 207.
[34] Ham, "Archival Strategies," 207.
[35] Ham, "Archival Strategies," 207.
[36] W. Kaye Lamb, "The Federal Archival Scene," *Report of the Annual Meeting of the Canadian Historical Association* 32, no. 1 (1953): 61-68.

the making of microfilms and the use of them is a complicated business: but we have also learned that the end result can be highly satisfactory."[37]

Lamb did not dismiss microfilm and created a path for government archives to continue using a preservation method that would allow records to withstand external conditions for years.[38] During his presidential address to the Canadian Historical Association in 1958, Lamb spoke about the opening of the Records Centre and the shift of the Public Archives to a records office.[39] Acknowledging the relationship between microfilm, archives and records management, Lamb transferred the government's Central Microfilm Unit from the Department of Public Printing and Stationary to the Archives in 1956 and housed it in the Records Centre.[40]

One can appreciate Lamb's progressive mindset as he accepted and championed microfilm technology regardless of its imperfections. He envisioned its advantages beyond the limitations others created. An interesting notion stated by Lamb, which can be extended towards records at all archives, was in regards to the type of information that was excluded when copyists were employed, rather than microphotography. The example he cited concerned the photographing of the Colonial Office 42 series and was regarded as the most important single file in the Records Office. Its documents are included in the "Q" series of transcripts and were being copied a second time.[41] The transcripts were made many years before this report was written, but copyists did not copy anything more than the actual text of each document. The marginal notes and comments made by the C.O. staff and officials were omitted. Such notes are highly valuable, but unfortunately were not copied for reasons not elucidated by Lamb. Microfilm did justice to these records by including all pertinent pieces of information, which of

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[37] Lamb, "The Federal Archival Scene," 65.
[38] Lamb, "The Federal Archival Scene," 65.
[39] William Ormsby, "The Public Archives of Canada, 1948-1968," *Archivaria* 15 (Winter 1982-83): 41.
[40] Ormsby, "The Public Archives of Canada," 41.
[41] Lamb, "The Federal Archival Scene," 66.

course is invaluable to scholars.[42] Such examples demonstrate the importance of microfilm and attests to its effectiveness in making long lasting copies of records. Those who were or continue to oppose microfilm may believe that information is lost due to the microfilming process if original copies are destroyed afterwards or if the photographic quality is lacking; however, Lamb's example illustrates the enduring effectiveness of microfilm.

Lamb had also been an ardent supporter of the Hudson's Bay Company's efforts in microfilming its archival records and, from Lamb's perspective, the historic material showcasing a vital part of Canada's past needed to be safely preserved against accidental destruction.[43] In 1950, he proposed the idea of microfilming the entire contents of the archive, a task to be completed in cooperation between the Hudson's Bay Company and the Public Archives of Canada.[44] The project did not only safely preserve the records but also allowed for the production of copies, creating further accessibility. Before the negatives were placed in storage, a positive print was made for retention by the Public Archives which would grant access to researchers, in accordance to the same policies regarding original documents.[45] Within three years of starting the project, the Public Archives received more than 650 reels of positive film, which contained copies of 450 000 pages and by the end of 1954, records of the first two centuries of the Company would be microfilmed.[46]

As per Lamb's positive perceptions of microfilm, Bryan Corbett and Eldon Frost acknowledge advantages of microfilm acquisition at the Public Records Division of the Public Archives of Canada (which is now known as Library and Archives Canada or LAC). LAC is now home to a large collection of microfilm records. The Public Archives of Canada received

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[42] Lamb, "The Federal Archival Scene," 66; Ormsby, "The Public Archives of Canada," 37.
[43] Ormsby, "The Public Archives of Canada," 39.
[44] Lamb, "The Federal Archival Scene," 66-67; Ormsby, "The Public Archives of Canada, 39.
[45] Ormsby, "The Public Archives of Canada," 39.
[46] Lamb, "The Federal Archival Scene," 67; Ormsby, "The Public Archives of Canada," 39.

thousands of microfilm reels between 1965 and 1979 alone with 828 of these reels coming from the Dominion Lands Branch.[47] The Public Records Division acquired the reels as a result of submissions from the Lands Branch, which became an integral part of Archive's holdings. Corbett and Frost recognized the important role microfilm played at the federal level, emphasizing the acquisition of large quantities of material and ease in duplication and distribution of information.[48] With that said, they also believed some scheduling improvements were required when faced with microfilm acquisitions. At the time the article was written, schedules for original hard copies of microfilmed records were not always amended. Their retention and disposal information must be included once the schedule is amended to reflect newly acquired microfilm.[49]

Best Practices in Microfilming

For an institution to acquire microfilm records, it is important to note the condition and accessibility of the reels. Such characteristics of microfilm are created through standardized practices, which not only have the ability to keep microfilm in a competitive position among other technologies, but can also lead to better quality reels. Updated, unified practices have proven to be successful in progressing industries which consumers have responded to positively and fulfilling requirements. Microfilm is no different; suitable practices are fundamental to microfilming and establishing a surrogate record set that is reliable and accessible.

The process of microfilming involves step-by-step procedures, which, if followed correctly from start to finish, has the ability provide quality film that will last for decades. The first step of microfilming takes place before the initial stages of filming begin. An institution

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[47] Bryan Corbett and Eldon Frost, "The Acquisition of Federal Government Records: A Report on Records Management and Archival Practices," *Archivaria* (Winter 1983-1984): 218.

[48] Corbett and Frost, "Acquisition of Federal Government Records," 219.

[49] Corbett and Frost, "Acquisition of Federal Government Records," 220; Barbara Lazenby Craig, *Archival Appraisal: Theory and Practice* (Germany: Die Deutsche Bibliothek, 2004), 74-75.

must decide whether a microfilm program is necessary to their current and future needs.[50] If such

a need is present, selection of which records to microfilm is naturally the next step. The records

are selected according to how much extra space an institution needs, whether backup copies of

originals are required and if the records require protection from excessive wear.[51] The records

are prepared by the institution to which they belong and provided to the microfilm vendor.[52]

Physical preparation of the documents ensures a smoother experience during filming and also for

the user of the completed film. Records must be in the proper sequence within their files and

series.[53] Filming records, such as serial volumes, out of sequence is not recommended even if a

more uniform reel, in terms of size or reduction ratio, is desired.[54] The records may need to be

cleaned, mended if torn, flattened and cleared of fasteners or tapes.[55] The next crucial step

involves deciding what material will be filmed on an individual reel of film.[56] Depending on the

physical characteristics of the records in question, deciding on which records can be filmed

together may be difficult since reels should be filled with records of approximately similar size

so the camera operator does not need to change the reduction ratio from one record to the next. A

reel should end at a logical point, such as the end of a volume or series, in order for the collection

to maintain archival arrangement. All records on a given reel should also be filmed at the same

reduction ratio to create uniformity for efficient filming and film scanning.[57] Image ratio works

hand-in-hand with image placement, which can contribute to the user experience, but also to the

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[50] "Guidelines for Microfilming Public Records: Developed by the Local Records Preservation Program, Missouri State Archives," Missouri Secretary of State: John R. Ashcroft, last modified 30 September 2011, pg .6, https://www.sos.mo.gov/CMSImages/Archives/mfmgguidelines.pdf
[51] Missouri Secretary of Sate, "Guidelines for Microfilming Public Records," 6.
[52] Missouri Secretary of Sate, "Guidelines for Microfilming Public Records," 23.
[53] Missouri Secretary of Sate, "Guidelines for Microfilming Public Records," 23.
[54] Lars Meyer and Janet Gertz, *RLG Guidelines for Microfilming to Support Digitization* (Mountain View, California: Research Group, 2003), 3.
[55] Missouri Secretary of Sate, "Guidelines for Microfilming Public Records," 23.
[56] Missouri Secretary of Sate, "Guidelines for Microfilming Public Records," 24.
[57] Meyer and Gertz, *RLG Guidelines for Microfilming*, 3 and 6.

efficiency of possible digitization at a later time. Image placement is determined by the position on the microfilm camera, which dictates orientation of images.[58] Since digitization displays one image at a time, it can be difficult to transfer from film containing two pages per frame.[59] Guidelines have mentioned having two pages per frame (IIA position as shown in the following diagram) is not acceptable, unless permission is granted.[60]

Figure 1.1: Filming Positions[61]

My experience as a researcher using microfilm confirms this principle. Having used Land Branch records on microfilm adhering to the IIA position, navigating through the material is difficult. Firstly, orientation of the image must be changed to an upright position in order to read the documents but once the film begins to roll forward, careful attention needs to be paid to which direction was in fact, forward as one can roll the film backwards quite easily if direction is lost. Secondly, only one of the two rows of images in the frame was in sequential order, which required doubling back to the beginning once one row was completely reviewed. Not only did I

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[58] Meyer and Gertz, *RLG Guidelines for Microfilming* , 6.
[59] Meyer and Gertz, *RLG Guidelines for Microfilming* , 9.
[60] Missouri Secretary of Sate, "Guidelines for Microfilming Public Records," 18.
[61] Meyer and Gertz, *RLG Guidelines for Microfilming*, 9

find this to be inefficient and confusing but so did other researchers at the Archives of Manitoba, who often require assistance in navigating Lands records.

Polyester film was recommended for microfilming, as it is the most stable type of film with the highest life expectancy.[62] On this film, black and white or colour images were recorded, although 35mm colour film has a much lower life expectancy than black and white.[63] Nonetheless, colour was an available option. Another important aspect of the filming process is to create targets. Targets are pieces of paper, which provide information concerning content of the film and information that is required as evidence in court. Targets also determine quality, organization and validity because they indicate the type of information the user will locate while scanning.[64] Placement of the target is crucial, as they should appear in a particular order in each reel beginning with the "title target" and finishing with and "end of reel" target. Those in between will include statements of duplication, corrections, additional bibliographical information, and resolution tests.[65] Microfilm guidelines clearly establish that the process of filming did not simply entail copying records onto film as they were provided. Intensive care is a significant part of microfilming before and after the process is finished.

Once records have been microfilmed, film should be stored in an environment that is temperature and humidity controlled. Temperatures should not exceed 70°F and humidity should be lower than 50% for all film types.[66] Keeping film in storage enclosures, such as archival boxes protects microfilm from pollutants in the air and from severe aberrations such as harmful friction from coming into contact with other material. Care must be taken when handling

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[62] "Reformatting: 6.1 Microfilm and Microfiche," NEDCC: Northeast Document Conservation Center, last modified 2017, pg. 1. https://www.nedcc.org/free-resources/preservation-leaflets/6.-reformatting/6.1-microfilm-and-microfiche
[63] NEDCC, "Microfilm and Microfiche," 2.
[64] Missouri Secretary of Sate, "Guidelines for Microfilming Public Records," 24.
[65] Missouri Secretary of Sate, "Guidelines for Microfilming Public Records," 25.
[66] NEDCC, "Microfilm and Microfiche," 2.

microfilm for scanning to increase the lifespan of each reel and master copies should be handled the least; additionally, access copies should made available for users.[67] Microfilm has been improved over the years and its longevity is greater than ever; however, care of reels does not stop once records have been microfilmed. The preservation process is not automatic from this point forward, as archivists, conservators and users all play a role in ensuring a quality lifespan of microfilm.

The responsibilities of archivists and conservators have been vital in the use of standards that continue to be the reason that microfilm is still the surrogate medium of choice. According to the discussion thus far, it is clear that two distinct phases exist in the application of microfilm. The first phase involves the use of microfilm in business, which includes the business of government. Microfilm was created by businesses to secure their records and to also make them accessible. The second phase encompasses the essential role of archives which worked with the microfilm industry to make technical improvements through the use of modern standards to regulate the quality of microfilm being produced.[68] The 1960s marked a turning point during which time a particular type of deterioration to processed microfilm was discovered. This was researched by the Eastman Kodak Company and the U.S. National Bureau of Standards who reported the formation of redox blemishes (orange spots) caused by peroxides in lignin containing woodpulp that were used to make cardboard boxes for microfilm. The deterioration was seen on film containing silver, also known as negative film.[69] Such findings influenced the development of standards, and in turn prompted archivists to ensure that their work with microfilm made use of these standards, which in return ensured optimum storage conditions and

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[67] NEDCC, "Microfilm and Microfiche," 2.
[68] Ala Rekrut provided insight regarding the two phases of microfilm application in her examiners report prior to my defence.
[69] Klaus B. Hendriks, "Notes on Microfilm," *Archivaria* 23 (Winter 1986 – 87): 182 -183.

long-term preservation of microfilm reels. Without modern standards, improvements would not have been made and records would ironically be in jeopardy, as microfilm has been seen as a source of preservation since its conception.

<u>Loss of Materiality</u>

Microfilming is a process of reformatting original documents. There are many advantages related to the use of microfilm but it must be understood as a platform that changes the way researchers interact with the documents, and causes some experiential and physical information to be lost. In the past, questions have been raised about microfilming with regard to the records' materiality.

Materiality is characterized as, "…the material expression of human ideas…"[70] Records are created for a specific purpose. Ala Rekrut argues, "…something exists for a specific person at a specific time and place, and using specific materials in specific ways."[71] All records represent beliefs of a society[72] while the materiality of records provides insights into the histories of various groups at different time periods. Records themselves influence how time periods and social organizations operate or can be interpreted by the observer. Rekrut notes that materiality is significant for records of all formats, regardless of whether they have already been created or will be created in the future. She asks, "As creators we know our material choices are significant, but do we become blind to these choices professionally as we deal with records from other times and other contexts?"[73] This question is relevant in a discussion of microfilm. As records are microfilmed, archivists make the conscious choice of changing an original record in more than one way.

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[70] Ala Rekrut, "Matters of Substance: Materiality and Meaning in Historical Records and Their Digital Images," *Archives and Manuscripts* 42, no. 3 (2014): 238.
[71] Ala Rekrut, "Material Literacy: Reading Records as Material Culture," *Archivaria* 60 (Fall 2005): 13.
[72] Rekrut, "Material Literacy," 13.
[73] Rekrut, "Material Literacy," 13.

Microfilm can be understood as a process that causes a shift in format. Firstly, the record is no longer only in paper form; it has become one of two copies, as one is the master and the other becomes an access copy, each representing an advancement of society in a particular time period. If scholars are to interpret microfilmed records, they may understand the creation of the record itself, but also its format, as it would provide evidence of societal or organizational operations of the given time period.

Secondly, microfilming permanently fixes the images on a reel. Once a record has gone through a process of microphotography, its order, colour, size, etc., cannot be changed. Permanence raises the issue of provenance. Scholars or archivists cannot always confidently determine the origins of the record or its initial meaning and after it is transferred to a different format, the task of formulating provenance proves to be far more difficult than if the record was in its original state. While in its original state, archivists are able to interpret various factors of the record in order to provide evidence of provenance, such as original order, paper type, age of the paper, ink type, and writing style. As humans, we use all of our senses to develop such conclusions, mainly by being able to physically perceive a record. If a record has been microfilmed, the lack of direct contact with the original eliminates the possibility of bringing additional senses such as touch and smell to bear as they normally would. Microfilming reduces our ability to engage with all aspects of the record.

Another issue related to microfilm is that of destruction. The destruction of documents after microphotography is a sensitive manner that has sparked controversy among scholars and keepers of records. Opposing opinions in the heritage community and among researchers indicate emotional and social ties to records.[74] These emotions result in heated discussions, as in Nicholson Baker's book *Double Fold.* Those who have some sort of attachment to records, either

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[74] Rekrut, "Material Literacy," 32.

personally or through research interest, perceive the destruction of original records as a destruction of history and information regardless of whether that same information has been preserved through other means like microfilm. Nicholson Baker opposes the idea of destroying authentic materials after being microfilmed because in his opinion it seems unnecessary to destroy original documents that can all be stored and preserved. However, Baker is dismissing a key factor in this discussion: Archivists must establish their role within the meaning of materiality. Are we, as archivists, information providers or guardians of cultural artifacts?[75] Is there a difference? Therefore, the question now extends towards the idea of performing a duty that is beneficial to the current needs of scholars, researchers, archives and archivists. To realize what is best for all relevant stakeholders, we must learn the needs of not only our own profession but also those of others as well. For instance, archivists require an understanding of the needs of researchers who, in my experience, utilize information regardless of its current format but there are many researchers who use information based on the materiality of the record. For instance, a conservator who wishes to maintain the authenticity of a record's materiality will ultimately discover microfilm will not do the record justice. The choice can be made by determining the needs of a particular archive and its specific use but may also be made by meeting the current needs of society as a whole. If society is acquiring information through digital media in the present day, archivists have a duty to provide information through digital mediums. A concept sometimes forgotten is that archives are not only places of preserved objects that can physically manifest historic information but are, in fact, places that provide knowledge gained by access to various archival mediums one of which is microfilm. I believe microfilm is the most advantageous of all forms because it can allow original properties of a record to be viewable without physical touch and personal experience.

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[75] Rekrut, "Material Literacy," 32.

Sarah Werner, however, does not agree, as she believes there are limitations to microfilm technology citing examples of early modern books that have been digitized using microfilm copies. In her article, books such as *Hamlet* or *Lachrimae Lachrimarum*, which have been digitized by using microfilm copies unfortunately do not capture the true essence of the original work.[76] Colours have been omitted, unnecessary print is showing, and incorrect image productions were created of *Lachrimae Lachrimarum.* She argues colours show dynamics of categories of text, which may signal the book's use.[77] There are times when corrections have been made to text using different coloured ink but those corrections are not as visible when the page appears in all black ink on microfilm reproductions. Her example of *Lachrimae Lachrimarum* provides examples of information loss in microfilm editions of the book. The book in question is a mourning book and was normally printed on pages bordered in black or sometimes entirely in black with white lettering. Regrettably, it appears someone thought the colouring of the book was a mistake and that it should have a white background with white lettering. As a result, they inverted the white on black colour scheme to a more conventional black on white colour scheme.[78] The microfilm copies of the book, then, misrepresent and take away from the meaning of the object. On the other hand, Werner does agree that microfilm and digitized copies provide access to books (and other works) as scholars allow us to connect with different parts of the world. The ability to read text itself, even on low quality microfilm copies, is a privilege that must not be taken for granted. Moreover, digitization – sometimes based on microfilmed records, books, newspapers and so on – can sometimes allow us to lift text from the page and manipulate it in new ways, which is why Terry Cook believed a shift from seeing a

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[76] Sarah Werner*,* "Where Material Book Culture Meets Digital Humanities," *Journal of Digital Humanities* 1, no. 3 (2012), http://journalofdigitalhumanities.org/1-3/where-material-book-culture-meets-digital-humanities-by-sarah-werner/
[77] Werner, "Material Book Culture."
[78] Werner, "Material Book Culture."

record as a physical object to a conceptual data object is necessary.[79] We are required to interpret the data within an archival object, as much as the object itself. By actively playing a role in order to do just that, archivists are moving forward into the post custodial era that allows us to extrapolate the meaning of documents, rather than only concerning ourselves with the normal custodial role that deters from the understanding of the "larger historical and social landscape."[80]

Werner is not alone in mourning the loss of materiality through microfilming. As mentioned earlier, Rekrut's treatment of materiality provides insight into the ways in which archivists can understand issues behind conscious changes made to records. As a part of her archival studies M.A. thesis, Rekrut did extensive research on Hudson's Bay Company (HBC) records that involved comparison of original records to that of their microfilm surrogates. In her thesis and a subsequent article, Rekrut writes about experiential losses of microfilm users, when they do not have access to the original version of records. This includes losses of colours and various details[81] that cumulatively prevent understanding a record in its entirety. Rekrut provides an example of an official HBC Moose Factory Journal, which is a part of two documents, dated from 1785 to 1796 that was microfilmed. Its rough copy on the other hand was not microfilmed.[82] In the official final copy of the journal that was microfilmed, she observes missing or inaccurate details such as thin pen strokes, darkened stains and scratches on the surface of the film.[83]

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[79] Terry Cook, "Archival Science and Postmodernism: New Formulations for Old Concepts," *Archival Science* 1, no. 1 (2001): 22.

[80] Ham, "Archival Strategies," 207.

[81] Ala Rekrut, "Reconnecting Mind and Matter,: Materiality in Archival Theory and Practice," (MA thesis, University of Manitoba, Winnipeg, 2009), 115, University of Manitoba MSpace.

[82] Ala Rekrut, "Connected Constructions, Constructing Connections: Materiality of Archival Records as Historical Evidence," in *Archival Narratives for Canada: Retelling Stories in a Changing Landscape*, eds. Kathleen Garay and Cristl Verduyn (Halifax and Winnipeg: Fernwood Publishing, 2011), 150-151; Rekrut, "Reconnecting Mind and Matter," 116.

[83] Rekrut, "Connected Construction," 151; Rekrut, "Reconnecting Mind and Matter," 119.

These are valid points, and ones I have experienced through my own research in the HBC

records, and elsewhere, including at the British Columbia Archives where I accessed the

personal diary of Richard Carr dating from 1836 to 1881. Carr was a merchant in Victoria,

British Columbia.[84]

Figure 1.2: A photographed page from Carr's diary. B.C. Archives, Richard Carr fonds.

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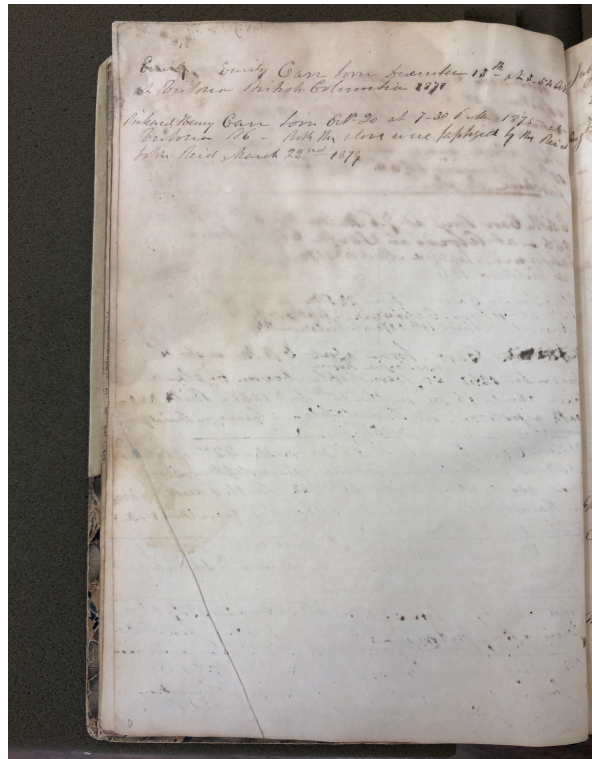
[84] "Series MS-0610 – Diary, Account and Correspondence," BC Archives: Collection Search, accessed March 21, 2019, https://search-bcarchives.royalbcmuseum.bc.ca/diary-accounts-and-correspondence

Figure 1.3: The same page as figure one, as it appears on microfilm A00788. B.C. Archives, Richard Carr fonds, A00788.
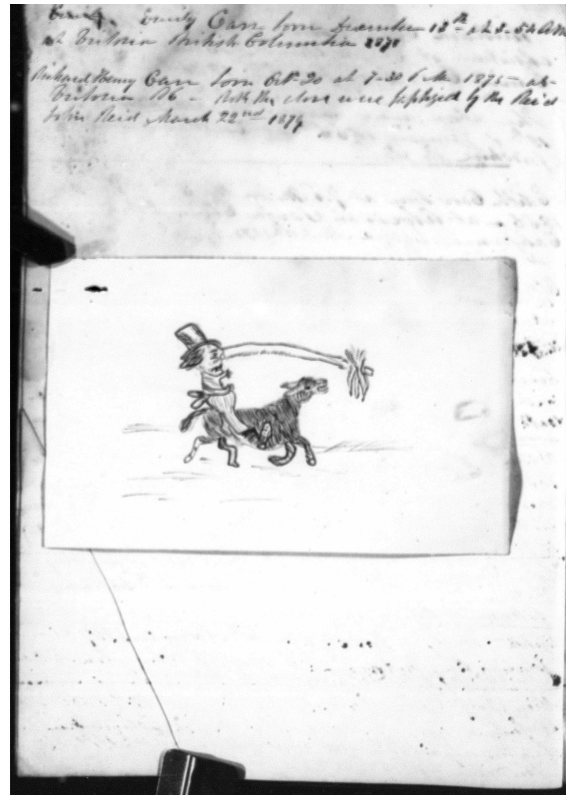
When comparing the original to its microfilmed counterpart, I immediately noted significant differences between the two. The microfilmed copy includes a secondary piece to the record, which I was expecting to find when handling Carr's diary. Interestingly enough, the sketch (drawn by Carr, as per B.C. Archives staff) was nowhere to be seen, leading me to inquire of its whereabouts. Upon doing so, I was told the sketch had been removed and placed in a separate folder among other loose materials from the diary.[85] Closer inspection of the microfilm led me to a page which noted, "Miscellaneous Accounts. Two (2) Letters Inward," meaning two loose pieces of the diary should be located within the diary itself.[86] My personal experience with this

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[85] Hand drawn sketch, 1836-1881, MSS0610, box 1, Richard Carr fonds, BC Archives, Victoria, British Columbia, Canada.

[86] Richard Carr, 1836-1881, "Miscellaneous Accounts. Two (2) Letters Inward," reel A00788, Richard Carr fonds, BC Archives, Victoria, British Columbia, Canada.

specific document illustrates a striking contrast between the original and its microfilmed surrogate, one that proves to be problematic. Missing information in microfilmed versions of records is generally a frequent complaint; however, in this case, the opposite was experienced. As a researcher, the missing record from the original diary was confusing, especially since it is a quirky piece of interest that may provide personal depth to the author of the diary and further provided evidence for loss of sequence, even though the microfilm version contained more information than its original. I'm inclined to believe the sketch may have been removed due to the record not being secured in place, a scenario that has the ability to cause further damage.

Beyond the question of this drawing being present in the microfilm and removed from the diary itself, additional losses of information existed in both versions. The microfilmed record did contain the sketch; however, due to the sketch being placed over top of the page, the discolouration, stains, spreading of ink and creases on the page were no longer visible. Also, the black and white film, removed all variations of colour from the pages of the diary. In black and white, liquid stains that are obvious in the physical diary, for an inexperienced user, can seem to be something completely different such as shadows or other problems in creating unified contrast on film, leaving room for inaccurate interpretation.

In keeping with Sarah Werner and Ala Rekrut's observations of the changes brought to a record once it is microfilmed or digitized, Geoffrey Yeo writes about the concept of "sameness," which considers the level of identical properties of various copies of the same record.[87] He questions the significance of certain characteristics of records because significance can vary from

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[87] Geoffrey Yeo, "Nothing is the Same as Something Else: Significant Properties and Notions of Identity and Originality," *Archival Science* vol. 10, no. 2, (2010): 85-86.

one community to another, or one researcher to another.[88] Yeo notes, "…we sometimes consider

that the differences between two discreet objects are inessential, and treat the two as identical."[89]

In order to determine the level of sameness, an interpretation of identical properties

comes into play, which are then determined by what we see as significant. During any migration,

it is important to preserve information and text; however, Yeo asks, what is really considered

text? Is it the paragraphs that form a piece of work? Does it include the appearance of the text?[90]

Sarah Werner would argue appearance is essential but other researchers may not consider such

factors to hold as much significance. Joanna Sassoon is in agreement with Werner but speaks in

terms of photographic records, believing "While the digital medium privileges the aesthetic

qualities and image content of a photograph, it obscures the subtleties of visual clues which

originate from the materiality of the original photograph object."[91] Both Werner and Sassoon

argue for the significance of the loss of visual appearance in preservation copies of records. As

Yeo points out, the Cedars Project team in the United Kingdom, who emphasise content and

functionality as significant properties, are in unison with the report of the "Effective Records

Management Project" at Glasgow University that recommends digital preservation activities

should focus on structured content of records.[92] Microfilm strives to preserve structure and

content of a record and most aspects of its presentation, a notion I agree with because data loss is

inevitable when creating copies of non-digital records. Preservation through copying is not an

easy process because there will always be contradictory opinions on what characteristics of a

record should be kept and what can be lost. As such, we must exercise prudence and choose the

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[88] Yeo, "Nothing is the Same." 86.
[89] Yeo, "Nothing is the Same." 86.
[90] Yeo, "Nothing is the Same." 89.
[91] Joanna Sassoon, "Photographic Materiality in the Age of Digital Reproduction," *Archives & Social Studies: A Journal of Interdisciplinary Research* 1, no. 0 (2007): 311.
[92] Yeo, "Nothing is the Same," 89.

lesser of all evils and move forward by using best practices after having learned from past mistakes. Authenticity can be legitimately argued here, but again, the idea of sameness is subjective to those dealing with a particular record. Even though it is possible to produce a copy that is completely indistinguishable from its original, views on possible changes within a document may be posited by a user of the record. As per Yeo, changes are an acceptable solution within preservation practices, as long as significant characteristics are retained in the copy.[93] He clarifies that more often that not, copies are made not by long-term preservation requirements, but inspired by a wider range of accessibility to records. Irrespective of the motivation, essential aspects or characteristics of the original copy must be kept intact.[94]

Yeo sums up issues surrounding preservation and authenticity, which, without a doubt, includes microfilm allowing the reader to think outside the box, rather than remain in what Ham believes to be the "custodial era."

Does Microfilm Still Matter?

Having gained knowledge from all perspectives, the question of relevancy stands before us. Does microfilm still matter in a time where digitization is taking a hold and gaining prominence in preservation practice? Are we still able to efficiently use a type of technology that is more analogue than digital, even though it connects the two?[95] The answer to both questions is simply, yes! Microfilm continues to play an important part in our digital world.[96] Microfilm can last up to 500 years if stored in the correct temperature and humidity,[97] a time frame made possible especially when Kodak introduced polyester-based microfilm in the early 1990s, as it

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[93] Yeo, "Nothing is the Same." 87.
[94] Yeo, "Nothing is the Same." 87.
[95] Patrick-Burns, "Archives as Artifacts," 49.
[96] Brandi Scardilli, "Microfilm Still Matters in the Digital Age," *Information Today* 31, no. 1 (2014): 12.
[97] Scardilli, "Microfilm Still Matters," 12.

can resist decay more than ever before.[98] While digital material degrades due to bit rot after a period of no usage, microfilm in comparison is a reliable option. To provide an example of how reliable microfilm really is in terms of transfer of information from one medium to another, storage and accessibility, Brandi Scardilli writes about the process of microfilming versus digitization of newspapers at ProQuest.[99] Forty newspapers have been digitized from around the globe (mostly with the full back file of each newspaper's title), which equals about 30 million pages worth of content. On the other hand, their vault houses microfilm that contains over 10 000 newspapers and 2 billion pages of content. They have spent 12 years digitizing newspapers and have not even come close to reaching the same amount of digitized content compared to their microfilm holdings.[100] The choice should be clear from this example alone. ProQuest is not the only organization facing this issue. In fact, this is the reality of all archives and libraries for that matter; resources are difficult to obtain, something digitization will always demand.

Microfilm may well remain a viable option for scholars and researchers even through the digital era. Scardilli writes on behalf of the New York Public Library's head of Collections Development who says "…many patrons on some level still prefer microfilm. I do believe a lot have switched loyalties and have gone to digital as they've understood its benefits. But they still find the microfilm medium really preferred to browse large quantities of content."[101] Cady mentions a similar perspective in her article, as she believes once documents reach a certain length, it becomes difficult and inconvenient to read on a screen, the type of fatigue also

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[98] Craig Saper, "Microfilm Lasts Half a Millennium," *The Atlantic* (July 22, 2018): https://www.theatlantic.com/technology/archive/2018/07/microfilm-lasts-half-a-millennium/565643/?utm_source=feed
[99] Scardilli, "Microfilm Still Matters," 12.
[100] Scardilli, "Microfilm Still Matters," 12.
[101] Scardilli, "Microfilm Still Matters," 12.

experienced with microfilm in its earlier days. Until recent technological advances offering high-resolution screens, microfilm was a better option than old computer screen displays.[102]

These are the issues I experienced while employed at the Archives of Manitoba during my archival studies internship. Firstly, those who are accustomed to using early models of microfilm viewers only prefer those machines. Archives of Manitoba also provides access to microfilm scanners, which display microfilm reels onto a monitor. The program used to view the reels also allows the user to perform many functions traditional viewers do not, such as digitally clipping portions of documents in order to save or print them. These readers solved quality issues to a certain extent because they allow adjustments in resolution and digital contrasts. If a microfilm reel had not been created in quality form, the scanners mitigated the problem enough to make the reel visible. The monitors provide relief from eyestrain and "motion sickness" that is sometimes felt when quickly running through a reel. Regardless of these factors, many researchers prefer to work with traditional microfilm readers.

When the question of using digital media arises, that was an even less desirable option at the Archive. A fair amount of researchers refused to use computers to search indexes or the online database and were certainly not always keen on using the scanners. If they happened to agree to use the scanners, they faced great difficulties and required frequent assistance illustrating the use of traditional microfilm readers at the present time is strong and there are generations of individuals who are more than happy to utilize this research method. I preferred the scanner myself but those who stay true to old viewers are not wrong in their ways. Saving information digitally from microfilm scanners has the potential to be lost or deteriorate over time. Printing from scanners is also costly and not the most environmentally friendly.

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[102] Cady, "The Electronic Revolution," 383.

One concern that comes to mind while comparing the two types of microfilm viewers is what will the next generation prefer when conducting research? Will microfilm still be an option for them? I believe exposure to archives and libraries is one way to provide knowledge to new generations of scholars. Millennials and future generations will have guaranteed exposure to digital media as children but they must be provided an opportunity to experience technologies such as microfilm. Many individuals are not fully aware of what microfilm is and how it is used - they ask whether it is "that machine where you crank the handle," while demonstrating with one arm; some have even lesser knowledge than that of what microphotography entails. Most of this concern pertains to familiarity with microfilm, especially due to society not feeling the need to learn about it and progressively moving further away from analogue technology towards the digital. A solution can be found in exposing individuals to microfilm technology at early stages in their educational careers when research methods are taught. Through exposure, knowledge and a hands-on experience of this technology, they will be inclined to use it in their future research endeavours, maintaining the relevance of microfilm as a whole.

Nicholson Baker's *Double Fold*

Microfilm has been a significant part of the preservation and access rhetoric within archives. Nicholson Baker's *Double Fold* caught the attention of many individuals within the archival and scholarly community since he took a firm stance on the value of this technology. Sparking a long-lasting debate, Baker's ideas on the use of microfilm are often accurate but also supplemented with hasty conclusions that have drawn the ire of his counterparts and reviewers.

It may be a surprise that Baker, despite writing about the administration of libraries and archives, does not have formal training in the field. Baker, however has written several novels and essays, making him a well-known figure in the literary community. He has written about

poetry, literature, library systems, history, politics and other topics within his ten published novels and other nonfiction work.[103] Among various awards, such as the Hermann Hesse Prize and a Katherine Anne Porter Award from the American Academy of Arts and Letters, Baker won the National Book Critics Circle Award for *Double Fold*.[104]

In *Double Fold's* preface, Baker describes himself as a, "library activist," who was, "…distressed that so many libraries were getting rid of their bound newspapers."[105] This statement is one to take note of because as an archivist, it is clear Baker speaks of a different administrative dynamic than of archives. Furthermore, the focus of this book is on libraries and books, rather than archives and archival records. Baker writes about the use of microfilm and the destruction of newspapers and books after they have been copied onto microfilm. Baker argues that microfilm has not been a good alternative to the preservation of library materials and historical records.

Archival educator Richard Cox writes in his review of *Double Fold* that Baker could quite well have been looking to create a dramatic effect, or to stir the pot so to speak. Cox asks, "Would a book critiquing library and archives preservation, minus a conspiracy theory, be featured on the pages of the leading newspapers and book review outlets?[106] Ironically, Baker writes about his encounter with Hy Gordon during which time he states, "…I thought some librarians had exaggerated the severity of newsprint's deterioration." Gordon replies, "Oh yeah, yeah, it doesn't fall apart. The ends might crack, but that's all. The newspaper's still fine."[107] It is interesting that Baker believed librarians exaggerated the fragile condition of historical material

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[103] "About Nicholson Baker," Nicholson Baker, last modified 2018, http://nicholsonbaker.com/bios/nicholson-baker
[104] Nicholson Baker, "About Nicholson Baker."
[105] Baker, *Double Fold,* vii; Baker, *Double Fold,* 20.
[106] Richard Cox, "Don't Fold Up: Responding to Nicholson Baker's Double Fold," review of *Double Fold: Libraries and the Assault on Paper*, by Nicholson Baker, *Society of American Archivists,* April 18 2001, https://www2.archivists.org/news/2001/dont-fold-up-responding-to-nicholson-bakers-double-fold-by-richard-j-cox
[107] Baker, *Double Fold,* 20.

when the author himself exaggerated the negative aspects of microfilm. Baker is undeniably

persuasive and might even convince the reader of his views; however, Baker's complete lack of

training within libraries and archives is apparent. He confuses the distinction between libraries

and archives because even though he believes he is speaking about the work being done by

librarians, much of it is also archival. His lack of understanding has led him to discuss the work

being done at both types of institutions in an interchangeable way failing to realize the

dilapidated state historical records, including newspapers, eventually reach once having been

handled by users for years in non-climate controlled environments. He confidently states "A true

archive must be able to tolerate years of relative inattention…" which could not be more

inaccurate.[108] In his review, Cox mentions that archivists are constantly battling problematic

environments and overuse of records.[109] It is not only "the ends [that] crack," but entire pages

which experience tears and rips,[110] something archivists and librarians can attest to, as I have,

having seen it firsthand.

As an archivist who views microfilm as a successful preservation tool, I strongly disagree

with Baker's ideas and criticisms of microfilm technology. Microfilm has saved valuable space

in archival institutions and, I'm sure, in libraries as well, allowing for the access of information

that once was not possible because microfilm is a movable medium. Archives and libraries can

readily send microfilm copies of records to researchers across different cities, a journey an

original record cannot survive (and frankly, should not be subject to). Microfilm has not only

been a step forward in preservation practices of libraries and archives but also provided insight

into new technology on the digital front since we have learned to digitize a record format that is

different than traditional paper. Additionally, Baker is under the impression that all records can

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[108] Baker, *Double Fold,* 242.
[109] Cox, "Don't Fold Up."
[110] Baker, *Double Fold,* 20.

and should be saved, a significant misconception. Microfilm addresses problems caused by lack of space, an idea Baker dismisses. If possible, archivists would keep more records, as most of us are lovers of history but we simply cannot keep everything. Baker asks, "Why can't we have the benefits of the new and extravagantly expensive digital copy *and* keep the convenience and beauty and historical testimony of the original…?"[111] As amazing as it would be to keep both, it is simply not realistic. Resources are not always available, forcing archivists to make educated decisions, informed and bolstered by the importance of appraisal and preservation practices in our training.

In his review of *Double Fold*, Cox reserves a section in which he explains the perspectives of library and archive administrators and the reasons behind their preservation practices.[112] Even though Baker's book was directed at librarians, it also affected archivists. The lack of public knowledge about libraries, and archives especially, is the reason why I believe it is effective and vital for Cox to include this section in review. It allows archivists to clarify what they do and why they do it. However, part of me also believes we, as archivists, should not have to justify our profession to those who make assumptions prior to comprehensively educating and familiarizing themselves with the the subject and practices in which we are trained. Will such individuals really try to grasp what archivists do if they have already created a negative impression of the profession? Despite those reservations, Cox's argument that we should not ignore Baker is correct.[113] We can use Baker's misrepresentations of the work of librarians and archivists as an opportunity to rethink certain practices or even how to effectively describe what we do to the public. We have to fight back and gain control of not only the public's opinion of our professions but also assist in shaping the perspectives of new and impressionable librarians

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[111] Baker, *Double Fold,* 67.

[112] Cox, "Don't Fold Up.

[113] Cox, "Don't Fold Up.

and archivists, such as myself. Baker is highly persuasive and his work can be used as a precautionary tale in fighting agains the misapprehensions and erroneous perceptions of the archival field as a whole.

Though Baker's arguments are essentially against the administrative processes of libraries and archives, there are pertinent elements regarding microfilm's shortcomings which demand a discussion. In its early years, microfilm was expected to see the same success as the printing press.[114] The reasons it did not soar to the same level as the printed word was mainly due to the fact libraries and archives in charge of the microphotography process did not grasp the social, economic and technological changes that accompany the acceptance and adoption of any new technology. For example, low cost microfilming was accepted by administrators but scholars felt otherwise due to poor film and photographic quality. Materials were easy to film and duplicate but quality was compromised in the process, preventing the production of good readable copies.[115] The blame may be placed on those in charge of the microphotography process rather than the technology itself.[116] If projects underwent quality control and procedures were put in place for possible mishaps, some quality and information loss could have been prevented. Furthermore, if microfilm was recognized as only one preservation medium among many others, records could have been preserved according to their current condition and type of access they require which could have prevented the "one-size-fits-all strategy."[117]

Conclusion

The history of microfilm sheds light on the development of digital tools we use every day. The innovative thinking of opticians and inventors such as George Eastman provided the foundation

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[114] Cady, "The Electronic Revolution," 375.
[115] Cady, "The Electronic Revolution," 379.
[116] Patrick-Burns, "Archives as Artifacts," 53.
[117] Patrick-Burns, "Archives as Artifacts," 53.

for creating materials necessary for progress in all fields in which this society engages, allowing inventors and thinkers like Vannevar Bush to extend past knowledge and combine it with the new. Progress can be achieved through a chain reaction and microfilm technology is a prime example of just that. Though advancements to microphotography are no longer being made, as digitization is the new means of preserving and storing information, microfilm remains a reliable form of data storage and access that will be with us for the foreseeable future.

Microfilm has been important in archives and libraries despite the opinions of those that refuse to believe in its utility. Archives continue to provide access to microfilm records with the belief that patrons will appreciate access to records provided by this technology, even if they might prefer other modes of access while those loyal to microfilm continue to make regular use of it even in the digital age. Opposing forces will rise time and time again stating microfilm is not a satisfactory medium in terms of preservation or readability but it will not change its prevalence and continued use in the archival community.

CHAPTER TWO

**HISTORY OF THE DEPARTMENT OF THE INTERIOR, ITS RECORDKEEPING
PRACTICES AND THE DISPOSSESSION OF INDIGENOUS CULTURES**

Introduction

The Department of the Interior maintains significant historical significance to Canada for the role it played in the development of western Canada, creating a path to a future witnessed in the present day. It was a central institution of Canada's government between 1873 and 1936 and as a large and integral part of the federal government, it contained many branches within itself that controlled various activities. For instance, the Lands Branch held authority over land distribution and ownership, allowing for the development of areas and marking them as key components to future needs of the population as colonization expanded. The branch was also responsible for surveying land in order to identify availability for colonization and resource development and, therefore, to control what could be distributed to individuals or institutions. The Canadian government's actions concerning the western land were possible with the existence of the Department, as it determined how the frontier in question would evolve.

The Canadian government's desire to colonize and develop the West led to population displacement, economic development, land development and unfortunately, material and cultural dispossession of Indigenous peoples. In the eyes of the government, the West was an open space awaiting development; however, previously established Indigenous communities were already settled on that land and had been for centuries. Colonizing the area was not simple nor did it take place without consequence. The West became the focal point of the government's agenda in this particular phase of developing the area, which left behind evidence of the impact on human

experience as exemplified by issues that remain relevant within current affairs today and also through various forms of documentation.

The activities of western development required systematic record keeping practices to allow a large and complex bureaucracy to regulate the colonization and exploitation of vast tracts of land and other natural resources. All departments of the Interior, including the Lands Branch, developed varying systems of filing and preservation of their records throughout their existence, which would have been the heart of daily operation, as they allowed for efficiency and organizational structure. They are highly important within the context of Canadian history because they allow archivists and historians to understand our nation's history and to pass it forward to future generations. Interior's records are now available in various forms, the two most significant being paper and microfilm. Records of the Department are available to researchers at facilities such as Library and Archives Canada (LAC) and also in the provinces to which the records pertain. This chapter will focus specifically on those records available in Manitoba, specifically at the Archives of Manitoba and those available at LAC.

Additionally, the history of the Department of the Interior will set the foundation for a subsequent discussion of the separation, microfilming and dispersal of the records of the Department. This history of the Department will highlight significant figures behind its creation and how it developed various branches such as the Lands Branch. By providing a history of Interior, the role of microfilm records within the Lands Branch will become clearer. Microfilm records, including ones I personally handled at the Archives of Manitoba, are part of this larger history of record keeping and preservation practices. Record keeping systems of records while they were in use, the disposal of those records and their eventual dispersal after the Department was abolished will be stepping stones for the discussion behind specific microfilm records of the

Lands Branch, which will also involve my experience in hands-on research done as a research assistant under the supervision of University of Winnipeg's, Dr. Ryan Eyford. My part in this research was to examine microfilm to determine which records were brought to Manitoba, which records were not, and through this process and examination to determine whether some records were permanently lost or destroyed. Said research will allow for the technical analysis of the condition these microfilm reels are currently in, their value as research material and how to increase further accessibility.

After completing this analysis, the place of Interior's records, including microfilm, will be discussed in relation to Indigenous dispossession from Western Canadian Lands. The absence of an Indigenous perspective within Interior's records as a result of cultural dispossession and systematic shifts in recordkeeping practices will be the focus of this section. Displacement of Indigenous communities during the settlement of the West impacted these communities to the core and the repercussions of those settlement practices continue to reverberate today. The National Centre for Truth and Reconciliation's (NCTR) role in preserving and providing access to Indigenous records will aid in understanding Indigenous perspectives on colonization, and on recordkeeping, compared to the government and settler perspectives available in Interior's records. The above case studies can allow archivists to recognise the provenance, context and content of specific records, namely microfilm, which will create further avenues for preservation and accessibility to these documents.

History of the Department of the Interior

The Department of the Interior occupies an important position in the history and development of Western Canada and was created by Sir John A. Macdonald in 1873 with the intention to unify and strengthen the nation. Macdonald, who was former Prime Minister, was

also Minister of the Interior after returning to power from 1878 to 1883. His efforts to settle the West began in 1873 and continued for sixty-three years until coming to an end in 1936.[1] As progressive as the idea was to build a nation, the process behind it was at times regressive. The idea was to establish a "civilized" society on this particular land even though the term and idea of what was and was not civilized was dictated from the European perspective; the emerging colony of Canada, a part of the British Empire, was meant to become a region with sophisticated agricultural practices like none other.[2] The lifestyle and rights of the Indigenous population was highly misconceived and as a result, the Canadian government's colonization of Western Canada proceeded with very little to no regard for the peoples already living on those lands.

The Department held many hopes for what western expansion would mean to the growing nation at the time and all that could be achieved throughout the years ahead. There were various motives behind the creation of this government organization which, like any new entity, must have a central purpose in order to reach the next level of progress. In this instance, progress was defined by the elimination of the past, which included Indigenous populations.[3] Department of the Interior was not short of such circumstance. During the first ten to fifteen years of its existence, the Department's goal was to survey the land of the West at which time immigration was not be possible, as the administration was not fully aware of the area's condition. Preparations for immigration and colonization were made through the removal of Indigenous populations from their traditional homelands to government-established reserves which was achieved by providing power to the North-West Mounted Police to maintain order, measures

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[1] Terry Cook, "Legacy in Limbo: An Introduction to the Records of the Department of the Interior," *Archivaria* 25 (Winter 1987-88): 74.
[2] Sarah Carter, *Imperial Plots: Women Land and the Spadework of British Colonialism on the Canadian Prairies* (University of Manitoba Press: Winnipeg, 2016), 5.
[3] Carter, *Imperial Plots*, 6; Wolfe describes "logic of elimination" as destroying a group of people in order to gain access to territory, more so than the desire to eliminate the race of that group. Patrick Wolfe, "Settler Colonialism and the Elimination of the Native," *Journal of Genocide Research* 8, no. 4 (2006): 388.

which made way for the construction of the railway and division of land.[4] Records of geological surveys and scientific analysis of natural specimens were created as a result prompting the establishing of the Lands Branch's recordkeeping practices.

Once having passed preparatory stages, the next phase of developments began. Significant impediments at the onset of the process included the need to resolve standing issues with the First Nations and Métis communities who were previously established in the area. They experienced forceful changes as the government began expansion, including displacement.[5] Once those matters were considered settled, Immigration and migration were expected as a result, leading to grants and purchase of land with organized division. The Immigration Branch, originally a part of the Department of Agriculture before Confederation and shifted to the Department of the Interior in 1893, played a significant role during this phase.[6] Interior also established land reserves for schools; divided land for railways and towns; leased land to collect money from timber, grazing, mining, water power and irrigation projects; developed a national park system to protect wildlife and conserve natural environments; and finally, conducted scientific research on natural resources.[7]

In addition to the Dominion Lands Branch, other administrative divisions were created to evenly distribute responsibilities, with each retaining focus on particular tasks at hand leading to the establishment of an organizational structure to maximize efficiency and management. As settlers began to colonize the area, the need for labour and jobs arose. Natural resources were part of the solution to create opportunity that was not limited to agriculture. Timber, Mines and Grazing Branch emerged from The Dominion Lands Branch in 1881, as well as the Irrigation

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[4] Cook, "Legacy in Limbo," 76.
[5] Cook, "Legacy in Limbo," 74.
[6] Cook, "Legacy in Limbo," 76.
[7] Cook, "Legacy in Limbo," 74.

Branch in 1898. At this time, the Klondike gold rush attracted many in search of new fortunes though the Mining Branch could no longer retain combined operations with other branches and as a result, separated in 1906. The Irrigation Branch followed suit in 1908, calling itself the Forestry and Irrigation Branch.[8] Most of the other divisions experienced similar changes since all were eventually large enough to operate independently. The Department of the Interior was anything but a stagnant entity as, from the time it began, it regularly transformed its administrative and bureaucratic structures striving to actively fulfill its purpose in regulating immigration and exploiting natural resources in order to settle the West.

The changes made in the past and maintained throughout subsequent decades continue to have an impact on the present. For over a hundred years, the Canadian government has made decisions affecting not only European and other settlers who migrated into the area but also the Indigenous peoples who called it their home. In this regard, concern over displacement and encroachment is at the forefront. The Dominion Lands Branch played a significant role in how Interior progressed with its decisions. As a branch, it was complex and deserves to have its individual history presented.

The History of the Dominion Lands Branch

The Dominion Lands Branch has just as complex a history as the Department of the Interior as a whole. The Lands Branch came into existence prior to Interior, in 1871. The proposal to survey the West was created after Confederation by provincial surveyor, John Stoughton Dennis. The proposal was developed under the Department of Public Works and was approved in 1869.[9] From 1870 to 1930, the Dominion government administered Crown Lands in the west, which are referred to as Dominion Lands. In 1871, regulations for the management of

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[8] Cook, "Legacy in Limbo," 78.

[9] Irene M. Spry and Bennett McCardle, *The Records of the Department of the Interior and Research Concerning Canada's Western Frontier of Settlement* (University of Regina: Canadian Plains Research Center, 1993), 55.

the Dominion Lands was established and as a result, laid the groundwork for the Dominion Lands Act of 1872.[10] The Dominion Lands Act helped the extraction of natural resources in the West due to the Secretary of State for the Provinces having surrendered control and management of Crown Lands in Manitoba and North West Territories. It was at this time Mining was placed under the Dominion Lands Branch and was responsible for obtaining natural resources from the newly surveyed land. Shortly thereafter, the Department of the Interior was created, consolidating the Lands Branch and its responsibility to survey the region as well as administer the sale and lease of agriculture, mining and forest activities on said lands.[11]

Following the administrative establishment of the Lands Branch, task management became the primary focus and by 1873, the Branch was beginning to initiate work it was intended for when it was created. At this time, Indian Affairs was a branch of the Department of the Interior; therefore, it was fitting to implement negotiation of treaties as one of its first tasks in order to gain possession of land for colonization, something that had already begun in 1871. In 1874, instructions were provided to extend the township surveys into the Northwest Territories through a system of meridian and baseline surveys for which Lindsay Russell, Assistant Surveyor General was responsible to complete. In the subsequent year, a Board of Examiners were to test and certify the professional federal surveyors under the Dominion Lands Act.[12] By 1880, Indian Affairs had been separated from the Department of the Interior into its own department.-This outcome prevented surveys of Indian reserves to be completed by the Surveyor General staff, a decision that led to administrative overlap and conflict under the leadership of

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[10] Spry and McCardle, "Records of the Department of the Interior," 55.
[11] Doug Whyte, "Excavating the Archival Legacy of the Department of the Interior: The Records of the Mining Lands Branch," *Archivaria* 25 (Winter 1987-88): 93.
[12] Spry and McCardle, "Records of the Department of the Interior," 55.

the new Surveyor General, Lindsay Russell.[13] Stability had not been accomplished and organizational systems were still being solidified. As the Department of the Interior sought administrative discipline, several changes to the staff, duties and recordkeeping structures were implemented. As such operational activities were taking place, the Lands Branch moved forward in its goal to settle the West.

Land surveys and division were pertinent to granting settlement of the area. The annual report of 1894 of the Dominion Lands Branch provides insight into the tasks and obstacles surveyors faced while on duty, including tough terrain and bad weather.[14] Mapping an unknown territory was no easy feat. Land division in western Canada, based on a checkerboard system, covered 200 million acres, making it the world's largest survey grid in a single system. Due to its sheer size, the Branch created 1.25 million homesteads.[15] Each 36 square mile township was divided into 36 square sections and were situated in order to reflect the cardinal directions of a map.[16] The sections within townships were then divided into four quarter resulting in, essentially, a duplicate of a checkerboard. Townships, from south to north, were numbered 1 to 129 and 141. Sections were approximately one square mile or 640 acres each, divided into quarters of 160 acres.[17] Another aspect of land division involved ranges numbered east to west starting from each meridian. Seven meridians were established from which townships were surveyed and numbered, with the first meridian established near the Emerson border in Manitoba. Combined,

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[13] Spry and McCardle, "Records of the Department of the Interior," 139.
[14] T. Mayne Daly, *Annual Report of the Department of the Interior for the Year 1894* (Ottawa: Order of Parliament, 1895), part II, 17.
[15] "Lands Grants of Western Canada, 1870-1930," Library and Archives Canada, last modified February 28, 2015, http://www.bac-lac.gc.ca/eng/discover/land/land-grants-western-canada-1870-1930/Pages/land-grants-western-canada.aspx#c
[16] *Canada: Dominion Lands Branch. Regulations for the Disposal of the Dominion Lands Within the Railway Belt in the Province of British Columbia* (Ottawa: Dept. of the Interior, 1889), 6.
[17] *Dominion Lands Branch,* 6.

all of the mentioned references created the western Canada land system with which land was

surveyed and thereby laid the groundwork for eventual colonization.

After having surveyed land in the western regions of Canada in 1871, which included the

three Prairie Provinces and railway belt of British Columbia, Letters Patent were issued to

homesteaders.[18] Unfortunately, obtaining land was not as simple as filing an application for a

grant and receiving a piece of desired land. The federal government had to ensure colonization of

its land was executed according to the guidelines of the Dominion Lands Act which dictated

each homesteader must prove an increase in value through additions made to the property. Such

additions, like cultivation or construction, were to be made to a land grant before a homesteader

could receive Letters Patent from the Crown.[19] The next step was to file an application to the

local Dominion Lands Office, which screened and validated the claim and sent an inspector to

confirm improvements on the land. Once the homestead had passed a test of this sort, Letters

Patent were issued, serving as proof that the land no longer belonged to the Crown. The patents

were issued by the Registrar General's office of the Department of Secretary of State from 1867

to 1883 and by the Lands Patent Branch of the Department of the Interior after July 18th, 1883.[20]

As this system became foundational to settlement, records of daily operations were consistently

created and are known to be highly unique in nature, even today.

Records of the Department of the Interior
Part I: Records of the Dominion Lands Branch

The Dominion Lands Branch was just one of the administrative divisions of Interior.

Having produced an immense amount of records, their management and care is an important part

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[18] *Dominion Lands Branch,* 6.
[19] *Dominion Lands Branch,* 6.
[20] *Dominion Lands Branch*, 6.

of understanding how the Lands Branch operated throughout its lifetime. The unique journey of these records makes them complex and difficult to understand or to trace.

The closure of the Department of the Interior in 1936 prompted a re-organization and dispersal of information. The division of the records and their dispersal to various provincial governments took place between 1930 and the mid 1950s due to the Natural Resource Transfer Agreement signed by the federal and provincial governments in 1930. Records were transferred to archives of the provinces of Manitoba, Saskatchewan, Alberta, and British Columbia, and to the territorial archives and the National Archives of Canada.[21] From an archival perspective, provenance of the written record was obscured by this dispersal.

Not only did the act of separating the records cause damage to their integrity, the process of microphotography was equally taxing presenting an immense challenge for archivists and researchers who are faced with various organizational frameworks of these records. In order to understand the original order of the records and to describe their content and context, they must essentially redevelop the original filing system or at least part of it which in turn, is necessary for researchers at present day to obtain access. Such redevelopments certainly took place at the Lands Branch but was also deemed necessary for other divisions of the Department of the Interior including Timber and Grazing Lands, Mining Lands, School Lands, Ordnance, Admiralty, and Railway Lands, Swamp Lands, Land Patents, Supervisory Mining Engineer, Indian Affairs, Half-Breed Commission, North-West Mounted Police, Immigration, Geological Survey of Canada, Topographical Surveys, Legal Surveys, Geodetic Surveys, International Boundaries, Chief Geographer, Dominion Observatory, Irrigation, Water Power and Reclamation, Natural Resource Intelligence Service, Forestry, National and Historic Parks,

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[21] Cook, "Legacy in Limbo", 73.

Wildlife, Tourism and administration of the Northwest Territories and Yukon.[22] In relation to the topic at hand, the focus will be on records of the Lands Branch.

As we have seen, the Dominion Lands Branch was established prior to the Department of the Interior itself and left behind an enormous array of records when Interior was abolished. Since the Lands Branch existed longer than other branches within the Department, it utilized and experienced many old and new recordkeeping systems. The first records system of Interior was that of the mid-nineteenth century and was not very efficient and contained two key features. Inbound correspondence was sequentially numbered by record keeping clerks and listed in bound registers in the order received. These letters were then folded into individual dockets and indexed alphabetically by author and occasionally by subject on an annual or cumulative basis in separate series.[23] Outgoing correspondence was copied into separate chronologically-organized letter-books, with an author index in each book. These two separate systems under one administration led to complications.[24] By the time Interior was formed, this system had fallen out of favour and was not used by this department of the government. Interior decided on a different approach and adopted the subject file system. Incoming and outgoing correspondence on any subject was placed together in a single file and those files were numbered sequentially in the order of creation.[25] Complexities overtaking recordkeeping practices were apparent from the beginning, not allowing for proper organization of written documentation. Land records were generally kept in poor structural form for example and areas considered Indigenous land were not registered properly, leading to trespass onto Indigenous lands and disputes from settlers. Also, a proper

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[22] Cook, "Legacy in Limbo," 74.
[23] Terry Cook, "Paper Trails; A Study in Northern Records and Northern Administration, 1898-1958," in *For Purposes of Dominion: Essays in Honour of Morris Zaslow,* edited by Morris Zaslow et al. (North York, Ont.: Captus Press, 1989), 15.
[24] Cook, "Paper Trails," 15.
[25] Cook, "Paper Trails," 16.

accounting system was not in place; when land transactions were made, it was difficult to verify which transaction belonged to a particular sale.[26] Dispersal of these records into the various provincial and territorial governments only fuelled inconsistencies, which are equally evident during archival practice or research.

By the 1930s, the Lands Branch had created 5.6 million files[27] including those from the Branch's subdivisions such as Mining and Natural Resources. The Timber, Mineral and Grazing Lands Office emerged from the Lands Branch in 1881, as land colonization and resource development were prioritized, increasing record creation.[28] It did not take long for this subdivision to expand once again into the Timber, Mines, Grazing and Irrigation Branch in 1898, which continued to use the subject file recordkeeping system from 1881, only changing the type of activities the records now reflected. As the government's northern affairs progressed, the focus of the Department of the Interior did as well assuming responsibilities not only for the West, but also for the North as well.[29] Such records exemplify the changes the Department experienced as a whole and within its smaller divisions and with the Lands Branch being a prominent part of Interior, these records provide a significant peek into the operations of the government at the time.

McCardle and Spry identified and summarized the types of records produced by the Dominion Lands Branch. The list includes:

- The conduct of explanatory and general surveys in preparation for the final Dominion Lands survey.
- The final formal legal surveys (subdivision survey) of Dominion Lands which also included townships, sections, quarter sections, legal subdivisions, town lots, settlement lots, and other legal units.

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[26] William Russell, "The White Man's Paper Burden: Aspects of Records Keeping in Department of Indian Affairs, 1860-1914," *Archivaria* 19 (1984): 56.
[27] Cook, "Paper Trails," 16.
[28] Cook, "Paper Trails," 16.
[29] Cook, "Paper Trails," 17.

- The recording of the technical and narrative information in the form of field notes, diaries and preliminary map sketches.
- The preparation of the final legal survey plans to establish Crown title to federal public lands and disperse those lands to individuals.
- The formal approval, printing and distribution of maps to local Dominion Lands administrators to use in the field.
- The amendment and consolidation of initial legal plans by follow-up surveys.
- The provision of descriptive (topographical) survey information of non-legal assistance in federal activities.
- Survey work such as Boundary Commission surveys and regulation of geographic names.
- Technical research and testing to improve the survey process.
- The licensing of Professional surveyors at the federal level.
- Dominion Lands Act of 1872.
- Dominion Lands Survey Acts of 1908.[30]

Lands Branch records are divided into two main series, one organized by surveyor and the other by township. Within these series, files exist in various forms such as letter books, maps, technical records of individual surveys, design and application of the survey systems in the West in response to demands of settlers and developers, and the township registers used for master indexes of survey activities. The records also contain policy material in the Surveyor General's correspondence, memoranda and special reports to senior levels of government.[31]

The records of the Surveyor General of the Dominion Lands Branch are of a technical and descriptive nature. The general records of the Dominion Lands Branch were kept separate, with their own complex set of files, registers, indexes and land title documents on all land ownership and use of resources in the Prairies, northern Canada, British Columbia and Ontario during certain time periods.[32] The most important of these files, generated in the administration of land and resources under the Dominion Lands Act from 1873 to 1930, were part of the Central Registry Files series covering all topics related to the Department of the Interior and its

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[30] Spry and McCardle, "Records of the Department of the Interior," 57-58; Kaur, "History of the Records From the Department of the Interior," 10-11.

[31] Spry and McCardle, "Records of the Department of the Interior," 57-58; Preeti Kaur, "Department of the Interior: A History of the Records" (term paper, University of Manitoba, 2016), 7.

[32] Spry and McCardle, "Records of the Department of the Interior," 73.

functions.[33] Other general records of the Lands Branch include subject files, correspondence

registers, indexes, letter-books and minor series; however, most external and internal

correspondence, and internal reference records, were not managed by the Lands Branch staff.

The records were held in two separate offices called the Correspondence Registration Branch,

which kept housing files, registers and register indexes, whereas other records were held at

Mailing Division.[34] Today, archivists and researchers must navigate a vast array of land records

that provide information on how the West was settled, organized into various recordkeeping

systems and scattered across central and western Canada.

From 2015-2017 I worked as a Research Assistant to Dr. Ryan Eyford of the University

of Winnipeg on a project involving microfilmed records of the Lands Branch. Dr. Eyford, who

was leading this study, was interested in uncovering which records had been transferred

specifically to Manitoba, among other provinces. The transfer of Department of the Interior

records began when the federal and provincial governments signed the Natural Resource

Transfer Agreement in 1930, leading to the dissolution of the Department of the Interior by

1936.[35] Under The Act, the Prairie Provinces gained jurisdiction over all Crown Lands, which

had been the responsibility of the federal government since the acquisition of Rupert's Lands in

1870.[36] The Act included an official agreement in relation to all records created by the federal

government:

> Canada will, after the coming into force of this agreement, deliver to the Province from
> time to time at the request of the Province the originals or complete copies of all records in
> any department of the Government of Canada relating exclusively to dealings with Crown
> lands, mines and minerals, and royalties derived therefrom within the Province, and will
> give to the Province access to all other records, documents or entries relating to any such

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[33] Spry and McCardle, "Records of the Department of the Interior," 75.
[34] Spry and McCardle, "Records of the Department of the Interior," 75.
[35] Cook, "Legacy in Limbo," 73.
[36] "1930 – Natural Resources Transfer Agreement," The Many Histories of Canada,
https://canadianhistory.ca/natives/timeline/1930s/1930-natural-resources-transfer-agreement

dealings and permit to be copied by the Province any of the documents required by it for the effective administration of the Crown lands, mines, minerals and royalties.[37]

The transfer of resources to the Prairie Provinces in 1930 was a significant turning point in the history of settlement and is described as the completion of confederation as initially imagined in 1867.[38] Due to the implications on recordkeeping provided in the agreement, the Prairie Provinces were to receive all records in question, leading to the initial stages of the dispersal of Interior's records. The Act explains why the dispersal took place and why the records are in the locations in which we can find them today.

After the Department of the Interior was abolished, the records were moved to new parent departments.[39] The dispersal of records was a long and complicated process that lasted decades after the closure of the Department; legal matters and complications played a major role in the transfer, further slowing and impeding the process. The transfer was disputed, especially over active records within certain provinces, because such records were necessary for precedent or legal value. Ultimately, the process was cumbersome with transfers having begun in the 1930s and ending in the 1950s.[40] Many of the records that were not transferred were destroyed due to economic constraints and to create office space during the Depression while others were pulped for paper salvage campaigns during the Second World War and those not wanted or required by the provinces were destroyed on a large scale in the early 1950s.[41] Dispersal and destruction obscured the provenance of the records, making it difficult for archivists and researchers to understand records in their current place. In the present day, one must search for particular documents in more than one archive, creating issues of access as well.

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[37] "Schedule: Memorandum of Agreement," *Manitoba Government*" (1929): 10, https://web2.gov.mb.ca/laws/statutes/ccsm/n030e.pdf
[38] Chester Martin, *Dominion Lands Policy* (Toronto: McClelland and Stewart, 1973), 226.
[39] Cook, "Legacy in Limbo," 80.
[40] Cook, "Legacy in Limbo," 80.
[41] Cook, "Legacy in Limbo," 81.

Although considerable quantities of documents were destroyed, the records were so voluminous that the records of the Interior still represented vast amounts to be managed by the provinces. Resources within each province were insufficient to take on record sets of that calibre. Even the physical act of transfer was a difficult task requiring extensive funds, large-scale transportation services and, eventually, space within the archives designated to receive the records.[42] From the perspective of both archival theory and archival practice it is not suitable to keep all documents for multiple reasons, some of which have been previously mentioned. The key question is to distinguish between what can be salvaged and what can be destroyed. A proper scheduling process, contextual reasoning (based on provenance) and content appraisal are required to select the reduced set of records for long-term preservation. Destruction of Interior's records, however, was done in manic bursts and on a large scale, not allowing archivists to have a full understanding of which records should have been preserved or which records could have been destroyed and, unfortunately, there is no way of knowing what some of those records contained, a tragic reality that came to pass upon the abolition of Interior. It is disheartening archivists in the present day are not always aware of what is missing from our knowledge.

The dispersal of the records following the abolition of Interior was not ideal from the perspective of understanding the original contexts of creation and use of the records. Nonetheless, there were some positive results. Though the records were in new locations, they continued to be used in the management of lands and natural resources, and for other reasons. Between 1948 and 1951, the federal Department of Mines and Resources sorted through Interior files and determined which files were to be sent to the appropriate provinces. In the province of Manitoba, such records were transferred to the Manitoba Lands Branch, which was responsible

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[42] Correspondence from J. Lorne Turner to Mr. Gibson, 17 November, 1943, records relating to Dominion Lands, RG15, volume 2006, file 5672360, Library and Archives Canada.

for microfilming the land records. The Manitoba Lands Branch reorganized the files into new series upon receiving them and began microfilming them in 1952 through contracts with Kodak.[43] The remaining files were sent to Public Archives of Canada, where further microfilming took place. These records are now available from Library and Archives Canada.[44]

As we look to the present day, the research on Interior's records led by Dr. Ryan Eyford allows us to gain perspective on whether the process of transfer was successful and the implications it had for the records available in Manitoba. During my time on the project, I was fortunate to experience, first-hand, how the process took place as a researcher and archivist. Within the correspondence between the Public Archives and various provincial Natural Resource departments in 1943 to1950, discussion concerning records transfer describes destruction of documents, cost, transportation, box counts, etc.,[45] providing insight into the lengthy process of record dispersal that took place before the provinces even received their records. As the research assistant on the project, a significant portion of my work involved understanding which records had been sent to Manitoba and which were not, in hopes of identifying what was missing. Though I was not able to complete the entire project with Dr. Eyford, I was able to analyze and assess some aspects of the dispersal process.

As several separate departments were involved in the dispersal, destruction and microfilming of Interior's records, continuity has been lost throughout the years. Having so many individuals involved, over an extended period of time, has caused much confusion regarding the existence and availability of the Lands Branch records in Manitoba. In particular,

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[43] "Crown Lands Project: Interim Report Executive Summary," March 29, 1988, Natural Resources - Crown Lands, Internal file, pg. 2, Archives of Manitoba, Winnipeg, Manitoba, Canada; RG17 Microfilming D1: 1950-1960, 1950-1960, Internal File, Archives of Manitoba, Winnipeg, Manitoba, Canada.

[44] Information provided through personal correspondence by Dr Ryan Eyford, Professor at University of Winnipeg; Records relating to Dominion Lands, RG15 volume 2006, file 5672360, Library and Archives Canada.

[45] Records relating to Dominion Lands, RG15 volume 2006, file 5672360, Library and Archives Canada.

as the Manitoba Lands Branch microfilmed the records, decisions about which records to microfilm differed from person to person and series to series, leading to inconsistencies that cause inefficiency and hinder the retrieval process. Poor microfilming and recordkeeping processes led to some records being retained in multiple formats and to series becoming mixed with each other due to inadequate storage after being microfilmed leading to further problems in retrieving and scheduling after the fact.[46] It is at times difficult to know which records were destroyed before the transfers took place and which were destroyed after microfilming began. A report written by Records Clerk Violet Patterson states the optimistic faith Manitoba Lands Branch retained in microfilm technology, which led to the destruction of many files and documents that had been microfilmed. The department felt microfilm was providing a solution to the lack of space, but moreover, that it represented human progress.[47] Unfortunately, many records that were transferred from Dominion Land Branch to Manitoba after 1930 were lost due to microfilming. Despite significant time and resources involved in making an in-depth comparison between paper records and microfilm, it is impossible to confirm all that has been lost. As a research assistant and archival studies student, my experience with this project allowed me to delve into the records dispersal process through the minds of those involved decades earlier. To read about such circumstances in secondary sources does not provide a comparable level of understanding of the consequences of the dissolution of a large entity such as the Department of the Interior.

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[46] "Crown Lands Project: Interim Report Executive Summary," March 29, 1988, Natural Resources - Crown Lands, Internal File, pg. 7-8, Archives of Manitoba, Winnipeg, Manitoba, Canada.

[47] Violet Patterson, "Western Land Director's Conference, Winnipeg Manitoba, August 10, 1953: Records Division," August 10, 1953, RG17 D1 Crown Lands Office-History and Records Division, internal file, pg. 4-5, Archives of Manitoba, Winnipeg, Manitoba, Canada. Thanks to Ryan Eyford for providing the source for this information in May, 2018 and also within his examiners report prior to my thesis defence.

Records of the Department of the Interior
Part II: Records of the Department of Indian Affairs

As Interior's records were microfilmed, records involving Indigenous communities were among those preserved on film. John A. Macdonald's vision for the West was to displace Indigenous populations and settle the area with new immigrants. The creation of a "civilized" society involved abolishing the rights of those who already occupied the land and Indigenous communities were eliminated or reduced in order to make room for colonizers. As Canada began to make significant strides in settling the West, the process had a devastating impact on Indigenous peoples. Settlers envisioned new possibilities for themselves but Indigenous peoples experienced hardship and loss and the story of what they experienced during the settlement of the West has been lost and displaced within the records of the Department of the Interior leading to inadequate representation of their perspective. Information about Indigenous communities, and the impact of colonization upon them, is lacking within existing records, while other information was destroyed along with the records. With the amendment of the Indian Act in 1880, the Indian Branch was promoted to departmental status becoming the Department of Indian Affairs (DIA) and continued under the supervision of the Minister of the Interior but most decisions were handled by the Deputy Superintendent General, Lawrence Vankoughnet, who served as the head of the department from 1874 to 1893.[48]

The early recordkeeping systems within Indian Affairs lacked direction and went through many changes, which was also reflected in contemporary recordkeeping practice more broadly. From 1782 to 1821, when Indian Affairs Superintendent Sir John Johnston was in power, there

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[48] Brian E. Titley, "Indian Administration: Origins and Development," in *A Narrow Vision: Duncan Campbell Scott and the Administration of Indian Affairs in Canada* (Vancouver: University of British Columbia Press, 1986),13.

was no letter-book or letter register kept in his office in Montreal.[49] The correspondence was

irregularly kept and annual account books and funds belonging to Indigenous communities were

administered without a system of arrangement.[50] After this time period, other officials within

Upper and Lower Canada also did not exercise acceptable recordkeeping practices since

periodical reports or accounts were not kept. In 1829 the first systemized system of

recordkeeping was introduced in form of letter-books that recorded outgoing correspondence.

Previously, letter-books and correspondence were not regularly maintained.[51] The Bagot

Commission, which operated from 1842 to 1844, examined the operations of the Indian

Department with a goal of improving First Nations standards of living while finding ways to

reduce expenses.[52] This provided the push to reorganize the Indian Affairs recordkeeping system.

The Bagot Commission determined that prior to 1830 there was no clerk within the Indian

Affairs Department; correspondence and business was occasionally performed by one of the

secretaries in the Government office or by one of the officers of the Commissariat.[53] Moreover,

Indian records from Canada East and Canada West were intermixed and handled in one office.

The correspondence and central business of the office was handled at the seat of the government

under the superintendence of a chief clerk and though it was not the most efficient record-

keeping practice, it can be argued it was an improvement to the personal and inconsistent record

keeping that came before it.[54]

Poor recordkeeping resulted from a lack of time and resources as staff members were

occupied with urgent demands or current business and no time was available to create or

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[49] Sean Darcy, "The Evolution of the Department of Indian Affairs' Central Registry Record-Keeping Systems: 1872-1984," *Archivaria 58* (Fall 2004): 162.
[50] Darcy, "The Evolution of the Department of Indian Affairs," 162; Russell, "The White Man's Paper Burden," 55.
[51] Darcy, "The Evolution of the Department of Indian Affairs," 163; Russell, "White Man's Paper Burden, 55.
[52] Darcy, "The Evolution of the Department of Indian Affairs," 163.
[53] Darcy, "The Evolution of the Department of Indian Affairs,'" 163.
[54] Russell, "The White Man's Paper Burden," 57.

implement a recordkeeping plan. As a result, the Commission recommended the office of the

Chief Superintendent hire a chief clerk to keep track of all correspondence of the Indian Affairs

Department in a book with an alphabetical index and also a bookkeeper responsible for

maintaining the account books, recommendations adopted between 1844 and 1872, leading to the

formation of the Department of Interior.[55] During this period, the incoming and outgoing

correspondence was filed separately. The incoming correspondence was filed sequentially by

number assigned at the front of the letter register, while the docket with the actual

correspondence was given the same number and filed. Another entry was made in the same

register, which was arranged alphabetically by correspondent and then sub-divided by year.

Copies of the outgoing correspondence were bound together chronologically in letter-books that

contained an alphabetical index at the beginning.

One significant downside of this system was that it was very difficult to distinguish

subjects within the incoming and outgoing correspondence and to link the two was time-

consuming and administrative efficiency was compromised.[56] Moving into 1872, a straight

numeric filing system (a central registry filing system) was introduced; the Department of

Interior proper simultaneously adopted the same system.[57] For the Department of Indian Affairs,

the system applied to incoming and outgoing correspondence at headquarters and was known as

the "Red and Black Series."[58] The colours of the leather letter-books was used to distinguish

between eastern and western Canadian correspondence. In this filing system, each letter received

was stamped with its date of receipt. If letters were received without previous correspondence to

refer back to their subject matter, they were then summarized on the file jacket and on the letter

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[55] Darcy, "The Evolution of the Department of Indian Affairs," 163.
[56] Terry Cook, "Paper Trails," 15.
[57] Darcy, "The Evolution of the Department of Indian Affairs," 164.
[58] Darcy, "The Evolution of the Department of Indian Affairs," 164.

attached to the file jacket. The entry was copied into the register. The letter, file jacket and the

entry in the register were all stamped with the same letter registration number.[59] Once this

department received correspondence regarding the same subject, it was registered under a new

number in the registry, with the original file number. This filing system also used a "Subject

Extension Register" and was arranged alphabetically by correspondent or subject.[60] Such

recordkeeping practices continued to be used even when records of the Department of Indian

Affairs became more extensive and complicated. By 1950, the Red and Black series system was

still being used, even though it was not able to fulfill the needs of the department. Many records

were lost due to poor and old recordkeeping practices.[61]

Understanding Indigenous Perspectives of Treaty Making Through the Context of Government Record Sets

The history of keeping records related to Indigenous communities is long and

complicated. The previous content has provided insight into the perspectives of the colonizer,

which is only part of the story of colonization, land dispossession and forced assimilation.

Treaty documents determined many important aspects of the lives of Indigenous

communities, including where and how they lived. The documents were legally binding and

were to be respected by both parties involved. As history has proved, this was not the case since

treaties were often written unfairly, did not comply with Indigenous traditions or laws and when

treaties did include Indigenous traditions such as oral agreements, those promises were not

written into final texts of treaties. Examination of government records can lead to insightful

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[59] Darcy, "The Evolution of the Department of Indian Affairs," 164.
[60] Darcy, "The Evolution of the Department of Indian Affairs," 164-165.
[61] Darcy, "The Evolution of the Department of Indian Affairs," 169.

information on what European colonizers believed treaties to be in comparison to their

Indigenous counterparts.

The ways in which treaties and other records have been interpreted allow insights into

conflicts during the settlement and dispossession of land in the West. Current interpretations

provide details on how the documents were understood in the past and continue to be interpreted

in the present. First, it is worthwhile to mention a recurring theme in many pieces related to the

subject, that of peace. Scholars have explored treaties and Indigenous records for decades and

this one idea tends to capture the attention of all. When treaties were being agreed upon,

Indigenous communities believed they were agreeing to documentation that promised peace and

shared land. It is evident that not only did they desire peaceful living but they also wanted to

establish peace between themselves, new settlers and even other Indigenous groups. The

following discussion will shed light on the characteristics and varied interpretations of

government documents, which will then illuminate some of the hardships experienced by First

Nations.

An important aspect of any legal agreement is that both parties understand the content

and context behind the agreement. There are many characteristics of paper documents that reveal

how content will be interpreted and whether it will be reliable. Since Indigenous law is based on

an oral foundation, this cultural practice must be taken into account when analyzing treaty-

making processes. Oral and written documentation are two very different forms of agreement

and misunderstandings between the two can be common if either party is unfamiliar with the

other form of practice. For instance, the Indigenous negotiators of Treaty 7 believed the treaty

promised peace and freedom to move across territories.[62] They understood the treaty according

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[62] Walter Hildebrandt, Dorothy First Rider and Sarah Carter, *True Spirit and Original Intent of Treaty 7* (McGill-Queen's University Press: Montreal; Kingston, 1996), 112.

to their own histories. The Stoneys believed they would no longer be fighting the Blackfoot

Confederacy and other First Nations while the Blackfoot nations also understood the agreement

to prevent friction with the Stoneys and Cree.[63]

To prevent misunderstandings, there are ways to interpret treaties that are fair to both

parties. The most widespread approach so far has been to consider only the written and legal

contexts of treaties. The other perspective is to take into account Indigenous customs, which

involve transfer of knowledge, oral history and scared laws.[64] Treaties are interpreted as living

documents because they are passed down from one generation to the next and that knowledge

within them is very much part of the lives of those affected by the treaties.[65] With this knowledge

of treaty interpretation, it is only fair to consider both perspectives. Settlers of Canada are

accustomed to one specific way of law and lawmaking but it should not lead to the assumption

that other forms of law are inferior. Due to limited understandings of Indigenous cultures, the

courts have historically denied the interpretation of oral histories as valid pieces of information.

The effort to understand Indigenous perspectives within negotiations is essential to reaching

peace and resolution with Indigenous communities but it is difficult to do so when historical

information and Indigenous voices prove the government's purpose behind such treaties as

Treaty 7 was for the simple surrender of land, while Indigenous negotiators brought a much

larger set of concerns to the table, including physical and cultural survival and peace with settlers

and neighbouring Indigenous groups.[66] The justification behind the government's claim to land

was because the First Nations did not farm their land should no longer belong to them or they

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[63] Hildebrandt, First Rider and Carter, *True Spirit*, 112.
[64] Aimée Craft, "Living Treaties, Breathing Research," *Canadian Journal of Women and the Law* 26, no. 1 (2014): 7.
[65] Craft, "Living Treaties," 8.
[66] Hildebrandt, First Rider and Carter, *True* Spirit, 112

should be taught to farm.[67] The scheme was meant to "civilize" First Nations and teach them a

domesticated way of life. The government, however, aimed to impose their knowledge and way

of farming on the Indigenous peoples who, in fact, possessed knowledge of farming that predated

that of Europeans.[68] Furthermore, Indigenous women were the farmers and played this role

willingly, contrary to the perceptions of settlers and government bureaucrats.[69] Unfortunately,

underhanded intentions created an advantage for European settlers and treaty makers.

Particularly disheartening about these truths is the notion Indigenous communities were ready to

share the land and its resources with new settlers.[70] They did not shy away from accepting

newcomers but the government did not honour their desire to cooperate.

Having established the importance of considering the perspectives of both parties in

making treaties, further contemplation of the characteristics of treaties indicates information on

Indigenous and settler recordkeeping practices. As mentioned earlier, written documentation

from government archives cannot be considered on its own in legal matters with First Nations, as

these records privilege the perspectives of settlers.[71] One reason written documents are unreliable

on their own when analyzing treaties is because the wording used to form treaties created a

disadvantage for Indigenous parties by failing to provide a clear understanding of what resources

were to remain under Indigenous control. Terms such as "dominion" and "sovereignty" were

used to describe land that was occupied by Indigenous peoples to reassure them that colonists

posed no threat when in reality, the British intended to increase their power over the Indigenous

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[67] Sarah Carter, *Lost Harvests: Prairie Indian Reserve Farmers and Government Policy* (McGill-Queens University Press: Montreal, 1990), 21.
[68] Sarah Carter, *Imperial Plots, 30.*
[69] Carter, *Imperial Plots*, 37.
[70] Craft, "Living Treaties," 7.
[71] John Borrows, "Wampum at Niagara: The Royal Proclamation, Canadian Legal History and Self-Government," in *Aboriginal and Treaty Rights in Canada: Essays on Law, Equality and Respect for Difference*, ed. by Michael Asch (UBC Press: Vancouver, 1997), 156.

lands.[72] While Indigenous peoples already had well-developed memory and oral traditions in treaty and law making, there is no doubt that a deliberately immoral use of written text would create an unfair advantage for settlers. One example of a document that illustrates issues of controversy and confusion is the North Saanich Treaty from BC which contains many errors and discrepancies such as the author of the act, James Douglas, stating the Wsanec people participated in issuing the treaty document and that 118 Indigenous people signed it. However, the signatures are missing and in place is a series of suspiciously uniform "X" marks.[73] In one instance of the treaty, the handwriting appears to be different between two paragraphs and this is something seen in every treaty written by Douglas and the identity of the other author remains unknown, a concerning issue in legal matters.[74] In order to provide answers to this mystery, archival methods ask us to fall back on determining provenance; however, the original recordkeeping of the North Saanich Treaty is obscured, as it has been re-described and re-filed at the BC Archives. It is clear from physical holes on the pages of this treaty that it was attached to other documents but it is not known which those were.[75] The circumstance only adds to other deficiencies such as the authenticity and reliability of this document in terms of archival practice but also indicates fair treatment of Indigenous peoples and matters is questionable to say the least. The Saanich Treaty is incomplete, as it is missing significant amounts of important details. If such a document were to be microfilmed, its incompleteness would then be passed on to other forms of documentation. I believe interpretation of this type of document is required prior to it being microfilmed in order to provide full information to the user of its insufficiency and unreliability in accordance to its context within record description. This is one of the many

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[72] Borrows, "Wampum at Niagara," 160.
[73] Raymond Frogner, "Innocent Legal Fictions": Archival Convention and the *North Saanich Treaty* of 1852," *Archivaria* 70 (2010), 66
[74] Frogner, "Innocent Legal Fictions," 71.
[75] Frogner, "Innocent Legal Fictions," 71.

reasons why Indigenous records need archival attention and the interpretation of Indigenous

people who can help provide an accurate perspective of documents to prevent misinterpretation.

The Truth and Reconciliation Commission's Calls to Action and Interim Report address issues of

Indigenous perspective within archival documentation and will be explored in the following

section of this chapter.

Issues with Microfilmed Indigenous Records and Potential Solutions

Recordkeeping practices and the process of microfilming have significantly affected

federal records addressing the place of Indigenous communities in Canada. Records created by

Interior and Indian Affairs preserve and are interpreted from the perspective of immigrants,

providing an ethnocentric account of events that took place during colonization of the West. The

records in question were archived in various formats, one being microfilm. Archival processes

significantly impacted their arrangement, accessibility and overall interpretation. It is pertinent to

understand the processes behind this microfilming specifically, as it was in high demand after the

Department of the Interior was abolished. Having the records on microfilm allowed them to be

distributed and accessed more easily. These records contain a vast array of information, carrying

with it the power of interpretation, for which archival methodology was responsible.

Memory is an important aspect of Indigenous tradition that involves passage of time and

experience. For example, Cree culture invests significant energy towards preserving the memory

of their people's past, as a main source of knowledge. Oral history has kept such memories alive,

is not only the primary form of record keeping for the Cree but for other Indigenous communities

as well.[76] Individuals are educated at an early age to retain oral histories and traditions in order

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[76] Winona Wheeler, "Cree Intellectual Traditions in History," in *The West and Beyond: New Perspectives on an Imagined Region*, ed. Peter Fortna, Alvin Finkel and Sarah Carter (Athabasca University Press: Edmonton, 2010), 53.

for them to be passed down from one generation to the next.[77] Oral histories rely on accurate

memories that have been highly trained, an unmatched skill unfortunately interrupted by

colonization, industrialization and residential schools. Grandparents were no longer able to raise

children with oral traditions or knowledge during this time, which created a disruption in the

ways of Indigenous cultures, particularly after the Second World War.[78]

Taking into account the ways in which the Cree and other Indigenous communities retain

knowledge of their past, microfilm poses issues in regards to accurate portrayals of Indigenous

histories. Since Indigenous stories and history have often been oral, their depiction on paper from

the perspective of European settlers is problematic, seeing as European settlers only saw positive

aspects of settlement and did not focus upon the disruption of Indigenous ways of life.[79]

Government records about Indigenous peoples have been microfilmed from paper originals but

have not taken into account the first-hand perspectives of the people themselves, raising the

question: how do we appropriately incorporate the traditional knowledge, oral traditions and oral

histories of Indigenous peoples into the records that already exist within archives, including

those on microfilm?

The spoken word is acknowledged as scared and ceremonial.[80] To omit that aspect from

Indigenous history with written records has been a mistake that is slowly being corrected through

the work of decolonizing archives such as the NCTR and Indigenous and other academics who

aspire to promote knowledge of the subject. Microfilm is of course a valued source of records on

how Western Canada was settled including on the dispossession of Indigenous lands but to

compliment these records, direct perspectives of the people in question must be added. For

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[77] Wheeler, "Cree Intellectual Traditions," 54.
[78] Wheeler, "Cree Intellectual Traditions," 54.
[79] Sarah Carter, *Aboriginal People and Colonizers of Western Canada to 1900* (University of Toronto Press: Toronto, 1999), 101.
[80] Wheeler, "Cree Intellectual Traditions," 55.

example, the following diagram represents the work being done by the NCTR to decolonize

records and deliver a much-needed perspective of survivors of residential schools.

Figure 2.1: Breaking Apart Colonial Record Sets.[81]
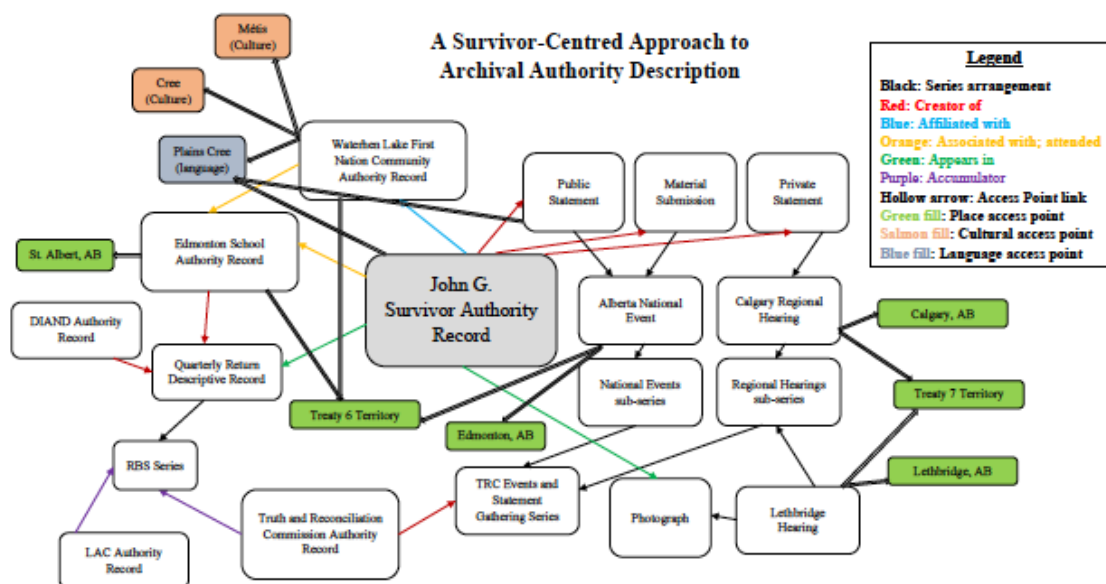
The type of perspective microfilm records provide cannot easily be altered because microfilm is

a permanent form of recordkeeping. Changes to the order of the record set cannot be made and

additions or subtractions are difficult as well. What we see on microfilm is what we get.

However, digitizing the microfilm, breaking the records out of their order on the microfilm reels

and adding oral histories to such collections by using a survivor-centric approach as seen in

figure 3 can offer further context to the Indigenous experience. Inclusion of oral histories within

a given description can provide a broader and deeper interpretation of provenance, reliability and

authenticity to the record set. The diagram shown here has essentially placed the individual at the

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[81] This diagram was provided with permission from Raymond Frogner, Director of Archives at the National Centre for Truth and Reconciliation and Jesse Boiteau, Senior Archivist at the National Centre for Truth and Reconciliation.

centre of all connections in the network that involves arrangement and description of a record set ensuring that through the incorporation of individual and community perspectives, institutional biases of traditional archival practices can be reduced. The survivor-centric approach provides a vastly different scenario to discovering and accessing records compared to those implemented by LAC. When searching for residential school records, including those on microfilm, the user must start by understanding the bureaucratic and recordkeeping processes followed by the Federal Government.[82] The government has steered away from the subjects involved in the records and concentrated on arrangement and description practices of the colonizer authority. Such an approach is being continued from past decades without significant change along the way. Microfilm records remain a part of the problem, to which the NCTR is now providing a solution.

Indian Affairs records were in high demand at what was the Public Archives of Canada (now Library and Archives Canada) in 1974. Due to this demand, the Archive's staff became responsible for sorting, classifying and microfilming the holdings. A significant reason behind microfilming Indian Affairs records was to offer the reels for sale to interested groups or repositories and to reduce research and travel costs of Indigenous organizations. The Public Archives of Canada was under a high workload in terms of providing service but these records were microfilmed in hopes of reducing demands. Prairie Provinces were the first to make extensive purchases and as a result the records can be accessed at the Archives of Manitoba.[83]

The Red and Black series were the earliest filing systems used by Indian Affairs that followed subject classification and duplex numeric systems.[84] Rearrangement of these records, along with those of the Residential Schools, took place prior to them being microfilmed. Their

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[82] "Conducting Research on Residential Schools: A Guide to the Records of the Indian and Inuit Affairs Program and Related Resources at Library and Archives Canada," Library and Archives Canada, accessed May 7, 2017, http://www.collectionscanada.gc.ca/obj/020008/f2/020008-2000-e.pdf

[83] James Morrison, "Archives and Native Claims," *Archivaria* 9 (Winter 1979-80): 24.

[84] "Library and Archives Canada, "Conducting Research on Residential Schools."

arrangement was altered, however, to meet the needs of institutions that needed the records rather than those of the communities they represented. Records of Residential Schools are another group of records that have seen similarly negative outcomes as Lands files. Between 1867 and 1996, there were 139 federally operated residential schools and residences.[85] The School Files series encompasses all aspects of Indian school administration in Canada which was eventually microfilmed and made accessible with certain restrictions in place. Files that were entirely restricted at the time of the microfilming were not filmed at all. If files were only partially restricted, the restricted items were removed from the file and the open material was filmed. The user was informed of the restriction with the insertion of an alert at the end of the open end of the filmed portion. As the material was removed before filming, it was retained with the original paper records held by Library and Archives Canada. These microfilm reels were digitized in the same form and order as they were on microfilm. The digitized materials can be found at the Library and Archives Canada website and was transferred to the National Centre for Truth and Reconciliation as part of the federal government's obligations under the Indian Residential Schools Settlement Agreement.

The National Centre for Truth Reconciliation (NCTR) is home to statements, documents and other materials associated with residential school attendees with a mandate is to preserve the memory of Canada's Residential School system and legacy forever.[86] Selective records at the Centre are available online, as they have been digitized, but they can also be accessed from the LAC website, as well as on microfilm at LAC, the Archives of Manitoba and many other locations. The digitized microfilm records in question are of a quality allowing viewing ability

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[85] Truth and Reconciliation Commission of Canada, *Honouring the Truth, Reconciliation for the Future: Summary of the Final Report of the Truth and Reconciliation Commission of Canada* (Winnipeg: Truth and Reconciliation Commission of Canada, 2015), 3;

[86] "Our Mandate," National Centre for Truth and Reconciliation, https://nctr.ca/about-pages.php#mandate

and research purposes. By housing digital copies of school files on microfilm from LAC and records from Indigenous communities, NCTR has become a leading institution on the path to Indigenous story-telling and accessibility. However, though most records are accessible and provide a necessary lens into the past, there remain questions of privacy, respect and ownership.

At present, selective digitized versions of microfilmed school records can be searched through the website of the NCTR, a platform available to a large audience. The NCTR provides open access to some records but also makes a point to respect the privacy of Indigenous communities by restricting access to others. Academics and archivists who are involved with the NCTR have continuously raised the question of whether access to such records should be restricted to the general public. The issue is complex, as it also involves the issue of Indigenous rights and whether Indigenous communities feel comfortable revealing their past through historical documentation. In the past, their control over access to information has been denied and in the words of Hagan, "The historical Indian may be the captive of the archives, but the key to those archives is in the hands of non-Indian historians and ethno-historians." Therefore, it is time that Indigenous communities and individuals are provided a chance to exercise their rights over information that has always been rightfully theirs.[87]

Most Indigenous records have been created, kept and maintained by non-Indigenous individuals or in other words, white individuals.[88] As a result, non-Indigenous perspectives are not well represented in the archives and Indigenous concerns have not influenced access policies and procedures.[89] This loss of control has been damaging to Indigenous peoples' past, present and future. Their history has been warped and in the present they fight to claim their right to not

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[87] Ry Moran, "Indigenous People Should Decide on Matters of Access to Archival Information," *International Journal of Circumpolar Health* 75, no. 1 (2016): 1-2.
[88] William Hagan, "Archival Captive – The American Indian," *American Archivist* 41, no. 2 (1978): 137.
[89] Hagan, "Archival Captive," 137.

only gain possession of their records but to finally provide an accurate representation of their historical past. Therefore the importance of surrendering control of Indigenous records to their rightful owners cannot be understated. Their voice and permission as to how these records are to be archived, including those that have been microfilmed by LAC, is one step forward to reconciliation.

The extensive work done by the Truth and Reconciliation Commission of Canada (TRC) towards reconciliation has created an impact on how archives, other various organizations, and the general public should begin to understand unjust experiences of the Indigenous population. TRC's *Interim Report* and *Calls to Action*, provide necessary recommendations, which must be implemented into the Commission's activities and those of international organizations. Document collection and archival responsibility are among those activities that involve accessibility to records that provide knowledge of truth. By collecting documents, developing a database, digitizing material, providing survivor statements about their experiences and the aftermath of those experiences in residential schools providing accessibility for research, the voice of Residential School survivors can reach further heights and begin the process of archival decolonization.[90]

Microfilm is a part of this process because many documents have been digitized from microfilm surrogates. Ensuring accurate, complete and reliable information is being digitized is necessary to providing the truth but there may be times when microfilm does not contain the entire truth due to the lack of information on original paper documentation at which point Indigenous peoples play a vital role in providing first-hand accounts of their experiences that can

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[90] Truth and Reconciliation Commission of Canada, *Truth and Reconciliation Commission of Canada: Interim Report*, (Winnipeg: Truth and Reconciliation Commission of Canada, 2012), 13.

be added to paper records and microfilm a practice ensuring the creation of a wholesome set of

records that can be relied upon for accuracy.

The TRC's Calls to Action include several addressed directly to Canadian archives. Calls

69 and 70, for instance, address the importance of proper recordkeeping and access to those

records. Call 69 directly asks Library and Archives Canada to adopt the *United Nations Joinet-*

Orentlicher Principles and *United Nations Declaration on the Rights of Indigenous Peoples* to

completely understand the full breadth of what has historically taken place. On the other hand,

Call 70 addresses the federal government to provide funding for collaboration with Indigenous

peoples to review archival policies.[91] Calls 69 and 70 are similar to the *Joinet-Orentlicher*

Principles that state the necessity to preserve archives and prevent destruction of documents or

concealment of records that may provide historical truths about human rights.[92] Access to such

documents is equally important, as it allows Indigenous people to exercise their rights and to

fairly control their own forms of government.[93] The United Nations Declaration on the Rights of

Indigenous Peoples (UNDRIP) states that only Indigenous communities can determine the type

of documentation and memory preservation they desire, encouraging more control for

communities that have lacked it in the past.[94] To implement all such activities is difficult,

especially in light of compliance with archival standards such as *Rules for Archival Description*

(RAD), and the pressure to meet international requirements.[95]

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[91] Truth and Reconciliation Commission of Canada, *Calls to Action* (Winnipeg: Truth and Reconciliation Commission of Canada, 2015), 8; Nathan Mnjama, "The Orentlicher Principles on the Preservation and Access to Archives Bearing Witness to Human Rights Violations," *Information Development* 24, no 3. (2008): 213-225.
[92] Mnjama, "Orentlicher Principles," 218.
[93] Mnjama, "Orentlicher Principles," 219.
[94] Greg Bak, Tolly Bradford, Jesse Loyer and Elizabeth Walker, "Four Views on Archival Decolonization Inspired by the TRC's Calls to Action," *Fonds d'Archives* 1 (2017): 4; United Nations, *Declaration on The Rights of Indigenous Peoples* (United Nations, 2007), 22-23.
[95] Bak, Bradford, Loyer and Walker, "Four Views," 6.

The Calls to Action provide a framework previously missing from government policies. The existence of this work reinforces ideas of what Indigenous peoples have believed to be appropriate avenues towards the possibility of reconciliation. Survivors of residential schools lost their identities and experiences feelings of dispossession due to the forced abandonment of their culture. Children were restricted on when they could speak their languages, which was a confusing circumstance, as they did not always understand English. They were punished for retaining their culture and punished for not understanding a culture they had very little exposure to.[96] By preserving relevant documents and retaining a public memory of what happened, Indigenous peoples can move forward with their families and as communities. Residential schools attacked their memory through assimilation, breaking connections and torture.[97] By creating archives that respect the memory and the perspectives of Indigenous survivors, we can shed light on the truth behind incidents that have not been given the full attention they deserve.

Ry Moran, Director of the NCTR, was asked to comment on the ethics surrounding data access and the implementation of processes that would restrict use of such records.[98] Now that copies of the records have been transferred from the control of the church and government to an institution governed by Indigenous peoples, Moran believes a better understanding and resulting practices in caring for these records can be achieved.[99] All originals, however, do remain with the churches and Federal government, creating limitations for decolonizing records at the NCTR. A major concern of the Centre centres around records that have been placed in the public

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[96] National Centre for Truth and Reconciliation, *Canada's Residential Schools: The History, Part 1 Origins to 1939. The Final Report of the Truth and Reconciliation Commission of Canada Volume 1* (McGill-Queen's University Press: Montreal & Kingston, London and Chicago, 2015), 617; National Centre for Truth and Reconciliation, *Canada's Residential Schools: Reconciliation. The Final Report of the Truth and Reconciliation Commission of Canada Volume 6* (McGill-Queen's University Press: Montreal & Kingston, London and Chicago, 2015), 162.
[97] National Centre for Truth and Reconciliation, *Final Report: Volume 6*, 157.
[98] Tracey Galloway and Rhonda Johnson, "Use of Archival Data on Indian Residential Schools," *International Journal of Circumpolar Health* 75, no. 1 (2016): 1.
[99] Moran, "Indigenous People Should Decide," 1.

domain. Records collected by TRC were microfilmed in the 1960s and have been distributed, digitized, and placed online. Access to these records began at a time when present day concepts of privacy had not been fully developed and continued through to the existence of the NCTR.[100] The decision to eliminate restrictions on access to these records is now being reconsidered by NCTR, as reconciliation becomes a priority of Indigenous communities and the relationship forged with the Canadian government as a result. For example, residential school files contain information regarding health, schooling and dealings with law enforcement, among other subjects, that may harm individuals and their families if made freely available. As the NCTR struggles to maintain a balance between their promise of access to the public and to the Indigenous peoples who entrust the Centre to maintain their records, complex ethical issues hover over the appropriate decision makers. The NCTR has taken action by removing some sensitive documentation from their website to ensure fairness and caution in an area that can be detrimental to the wellbeing of the community in question.[101] In agreement with Moran's perspective on the disclosure school records, I believe documentation concerning individuals is highly sensitive and must be handled with care. Considering the trauma endured by Indigenous peoples at the hands of settlers, publicly sharing their experiences would only add salt to wounds that, for many, remain fresh. Those not working in close proximity with the NCTR or the records they house, remain naïve of implications involved as non-Indigenous community members seem to forget the time period of when these travesties and miscarriages of justice took place. Most residential schools had ceased operation by the mid-1970s, with the last one closing in 1996.[102] Restrictions on access to records that have been removed from the public domain or ones that were not made available at all should remain in place until adequate reconciliation has been

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[100] Moran, "Indigenous People Should Decide," 1.
[101] Moran, "Indigenous People Should Decide," 1.
[102] Library and Archives Canada, "Archived – Microform Digitization."

reached which is only possible when Indigenous communities and the institutions holding their records can resolve all outstanding issues on accessibility. Even so, many victims of Residential Schools are no longer alive, but their families continue to struggle with their past, informing the decisions NCTR has made to find a balance between access and privacy. I believe there exists misunderstanding, which results in tension between pubic demands for access of records and privacy laws that have been put in place by archivists or other holders of records. Moran believes in advancing our knowledge about the experiences that took place at residential schools.[103] We tend to approach the subject from the perspective of an outsider.[104] My perspective aligns with Moran's in that Canadians fail to realize such experiences took place in the very recent past and is key to understanding the entire picture at hand. Individuals who remain plagued by mental after experiencing the harsh environment of residential schools still have not come to terms with what took place and why; to disrespect their present wellbeing is to undermine their traumas, which makes the decision to restrict certain records a valid one.

Given Moran's perspective on access to school records, differences have occurred in the way in which records are accessed. In order to gain access to particular Indian Affairs files, one must file a FIPPA request. Such requests are time-consuming and indicate restrictions on materials at hand. It has been argued, though, that land records from Indian Affairs should be open access, as they aid in land disputes and provide proof of land titles for some Indigenous people. I believe, however, that these access policies require re-evaluation, just at the NCTR is re-evaluating access to school records. Land records directly relating to Indigenous peoples should be open for the purposes of historic land claims but not for the scrutiny and advantage of

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[103] Moran, "Indigenous People Should Decide," 1.
[104] Hagan, "Archival Captive," 138.

those outside of those communities. New procedures would come into play, providing easier access to the Indigenous community but maintain restrictions for others.

<u>Conclusion</u>

In its lifespan, the Department of the Interior created millions of records that now hold significant value within Canadian history and Interior's records are invaluable to Canadian society, including archivists. The settlement of the West and the effects on all Indigenous communities in the area at the time is visible in the analogue and microfilm records left behind. Fortunately, most records did disappear with the Department itself and as a result, archivists and researchers are limited to an incomplete exploration into this controversial aspect of Canada's history. The records in question allow us to not only gain knowledge of how the West was colonized but to also question the motives and processes behind it. Reconciliation, one of our current priorities, can be achieved through a comprehensive account and knowledge of past actions and will aid in the betterment of Canada's future. Crucial information is contained in the records of Interior but also in the stories being told by Residential School survivors and through Indigenous oral traditions and histories. Reports and Calls to Action released by the Truth and Reconciliation Commission hold the key to progress towards reconciliation at the present time and it is imperative to rely on such recommendations to remain on the path to healing. Access and knowledge are key concepts to understand in this chapter and I believe microfilm, as a long lasting medium, is an important way to learn about an era that played a substantial role in shaping our present.

CHAPTER THREE

CURRENT AND FUTURE MANAGEMENT OF MICROFILM

Introduction

Future management of microfilm and microfilm-derived records is a concept archivists must begin to incorporate in their professions, if they are not doing so already. Generally speaking, archivists prioritize preservation of materials through currently available mediums. During the everyday tasks of an archivist, less time is allocated towards the development of new practices or mediums for future management of records. The future depends on our actions today and for that reason, conceptualization of quality preservation practices in a must. What will future management of microfilm entail? What systems are required in order to not only preserve microfilm but records that have been digitized from microfilm? These are only some of the questions that arise when thinking of the impact technological advances have had on archives and which will continue to come to bear in the near future. Although digitization is becoming the new norm in societies across the globe, archivists need to be mindful of the relevance of microfilm as a reliable medium of information access and take a thoughtful approach to digitization programs based on microfilm records.

Microfilm digitization programs exist in many institutions and are in place to preserve information and also provide easier access. Such projects are noteworthy as they all take a slightly different approach in order to achieve the same goals, answer questions as to why digitization is taking place and why many institutions believe the conversion to be advantageous. I believe they also allow us to examine current practices in various organization and their requirements but can also provide a glance into future possibilities in terms of creating efficient

access, acquiring necessary equipment and bringing needed change to practices that may have failed. It is a worthwhile and beneficial learning experience from beginning to end.

Should Microfilm Be Digitized?

Prior to exploring the various digitization projects, an understanding of what it means to digitize material and why we should or should not digitize records will create a foundation for the next part of this chapter. Although microfilming is a way of the past, microfilm has a definite place in libraries and archives today on account of existing holdings, which in many instances are quite extensive. However, technology continues to advance, as it always has, and with it we are provided with the means to digitize records either from microfilm reels or from the original records.

When information is created in digital form, it is not fixed in the way analogue information is. Digital text is much easier to copy and to change than a hard copy because digital mediums use code to represent data, which is then transferred to a machine in order to become viewable to the human eye.[1] The metadata associated with a digital record can also be recombined and manipulated for storage purposes or for the purposes of the institution.[2] Such flexibility allows for advantageous avenues of preservation and access. There is a possibility to create several copies without damaging the document and to provide access to information with ease and efficiency. By digitizing records from microfilm, we are able to control and enhance the records and metadata. Poorly microfilmed records can, in some cases, once again be made legible and usable. Since digital materials can be shared with various locations, they also make effective teaching tools for students who may not have access to microfilm or microfilm

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[1] Abby Smith, *Why Digitize?* (Washington, D.C.: Council on Library and Information Resources, 1999): 2.
[2] Smith, *Why Digitize?* 2.

readers.[3] Records such as manuscripts, rare books, or photographs can be provided through digital mediums and allow individuals to experience information they would have otherwise never experienced or waited a lengthy period to do so.[4] Although digitization has provided accessibility of records that may be unattainable to most, it maintains some limitations for specific demographics that, unfortunately, cannot make use of materials in this form.

    One such project that exemplifies this drawback is LAC's School File Series. As we saw in Chapter Two, these records were microfilmed in the 1970s as part of an effort to make key records more easily available and to decrease users' dependence on reading room services at the Public Archives in Ottawa.[5] In the 1990s, the School Files microfilm reels were digitized in the same order as they appear on microfilm.[6] On the LAC School Files Series webpage, the user may browse an extensive list of residential schools by volume or school name, which are then cross-listed by reel number. Individual records are located by scrolling through PDFs in a way that mimics the experience of using a microfilm reader.

The concept behind this project is of great value; however, it is not without some shortcomings. In order to view these records, the user must have Internet access. For many users, this is not an issue and something to which they would not give a second thought. For communities in the north, however, this is a regular challenge who continue to face troubles when accessing high-speed Internet and other tech-based services. Due to a lack of fibre optic lines in some areas, high speed and high bandwidth Internet is not available.[7] Further exacerbating matters, some residents do not have access to Internet or computers to begin with,

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[3] Smith, *Why Digitize?* 8.
[4] Smith, *Why Digitize?* 8.
[5] James Morrison, "Archives and Native Claims," *Archivaria* 9 (1979): 24.
[6] "School Files Series-1879-1953 (RG10)," Library and Archives Canada, last modified 2016, https://www.bac-lac.gc.ca/eng/discover/mass-digitized-archives/school-files-1879-1953/Pages/school-files-1879-1953.aspx#anc2
[7] Jamie Malbeuf, "Feds Say All N.W.T. Communities Have High-Speed Internet, Residents Disagree," *CBC News*, May 18, 2018, https://www.cbc.ca/news/canada/north/federal-announcement-high-speed-internet-residents-diasgree-1.4668223

possibly due to their socioeconomic status or age.[8] Income has been identified as a source of inequality, for instance, as households with incomes above $41, 000 are more likely to have Internet access and engage in online activity.[9] Moreover, individuals who are younger are more likely to be online than those who did not grow up with computers, as this population finds it harder to identify with and utilize emerging computer technologies.[10] Apart from technical limitations brought on by remoteness, economic status and age are significant challenges being faced in the North. Residential school records are meant to be available to the communities most affected by them but the irony is that Indigenous communities are often at the greatest distance from this information.

Unavailability of high speed Internet is only one problem for the file format in which the LAC Residential School Files Series has been uploaded on their website. After choosing a particular school to research, the user can either view the pages as they appear in a small window on the initial page or view the PDF version, which displays only the current page being browsed. Therefore, the user is only able to read one page at a time in PDF format. In my personal browsing experience, I felt I had no choice but to use the PDF view because the smaller window on the initial view was inadequate for reading content of most pages. The entire process is highly time consuming compared to viewing microfilm, as it is easy to scroll through a given microfilm reel without interruption.

Implementing digitization projects are proving to be useful and providing a way forward regarding access to records; however, they do come with a price. Resources required to implement digitization of records are difficult to attain. Funding may not be easily acquired for a

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[8] Michael Haight, Anabel Quan-Hasse and Bradley A. Corbett, "Revisiting the Digital Divide in Canada: The Impact of Demographic Factors on Access to the Internet, Level of Online Activity and Social Networking Site Usage," *Information, Communication & Society* 17, no. 4 (2014): 514.

[9] Haight, Quan-Haase and Corbett, "Revisiting the Digital Divide in Canada," 514.

[10] Haight, Quan-Haase and Corbett, "Revisiting the Digital Divide in Canada," 506.

project due to expensive equipment, such as flatbed scanners or overhead cameras, and the cost of employing a digitization team can be equally significant. After digitization has been implemented, expense continues to rise with the requirement of digital infrastructures needed to preserve digital images and make them available to users. In addition to cost, knowledgeable staff that has an appropriate digital educational background or work experience is valuable for a successful outcome. Establishing resources is a crucial step towards implementing a digitization project, which unfortunately can take months or even years to materialize.

One last drawback is that since digitization results in the creation of multiple copies of the same record (in this case, the original, the microfilm and now the digital), archivists are faced with responsibilities to preserve the same records in multiple media, raising the question of how many copies should be kept, risking issues of provenance, mass storage and unnecessary duplication. Archives may not view such flexibility as harmonious to their mandate because archives normally strive to maintain records in the form in which they were created, used and transferred to the archives.[11]

Though these disadvantages of digitization are apparent, it remains attractive as a means of providing remote access to unique records and as a way of preserving high-use and fragile records. Until there is the development of a technology that surpasses the features and functions of those offered by digitization, we will have to adhere to what digital technology presently has to offer. Maintaining loyalty to microfilm, while using digital forms of research does not require a guilty conscience; we can use both technologies without having to pick between the two. Archives can work with various technologies as long as they are beneficial to both the records themselves and end users. The projects featured in this chapter will explore the processes behind

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[11] Smith, *Why Digitize?* 3.

digitization by providing examples of situations when microfilmed records were migrated to digital forms.

Case Studies:
Newspaper Digitization

The University of Utah (U of U) has an interesting background regarding microfilming and digitization of its newspapers. Time and time again, the Marriot Library at U of U has successfully completed large-scale projects after receiving various grants. Since resources are one of the most significant impediments to digitization, U of U has been fortunate to receive sufficient funding in order to carry out these projects. For instance, the University of Utah started the National Endowment of the Humanities' United Sates Newspapers Program in the 1980s involving the cataloguing and microfilming of Utah's newspapers which continues with the Utah Digital Newspaper program digitizing historic newspapers of the state.[12]

The first newspapers to be digitized by the Utah Digital Newspaper Program (UDNP) were done from microfilm. The microfilm collection at U of U was the most complete collection of newspapers that could be used for scanning because most originals had been destroyed after they were microfilmed. During the digitization process, the team encountered an all too familiar problem: The quality of some of the microfilm reels caused issues and the team was forced to use print archives in 2003 when 65% of the 106 000 pages were digitized from paper.[13]

A problem I realized in relation to this fact, while making use of the database, was one of provenance. Realizing some digitization took place from microfilm surrogates and some from print archives, there is no clear way of knowing which source was used for each search result. Therefore, it is difficult to conclude whether particular defects exist due to microfilm or the state

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[12] Kenning Arlitsch and John Herbert, "Microfilm, Paper, and OCR: Issues in Newspaper Digitization. The Utah Digital Newspapers Program," *Microform & Imaging Review* 33, no. 2 (2008): 59; "About Utah Digital Newspapers," Utah Digital Newspapers, accessed May 19, 2019, https://digitalnewspapers.org/about/
[13] Arlitsch and Herbert, "Microfilm, Paper and OCR," 60.

of the paper records. The U of U had their newspapers microfilmed by a service bureau in 1948

and by the 1980s, 30 years worth of Utah's papers had been microfilmed. The microfilm reels

contained defects resulting in decreased accuracy in the optical character recognition (OCR)

process, uneven lighting and even optical focus.[14] Luckily, Utah's program was able to use paper

copies for digitization and the information was preserved in the end. The UDNP did initially

experience storage issues, as the digital files and metadata required large amounts of digital

space; however, though the Library has almost 2 million files from all digital collections, as well

as metadata, they had resolved these problems by the end of 2005.[15]

In using the Utah Digital Newspapers database online, I found the search engine to be

user friendly and self-explanatory. The site itself is not complicated and allows the user to easily

begin their search from the moment the site is reached.[16] Pleasantly, the digitized content is

visually clear and does not create problems in viewing once the page has loaded. I was, however,

curious about the keyword search process and whether the use of OCR was successful in this

project. Upon conducting several single word searches on a particular page and through the

database as a whole, I was impressed with the accuracy of the search results, as the desired

content was produced. On the other hand, it is worth noting that my testing was not

comprehensive and I was not able to test for "false negatives," which refers to missed articles in

the search.[17] A search result without keywords that should have ultimately appeared in the search

yield can happen due to a variety of reasons, such as fonts, print noise, hyphenation and single

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[14] Arlitsch and Herbert, "Microfilm, Paper and OCR," 60.

[15] Arlitsch and Herbert, "Microfilm, Paper and OCR," 62.

[16] "Search," Utah Digital Newspapers, accessed May 3, 2019,
https://newspapers.lib.utah.edu/search?q=election&sq=&fd=paper_t%2Cdate_tdt%2Cpage_i%2Carticle_title_t%2C
type_t&rows=25&sort=date_tdt+asc%2Cparent_i+asc%2Cpage_i+asc&page=1&gallery=0&year_start=&year_end
=&facet_paper=%22Mt.+Pleasant+Pyramid%22

[17] Ian Milligan, "Illusionary Order: Online Databases, Optical Character Recognition, and Canadian History, 1997-
2010," *The Canadian Historical Review* 94, no. 4 (2013), 561.

character errors in the OCR transcription.[18] When performing a search for two-word phrases, the results did not prove to be successful.[19] This is the case with other newspaper sites as well, such as Newspaper Archive, which in my research experience when working as a research assistant for author Eva Wiseman, has a high rate of inaccuracies in its OCR process when using single or multiple word searches.[20] Newspaper Archive at times fails to produce search results that are known to be on a specific page. Also, its "highlight" function does not operate at all times, leaving the user to either manually scan for content or simply moving onto a different search. In this comparison, the Utah Digital Newspapers site creates fewer frustrations even though Newspaper Archive provides a vast amount of information. Unfortunately, researchers continue to choose databases over microfilm because of the availability of keyword searches. Researchers willing to avoid relevant primary source material search functionality is available on less relevant primary sources, which can be found by skimming through databases.[21] Regardless of my experience with these databases, OCR systems still underperform on historical documentation due to the type setting processes, which are too "noisy" or contain unnecessary information on the actual page, such as the imprint of the printer's hand and unknown fonts on documents.[22] OCR is designed to take an image and recognize the shape of letter to eventually output this in plain text and noise or fonts can confuse the system.[23]

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[18] Milligan, "Illusionary Order," 563.

[19] Milligan wrote a program that would count specific phrases in order to find information on how many dissertations used a given newspaper source. This revealed the usefulness and preferences of online newspaper sources within dissertations. I believe better programs should be developed within databases, newspaper databases for instance, that use bigrams, trigrams, etc. that provide accurate and ease of information. Milligan, "Illusionary Order," 547.

[20] I was a research assistant for an author, Eva Wiseman during which time I conducted research on the book she is authoring for the Jewish Heritage Centre of Western Canada. "Search," Newspaper Archive, last modified 2019, https://newspaperarchive.com

[21] Milligan, "Illusionary Order," 558.

[22] Taylor Berg-Kirkpatrick and Dan Klein, "Improved Typesetting Models for Historical OCR," *Association for Computational Linguistics* 2 (2014): 118; Milligan, "Illusionary Order," 561.

[23] Milligan, "Illusionary Order," 542.

To use a different example, digitization in Mongolia took place at the Press Institute of Mongolia as a two-year project and came to fruition in 2005 after receiving a grant from the Endangered Archives Programme at the British Library.[24] The Press Institute is a nonprofit organization located in Ulan Baatar and was established in 1995. The newspaper collection in question documents political changes after the fall of communism in the early 1990s. The newspapers, published between 1990 and 1995, exist only within this collection in the country.[25]

In order to effectively use the given two-year time period for the digitization project, specific publications had to be selected. The selection consisted of 59 titles with over 6000 issues.[26] Original paper copies were used to digitize, as no other formats or surrogates were available. Had microfilm been used, the cost would have been significantly lower and the process would have been much faster. However, scanning from original papers results in a better image, more accurate Optical Character Recognition, and, as a result, higher quality searchable text.[27] Oversized flat-bed scanners were used to scan the publications in 8-bit greyscale mode while coloured images were scanned in 24-bit red-green-blue mode. Each page was scanned separately and pages too large to fit in the scanner were processed in two sections. They were then merged using Adobe Photoshop software.[28] Once the material had been digitized, it was made available on the Internet, which provides access to the archival digital copies without restrictions. PDF versions were created for access, and two sets of TIFF versions for archiving. One copy of the TIFF format is stored at the Press Institute and the other at the British Library.

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[24] Krystyna K. Matusiak and Myagmar Munkhmandakh, "A Newspaper/Periodical Digitization Project in Mongolia: Creating a Digital Archive of Rare Mongolian Publications," *The Serials Librarian* 57, no. 1-2 (2009): 119-120.
[25] Matusiak and Munkhmandakh, "Digitization Project in Mongolia," 119.
[26] Matusiak and Munkhmandakh, "Digitization Project in Mongolia," 121.
[27] Matusiak and Munkhmandakh, "Digitization Project in Mongolia," 122.
[28] Matusiak and Munkhmandakh, "Digitization Project in Mongolia," 123.

This example is unique because it demonstrates that it is not necessary to have microfilm in order to directly digitize material, as the Press Institute was able to digitize this material with only original prints. Microfilm was an expensive process and Mongolia likely did not have funding prior to digitization in order to create microfilm copies. Funding from the British Library provided an opportunity for the Press Institute to carry out a preservation project that would have otherwise been difficult.

Resources are a common obstacle faced by archivists when the question of digitization arises and must be taken into account; nonetheless, the proven need for microfilm cannot be so easily dismissed. In the western world, we are at the very least able to access technologies that aid in archival goals, even if they do not perform exactly as envisioned. They also act as stepping-stones to improved methods. Less fortunate institutions are not offered the same experiences and do not have the chance to even experiment with various preservation methods. As archivists, scholars, and the general public, how do we effectively view our resources that preserve the past? This question and issue may be the answer to potential new projects and cooperative relationships between institutions that help to bridge the gap created by a lack of resources.

Canadiana Project

Digitization projects close to home are also making historic archival collections available. One such project initiated by Canadiana.org has brought together three digital searchable databases that provide access to various Canadian historic records. The three databases include Canadiana Online, Héritage and Early Canadiana Online. As of April, 2018, Canadiana has merged with the Canadian Research Knowledge Network (CRKN) and with the management of the CRKN, support for digitization, preservation and access will be provided through the

services of Canadiana.[29] Canadiana has also partnered with Library and Archives Canada in order to provide better access to information, such as historic records, finding aids and site navigation tips.

The Canadiana Trustworthy Digital Repository (TDR) is the digital preservation system for the digitized content. Content in this system is deposited, identified, collected, managed and secured over time. Content preserved by the TDR has been digitized through CRKN projects, received from project partners, already be digitized, or be born-digital.[30] The Canadiana TDR only preserves digital information and does so by accepting digital material directly or by providing digitization services for material that is not yet migrated to digital form. The non-digital material is then returned, while a digitized copy is retained.[31]

Canadiana Online provides access to featured databases such as the Monographs, which span three and half centuries of Canadian documentary history. By the time this database is complete, a total of 84 000 titles will be available. The topics within include major historical events, development of institutions, law, science, Canadian literature, philosophical treatises, agriculture, politics and trade and tariffs.[32] Another database within Canadiana Online is called Serials, a collection including dailies, weeklies, specialized journals, mass-market magazines, city directories, and annual reports from churches, schools, and corporations. The third database is that of Government Publications including 1.7 million pages of pre-1920 colonial, provincial and federal documents.[33]

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[29] "About Canadiana," Canadiana, last modified 2018, http://www.canadiana.ca/about
[30] Canadiana, "About Canadiana."
[31] "Trustworthy Digital Repository," Canadiana, last modified 2018, http://www.canadiana.ca/trustworthy-digital-repository
[32] "Search Canadiana Online," Canadiana, last modified 2018, http://online.canadiana.ca
[33] Canadiana, "Search Canadiana Online."

The Héritage Project focuses on a separate set of records and is the second of the three collections available through Canadiana. The Héritage Project is a 10-year program that digitizes records primarily from the 1600s to the mid 1900s covering subject areas such as genealogy, aboriginal history, government departments, military history and landmark papers from key Canadian figures. Each collection is equipped with finding aids and tips on how to use digitized microfilm.[34]

Early Canadiana Online is the third collection and holds the most complete set of records about Canada. The databases included in this collection include Aboriginal studies, early Canadian periodicals, early Governors General of Canada, early official publications, English Canadian literature, genealogy and local history, health and medicine, history of French Canada, Hudson's Bay Company, Jesuit relations and finally, Women's history.[35] This vast collection holds many records that can be used by scholars, students and historians for almost any Canadian subject that may be of interest.

This project has made use of previously microfilmed content, as well as other record mediums, in order to provide accessibility to all three collections previously mentioned. Once again, microfilm has played a significant role in furthering preservation of these records, and providing access to more users, than before the project began. At times, microfilm reels may be difficult to navigate in a digital format; however, LAC has provided tips on how to search through the digitized reels through their MIKAN archival catalogue to improve ease of use. The basic search scans all three collections and guides the user to a specific collection that matches

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[34] "Héritage Project," Canadiana, last modified 2018, http://www.canadiana.ca/heritage-project; "Search Tips," Canadiana: Héritage, accessed May 19, 2019, http://heritage.canadiana.ca/search-tips
[35] "About Early Canadiana Online," Canadiana, last modified 2018, http://eco.canadiana.ca

their keyword search.[36] It is interesting to note the higher quality of digitized material available online through Canadiana in contrast to LAC's School Files Series. When browsing through the records on Canadiana, I instantly noted the higher resolution and inclusion of OCR in its digitized material. It is much more legible in contrast to the way in which school files appear and allows the researcher to perform keyword searches within text. To note, this is due to the fact that hand-written documents are not as visible to text recognition or keyword searches[37] but documents that are not hand-written provide an opportunity to perform well guided keyword searches. Not only that, in the instances where PDF formatting is available on Canadiana, the entire digitized microfilm reel loads as one PDF document, rather than one page at a time. Browsing the file at once provides a similar experience to using microfilm where there are no interruptions between pages and prevents the user from moving back and forth between webpages. From an efficiency perspective, Canadiana provides a superior platform than that of School Files. Users of the different databases on Canadiana are also provided with an archival description when searching for records, somewhat bridging the gap of multiple provenance that occurs with media shifts. The descriptions do provide sufficient information on each collection or fonds but not necessarily each reel that has been digitized. There is room for further additions from this perspective, otherwise, users may have to track their way back to LAC for details on each reel they are viewing, which, admittedly, can cause inefficiencies during research.

Though Canadiana collections have taken great initiatives to create access to a reliable digital system that preserves Canadian history, Canadiana acknowledges that more work lies ahead to review content in order to decolonize descriptions of records by ensuring sensitive

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[36] "Enhanced Archives Search-Basic," Library and Archives Canada, accessed May 19, 2019, http://www.collectionscanada.gc.ca/lac-bac/search/arch
[37] Canadiana, "Héritage Project."

usage of search terms and keywords.[38] By taking the step to create some cultural awareness

behind the context and content of the records available on these databases, Canadiana is perhaps

upholding its responsibility of community inclusion. Even more needs to be done in order to

serve First Nations users, for instance, by providing Internet access to communities in the north

as discussed earlier; nonetheless, these digital platforms are providing information to a large

general demographic that also has a responsibility to educate themselves on the history of

Canada and its Indigenous population.

As of January 1, 2019, all Canadiana content became available free of charge to all users

breaking down barriers between the organization and patrons to provide encouragement in

studying Canadian history. It has created a relationship that can be extended to physical

institutions in order to further the use of archives and maintain their relevance. Without access to

knowledge of our past, Canada cannot move forward as a country. Its digitized history is now

available to everyone, Canadians and non-Canadians alike, if they have access to the Internet.

The Last Best West: The Alberta Land Settlement Infrastructure Project

Although the Department of the Interior created a vast amount of records, providing

researchers with information of its daily operations, many unanswered aspects of the settlement

process remain. The Alberta Land Settlement Project began with the goal to answer those

questions, some of which shed light on the people who settled the area, where they came from

and how long they stayed.[39] Led by Peter Baskerville, Sarah Carter, and Sean Gouglas, the

project was funded through the Canada Foundation for Innovation and based at the University of

Alberta Libraries. It entailed digitization of microfilm reels of Alberta's Homestead records,

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[38] Canadiana, "About Canadiana."
[39] Peter Baskerville, *The Last Best West: The Alberta Land Settlement Infrastructure Project*, 25651 (University of Alberta: Canada Foundation for Innovation, 2010), 2A.

digitized and hosted by the Internet Archive.[40] Baskerville and Carter also created two machine-readable data sets for records up to 1917 and a shorter data set for records up to 1930.[41] Microfilmed copies of the 200 000 homestead applications between 1872-1916 exist in the format of approximately 600 16mm reels at the Provincial Archives of Alberta.[42]

The homestead records used for this project were created after the Dominion Lands Act of 1872 was passed at which time settlers were able to file for a quarter section with a ten-dollar registration fee. The buyer was to occupy the land within six month, and to remain on it for six months per year for at least three years. They also had to clear and break five acres, cultivate the land and construct their home.[43] Each homestead application requires an average of 10-12 microfilm frames and each record contains 32 pieces of information on the applicant including name, gender, martial status, birthplace, citizenship, number of children, occupation before filing, last address, whether the land was proven up, whether the applicant's family joined them, reasons for leaving, land co-ordinates, etc.[44] The microfilm reels used for digitization are deteriorating and can be difficult to read; nonetheless, the enhanced images are legible when viewing their digitized versions.[45]

The researchers behind the project aimed to outline geographic areas of settlement and those who settled the area. By using the 1911 census, which included 100 percent of Alberta's population at the time, a link to the homestead records was made. This data set addresses questions relating to individuals and their families in regards to their social and economic living

[40] "Alberta Homestead Records," Internet Archive, https://archive.org/details/albertahomestead
[41] Thank you to Dr. Ryan Eyford for getting in touch with Peter Baskerville on my behalf and forwarding this information from their conversation. Peter Baskerville, email, November 14, 2018.
[42] Baskerville, *The Last Best West,* 3A.
[43] Baskerville, *The Last Best West,* 3A.
[44] Baskerville, *The Last Best West,* 3A.
[45] Baskerville, *The Last Best West,* 3A;

conditions.[46] The census data file was also linked to Ancestry.com and uploaded to their

genealogy site. Currently, the team is at work inputting Geographical Information System (GIS)

data in their two data file sets which will use spatial resources along with Homestead map in a

sequential and automated process creating a unified settlement model.

The Alberta Land Settlement Project is quite distinct within the realm of Canadian

history studies. It will build a unique resource for the purpose of research that includes climate,

geographic and land variables that come together to answer questions of Western colonization.

The University of Alberta (U of A) has shown tremendous leadership by initiating this project

through the use of cutting edge ideas and technologies that were used in conjunction to one

another to create an integrated database of information. The homestead microfilm reels at the U

of A are deteriorating and by digitizing them, the reels themselves are being preserved and used

to create a resource that matches the needs of today's society.

Might Manitoba Benefit From a Land Settlement Infrastructure Project of its Own?

The U of A has taken an unprecedented leap into preserving land records of its province.

Once the data sets become available on the University's site next year, researchers will certainly

benefit from the resources to be made available though they are already reaping the benefits of

the digitized material on the Internet Archive and Ancestry.com. The Archives of Manitoba

houses the same type of records on microfilm and one must wonder whether the same kind of

digitization project might be realized here as it was in Alberta.

Sarah Carter examined microfilmed land records from Manitoba and concluded they are

of a poorer quality when compared to the records of Alberta, which are generally legible.[47] In my

experience of examining only a portion of the land records reels at the Archives of Manitoba, I

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[46] Baskerville, "*The Last Best West*, 3B.
[47] Peter Baskerville, email, November 14, 2018.

found them to be legible and it's possible Carter may have examined a different set of reels that were in a further deteriorated state. Regardless, I believe the microfilmed land records in Manitoba are good candidates to be digitized and made available online. The reels that are not as legible can be made readable through the use of digital technology that can enhance the material to create sharper and clearer images. The quality of these reels should not be a factor in discouraging the initiation of a project similar to Alberta's.

There are similarities of arrangement, as completed by the Public Archives of Canada at the time of their microfilming, between Alberta's and Manitoba's homestead records with the former's indexed by name and geography that lead to the location of the files on microfilm, which is also the organizational method of homestead files at the Archives of Manitoba. The process to find specific reels is time consuming and confusing if the researcher makes the smallest of errors in noting the reel number therefore one must know how to navigate range, township and sections on the Archives of Manitoba's Keystone database and how it correlates to the reels. Nonetheless, the homestead microfilm reels at the Archives of Manitoba provide the same type of information as those in Alberta and can lead to studies that expand our knowledge of how the West was colonized, including the displacement of Indigenous communities and the fate of settlers over time. Since the Lands Branch existed prior to the Department of the Interior, many land records were filed, re-filed and put into new recordkeeping systems creating problems in understanding the underlying logic behind their arrangement in their original files and volumes, and on the microfilm reels. The University of Alberta project promises to use digitized versions of the microfilmed records to address this problem by allowing users multiple methods of navigating these records.

In using homestead files, I believe same complications arise in both provinces, therefore, if Alberta is able to extrapolate data from their homestead files, Manitoba would be able to do so as well. Peter Baskerville and his team understand the history of colonization as a "giant social experiment,"[48] from which we can form a different type of history that showcases the successes and failures of Western Canada. Manitoba was among the provinces in which the government held administrative and political control and initiating a project that reveals successes and failures specific to the province can help historians and archivists in gaining further knowledge of the provenance, histories and many contexts of the extant records. Archivists, specifically, would be able to learn about migration patterns of settlers with GIS and some of the reasons behind missing records allowing them to make connections among records and identify inconsistencies in recordkeeping and the arrangement of the records, to create whole new descriptions and by adding or correcting details to existing descriptions.

Many benefits are anticipated from a digitization project like this; not only would Manitoba be contributing to its own archival collection but also to the larger picture of the management of Interior records across the country, including in Alberta. Archivists in the past have spoken about the desirability of reuniting the records the Department of the Interior, even though that task was not realistically possible at that time.[49] If Manitoba and other Western provinces, like Alberta, were to digitize their land records, the ambitious goal would become a real possibility, a concept to be celebrated since Interior's records are vastly dispersed. From an archival viewpoint, this dispersal is anything but ideal.

Moreover, if, as Carter concluded from her survey, some reels of Manitoba's microfilmed land records are deteriorating, digitization could allow for the preservation of these records. The

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[48] Baskerville, *The Last Best West*, 3D.

[49] Gabrielle Blais, "Recovering a Lost Heritage: The Case of the Canadian Forestry Service Records," *Archivaria* 25 (Winter 1987-88): 85.

reels in Alberta are also being preserved for the future through digitization, an idea Manitoba must explore. The future of our records hangs in the balance. Are we willing to lose a significant part of our history in the name of funding? Or is some local institution willing to work with scholars and other users to use either institutional or grant funds to begin the necessary process?

National Centre for Truth and Reconciliation

The National Centre for Truth and Reconciliation (NCTR) is located at the University of Manitoba and is tasked with the mission is to create a safe place of learning and dialogue for those affected by Indian residential schools, to ensure the truth about residential schools is integrated into Canadian history for Indigenous and settler alike and to preserve the records of the system and of the survivors, so that the truth about residential schools can never be denied. Survivors of the schools, and the families of those who have died, are encouraged to speak about their experiences and to provide knowledge of the truth of this country's history in the form of video, audio or written statements, which NCTR will continue to collect.[50] The core of the collection, however, is the statements, documents and other materials gathered by the Truth and Reconciliation Commission of Canada (TRC). The NCTR ensures that residential school survivors, their families and their communities have access to their own history; that educators have access to residential school history; and that researchers and the public have access to accurate, truthful information about the residential school system in hopes that this knowledge will prevent history from repeating itself.[51]

The NCTR maintains a primarily digital archive as records gathered by the TRC – both historic records and the statements of survivors and others – were mainly gathered in that medium. Additionally, NCTR continues to acquire digital and digitized records from Library and

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[50] "About the National Centre for Truth and Reconciliation," National Centre for Truth and Reconciliation, last modified 2018, https://nctr.ca/about-new.php

[51] National Centre for Truth and Reconciliation, "About the National Centre for Truth and Reconciliation."

Archives Canada, other agencies of the Government of Canada, other levels of government, the churches, and from other sources.

The archive is divided into two parts. The first part is statements about the residential school system from survivors, intergenerational survivors and others. The second part is the historic records created by the government and churches that ran the schools.[52] Some of these records include digitized microfilm from Library and Archives Canada that can be easily viewed through the NCTR website. During the operation of the TRC, these records were held in nine databases but the NCTR is currently migrating the records out of these databases into a single archival management system.[53]

NCTR has a substantial responsibility to handle its records according to archival standards, especially those in digital format, but also with respect to Indigenous cultures and the Indian Residential School Settlement Agreement (IRSSA). A key issue in housing digital records at the NCTR is that of addressing their provenance. Use of traditional Eurocentric ways of archiving will not be appropriate in dealing with records at the NCTR because of the nature of their origins.[54] Respect to First Nations must be regarded in accordance to their sources of traditional knowledge, including records but also oral histories, dance, storytelling and so on. These Indigenous forms of records are subject to Indigenous as well as Western forms of copyright and intellectual property, which will require the incorporation of various levels of access.[55] These records also require new approaches to description that are able to incorporate

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[52] "Browsing the Collection," National Centre for Truth and Reconciliation, last modified 2018, https://nctr.ca/archives-pages.php#browse

[53] National Centre for Truth and Reconciliation: University of Manitoba, "Browsing the Collection."

[54] Leesha M. Cowan, "Decolonizing Provenance: An Examination of Types of Provenance and their Role in Archiving Indigenous Records in Canada" (MA thesis, University of Manitoba, Winnipeg, 2018), 27, University of Manitoba MSpace.

[55] Brett Lougheed, Ry Moran Camille Callison, "Reconciliation Through Description: Using Metadata to Realize the Vision of the National Research Centre for Truth and Reconciliation," *Cataloging & Classification Quarterly* 53 no. 5-6 (2015): 607.

multiple provenance. Indigenous traditions and knowledge are passed down from one generation to the next and do not fit definitions of provenance the way to which archivists are accustomed. Provenance is nor formulated or governed by only one person or from an institution and the history of residential schools cannot be told only through government records.[56] Stories of residential school experiences are a product of various people, traditions, knowledge and information.

As a newly formed organization, the NCTR is still finding its way forward.[57] The digital archive is not completely accessible and a sustained effort to decolonize the records and integrate Indigenous participation, to ensure appropriate levels and forms of access for all records, is in place at present. The challenge of accessibility is sensitive and the implementation of protocols supporting access of records is multifaceted for residential school records. Information and knowledge drive communities and societies at large; however, in this case, how freely can information be distributed especially through a digital platform where information can be redacted[58] or multiplied. As a society, we have become accustomed to open access, information sharing and tend to only see the benefits of such actions.[59] Since a focus has remained on the advantages of openness regarding everyday digital practices, such as Internet engine searches, we have turned our backs on fairness of access. Through "cultural blindness," Indigenous perspectives continue to be overshadowed by those of settlers who provide mixed histories that are not true representations of Indigenous knowledge, which ultimately results in the loss of

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[56] Cowan, "Decolonizing Provenance," 28; Tom Nesmith, "The Concept of Societal Provenance and Records of Nineteenth-Century Aboriginal-European Relations in Western Canada: Implications for Archival Theory and Practice," *Archival Science* 6, no. 3-4 (2006), 352.

[57] Sean Carleton, Crystal Fraser and John Milloy, "Assessing the National Centre for Truth and Reconciliation," *ActiveHistory* (2015): http://activehistory.ca/2015/11/assessing-the-national-centre-for-truth-and-reconciliation/

[58] Cowan, "Decolonizing Provenance," 27.

[59] Kimberly Christen, "Does Information Really Want to be Free? Indigenous Knowledge Systems and the Question of Openness," *International Journal of Communication* 6 (2012): 2878.

meaning.[60] NCTR is aware of such implications which is why those involved in completing this digital archive are prioritizing access through Ownership, Control, Access, and Possession Principles (OCAP), which highlights that First Nations must have access to information about themselves and their communities and be able to make decisions regarding access to their collective information.[61] This is a crucial aspect of open information because if Indigenous communities lack access to their own information, they once again become separated from their own story and the meaning of their history is lost within colonial perspectives. It is this gap that NCTR is carefully bridging.

The NCTR continues to work with Indigenous communities and other partners to provide appropriate access to the most complete set of records it possibly can. The priority of the Centre is to meaningfully preserve the memory and experiences of those who survived atrocities of residential schools in hopes of reconciling and healing wounds of the past. Regardless of the format these records are preserved in, they reflect a deeper meaning that has affected the lives of many. However, available digital records at the NCTR are an avenue for Indigenous communities in remote locations that cannot reach the NCTR to access records online and be able to communicate with archivists or administrators at the Centre. Furthermore, for the Centre to make records available on a platform available to Indigenous and non-Indigenous communities, it has begun a conversation with the public by stating that it is not afraid to speak out about unjust acts committed by the government.

Conclusion

Digitization is the most current archival preservation and access procedure. Digitization, and digital media more generally, experience constant change and evolution. The non-archival

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[60] Kimberly, "Does Information Really Want to be Free?" 2879-2880.
[61] "The First Nations Principles of OCAP," First Nations Information Governance Centre, last modified 2019, https://fnigc.ca/ocapr.html

community has embraced digital mediums with open arms as they provide countless benefits in the information age. Archives, though similar to those outside of its community in terms of being information providers, must consider aspects of digitization in a different manner, specifically in terms of access and privacy. Though we presently live through the digital era, microfilm maintains an important place within the archival setting, acting as a primary surrogate in information migration and its increased use in the digitization process. Though some reels of microfilm have deteriorated, they have survived for decades thus far, outlasting many other media including now out-dated digital programs and even paper itself. As we look to the future, digitization is at the forefront of information management; however, this would not have been entirely possible without the initial existence of microfilm.

CONCLUSION

Even to a layperson with only a passing or cursory knowledge of archives or archival practices, microfilm is recognized as an iconic technology that has played an important role in preserving, and providing access to, the records that form an integral part of our history. Its durability and longevity, preserving records for decades and decades, has been relied upon to ensure our history is not lost to the passage of time and in return, made an impact on the scholarly community and on the general public as well, presently shaping the manner in which the government and other stakeholders reconcile present issues with past grievances and injustices.

As discussed in the first chapter, microfilm has remained reliable despite the existence of newer technologies. Even though it has faced many criticisms over time regarding its quality and ability to support the enduring value of records, archives continue to deliver access to microfilm records because of the technology's ability to preserve and provide information, which may not be in compliance with beliefs on the loss of materiality. Nevertheless, microfilm has proved to be the lesser of all evils in a situation that will always attract differing opinions on best practices for preservation. Chapter two revealed microfilm technology is not the only piece of the equation with potential to suffer from criticism; the information and data held within microfilm and the methods of its accessibility are also not immune to objections and judgment. Though the technology itself has not been advanced or dramatically updated, the way in which it is being used has. The work being done at the NCTR has been an integral example of how society can be improved by using records on microfilm, even after they have been digitized. The discussion on digitization projects in chapter three illustrates the vast progression in reformatting records from the easy scan-and-post projects that produced the LAC School Files Series to ones implemented

by Canadiana and The Alberta Land Settlement Infrastructure project, which make further use of different technologies like OCR and GIS systems to create a higher level of interaction with the records. Recent projects, on the other hand, allow researchers to use data embedded in record sets to dig deeper into the available information. With new technologies at our disposal and the precedence shown by The Alberta Land Settlement Infrastructure Project, many other microfilm records beyond those of the Department of the Interior await the same fateful results. The success experienced in these projects provides an optimistic outlook for records that may be used in new and innovative ways after being digitized.

Microfilm has come a long way since it was first invented as a tool to preserve and view records, maintaining its relevance within archives as a traditional technology but also showing its usefulness in the creation of digital records. Many technologies experience complete obsolescence and eradication when newer formats become available that may be better suited to current needs but microfilm has not yet suffered a similar fate because of its enduring relevance and utility for research purposes, even as the availability of digital records threatens to supplant its role in archival practice. At one time, microfilm began a revolutionary path to recordkeeping and it is now substantially contributing to the creation of another in the digital era, which will leave its own mark on archival theory and practice.

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