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Crystal Simmons

AUTEUR DE LA THÈSE / AUTHOR OF THESIS

Ph.D. (History)

GRADE / DEGREE

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FACULTÉ, ÉCOLE, DÉPARTEMENT / FACULTY, SCHOOL, DEPARTMENT

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TITRE DE LA THÈSE / TITLE OF THESIS

Ruby Heap

DIRECTEUR (DIRECTRICE) DE LA THÈSE / THESIS SUPERVISOR

CO-DIRECTEUR (CO-DIRECTRICE) DE LA THÈSE / THESIS CO-SUPERVISOR

EXAMINATEURS (EXAMINATRICES) DE LA THÈSE / THESIS EXAMINERS

Amy Bix

Eda Kranakis

Jeffrey Keshen

Cynthia Toman

Gary W. Slater

Le Doyen de la Faculté des études supérieures et postdoctorales / Dean of the Faculty of Graduate and Postdoctoral Studies

ELSIE GREGORY MACGILL: ENGINEERING THE FUTURE AND BUILDING BRIDGES FOR CANADIAN WOMEN, 1918-1980

by

Crystal Sissons

Thesis submitted to
the School of Graduate Studies and Research
in partial fulfillment of the requirements for the
Ph.D. degree in History

Université d'Ottawa/University of Ottawa

Ottawa, Canada

Your file Votre référence
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Our file Notre référence
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I would like to dedicate this thesis to my parents, Brian and Sandi Sissons my brother Darren Sissons.

Abstract

Elsie Gregory MacGill: Engineering the Future and Building Bridges for Canadian Women, 1918-1980

Crystal Sissons
University of Ottawa 2008

Supervisor
Professor Ruby Heap

This thesis is a feminist case study of the public life and experiences of pioneering Canadian woman engineer, Elsie Gregory MacGill. Earning her undergraduate degree in electrical engineering at the University of Toronto in 1927, she then became the first woman in North America to obtain a Master's degree in aeronautical engineering from the University of Michigan in 1929. In 1938, she was appointed Chief Aeronautical Engineer at Canadian Car and Foundry in Fort William, Ontario (presently Thunder Bay), achieving celebrity status during the war for her work at the company. MacGill later established herself as a key social reformer and feminist activist. Between the 1950s and 1980s she was actively involved in the Canadian Federation of Business and Professional Women's Clubs (CFBPWC), served on the Royal Commission on the Status of Women (RCWS), and was a founding member of the National Action Committee on the Status of Women (NAC).

This thesis discusses MacGill's training and career in engineering at a time when women's access to this male-dominated profession was extremely limited. She devoted years of dedicated service to her profession. She strongly believed that engineers needed to reach out beyond their field and interact with the larger Canadian society. However, MacGill's firm belief in the principle of equality led her to challenge her profession's

ability to attract and retain women; after the war, she thus became a public advocate for women in the profession, and served as a role model and mentor.

This thesis also examines MacGill's multi-dimensional feminism, which is difficult to label. It was certainly shaped by her experiences as a professional engineer. In this respect, this thesis offers important insights into the links between engineering and feminism.

Acknowledgements

This thesis was first contemplated while discussing the possibilities of exploring the MacGill Fonds at the National Library and Archives of Canada with Dr. Ruby Heap in the spring of 2003. At the time, I was still residing in Thunder Bay, Ontario, which in fact, has an interesting link to Elsie MacGill, as she worked there during the Second World War, at which time it was known under the names of Fort William, Ontario and Port Arthur, Ontario respectively. It was thus with enthusiasm that I contemplated the opportunity to further elaborate on the life of a Canadian woman who had also been a temporary resident of the region.

In September 2003, I began work and research with Dr. Heap towards a Masters degree on Elsie MacGill's work on the Royal Commission on the Status of Women, and in September 2004 I began work on the current doctoral dissertation with Dr. Heap. To Dr. Heap I owe immense gratitude for her guidance, support and motivation and friendship throughout the duration of my graduate studies at the University of Ottawa. Dr. Heap also allowed me the opportunity to work concurrently as the Program Manager of the University of Ottawa's Women in Engineering Research Group (UOWERG). This opportunity allowed for additional training and experience as well as financial aid to my studies. Moreover, the opportunity allowed for important interdisciplinary work and an opportunity to link historical studies to contemporary research problems. I would also like to thank Professors Ann Denis, Janice Ahola-Sidway, and Monique Frize for their encouragement throughout my studies and work with the team. Thanks also to Debra Hauer for her support and friendship.

This thesis would not have been possible without the generous financial support from the Social Sciences and Humanities Research Council of Canada (SSHRC), the Ontario Graduate Scholarship (OGS), and the University of Ottawa's entrance scholarship and subsequent conference funding. To these three institutions I would like to express my sincere gratitude.

Thanks are also due to the University of Ottawa's Department of History, which has also been a source of strength throughout my studies. My thanks go out especially to Professors Jeffery Keshen and Eda Kranakis for the stimulating discussions during field studies and continuing support. Thanks also to Professor Corrine Gaudin for her advice early on in my graduate work. A special thank you to the academic support staff at the department, especially Suzanne Dalrymple, and Francine Laramé for their kindness and help in guiding me through the various administrative steps over the course of my studies. Thanks also to my colleagues and friends both at the University of Ottawa and Carleton University who were willing to offer debate and resources, but also friendship.

I was also fortunate to retain strong academic ties to my alma matter, Lakehead University, throughout my studies. To Professors Helen Smith and Pam Wakewhich I owe special thanks for continued meetings and discussions pertaining to my topic and progress. I would also like to extend thanks to Professors Ron Harpelle, Patricia Jasen,

and Victor Smith. While my graduate studies required a long-distance move to Ottawa, the strong support from the Lakehead University's History Department eased the transition and provided a needed lifeline.

The research for my thesis took place mainly at the National Library and Archives of Canada. The staff in the reading rooms and the archivists provided much needed assistance which made the work possible in the first place. To the Commissionaires I also owe thanks – their conversation and help when needed made long hours of research much more enjoyable. Thanks is also due to the archival staff at the University of Toronto Archives.

I also owe my gratitude to the many people who agreed to sit for interviews, and/or provide information about Elsie MacGill's life in the form of email reminiscences. Special thanks MacGill's remaining family Ann Soulsby and Elizabeth Schnewind who both provided in-depth insights on MacGill, and shared photographs. I would especially like to dedicate this work to Ann Soulsby who was eager to see the completed work and passed away before it could be finished. Thanks also to Dr. Monique Bégin, Dr. Naomi Black, Dr. Dormer Ellis, Dr. Ursula Franklin, Wendy Lawrence, Dr. Lorna Marsden, Cathleen Morrison, Liz Neville, Brigid O'Reilly, and Victor Stevenson. In addition the support and interest from MacGill's former colleagues in the Canadian Federation of Business and Professional Women's Clubs of Canada has been a special asset.

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Ultimately, my greatest debt of gratitude goes to my family. My parents Brian and Sandra Sissons supported my studies from the beginning and never wavered in their support. They provided emotional and financial aid throughout, never hesitated to listen to yet another idea pertaining to my work, and assisted whenever possible including taking the time to read final drafts for clarity. They also provided much needed refuge both at home in Thunder Bay, and at the family camp. The thanks I owe them can only be partly expressed in words. To my brother Darren Sissons I thank for long conversations and support when challenges arose, but also his belief that I would make it through no matter what. I owe him and Kora Kamps a debt of gratitude for a place to escape to the solitude of the country within two hours of Ottawa, where good food and fun were always waiting and laughter a guarantee. I also acknowledge the support from my grandparents, Eva and George Sissons, and Evelyn and Jack Smeeth. While the former did not have the chance to witness my academic endeavours, and the latter passed away before the work was completed, they believed I could do anything I put my mind to.

Finally, to all those who assisted me with additional resources, suggested new lines of thought or possibilities, bore with me when I yet again started talking about my thesis, and offered needed distractions and breaks – thank you! Special thanks especially to Teva Vidal for his dedicated reading of drafts, editorial suggestions, and strong support in the final weeks of preparation, when having someone who understood the related stresses and frustrations was invaluable.

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Chapter 6: The Royal Commission on the Status of Women

Chapter 7: Moving Forward

Acronym List

Organization/Term	Acronym
Advisory Council on the Status of Women	ACSW
American Institute of Aeronautics and Astronautics	AIAA
Association of Professional Engineers of Ontario	APEO
American Rocket Society	ARS
American Society of Women Engineers	SWE
Association of Consulting Engineers of Canada	ACEC
Building Materials Evaluation Committee	BMEC
Canadian Car & Foundry	Can Car
Canadian Federation of Business and Professional Women's Clubs	CFBWPC
Canadian Aeronautics and Space Institute	CASI
Declaration on the Elimination of Discrimination Against Women	DEDAW
The Department of Transport	DOT
Design Approval Representative	DAR
Engineering Institute of Canada	EIC
Faculty of Applied Science and Engineering	FASE
Institute of Aeronautical Science	IAS
International Civil Aviation Organization	ICAO
International Conference of Women Engineers and Scientists	ICWES
International Federation of Business and Professional Women	IFBPW
International Federation of Consulting Engineers	FIDIC
International Labor Organization	ILO
International Women's Year	IWY
Massachusetts Institutes of Technology	MIT
The Ministry of Transport	MOT
National Action Committee on the Status of Women	NAC
National Research Council	NRC
Ontario Committee on the Status of Women	OCSW
Ontario Status of Women Council	OSWC
Ontario Women's Resource Centre	OWRC
Penal Reform for Women's Joint Committee	PRWJC
Royal Airforce (British)	RAF
Royal Canadian Airforce	RCAF
Royal Aeronautical Society of Great Britain	RAeS
Royal Commission on the Status of Women	RCSW
Therapeutic Abortion Committee	TAC
Toronto Business and Professional Women Clubs	TBPWC
University of British Columbia	UBC
United Nations	UN
United Nations Commission on the Status of Women	CSW
Voice of Women	VOW
Women in Science and Engineering	WISE

Introduction

Writing the history of Canadian women engineers is a challenging task. Women in engineering in Canada and throughout the Western World remain very small in numbers compared to their male colleagues, and this helps explain why their lives and accomplishments have largely been overlooked in the historical record. This is especially the case of those women belonging to the generation of "pioneers". Canadian Elsie Gregory MacGill belongs to this category. She earned her undergraduate degree in electrical engineering at the University of Toronto in 1927, and then became the first woman in North America to obtain a Master's degree in aeronautical engineering from the University of Michigan in 1929. In 1938, she was appointed Chief Aeronautical Engineer at Canadian Car and Foundry in Fort William, Ontario (presently Thunder Bay). As a result of her success as a woman engineer, she achieved celebrity status during the Second World War, with one media portrayal crowning her the "Queen of the Hurricanes".[1] MacGill also stands out from the 1950s to the 1980s as a key Canadian feminist activist. She was actively involved in the Canadian Federation of Business and Professional Women's Clubs (CFBPWC), served on the Royal Commission on the Status of Women (RCWS), and was a founding member of the National Action Committee on the Status of Women (NAC).

[1] Pamela Wakewich, " "The Queen of the Hurricanes": Elsie Gregory MacGill, Aeronautical Engineer and Women's Advocate", in *Framing Our Past: Canadian Women's History in the Twentieth Century,* Sharon Cook et. al. eds. (Montreal: McGill Queen's Press, 2001), 396-401.

In 1981, the second edition of Elsie MacGill's biography of her mother, Helen Gregory MacGill entitled, *My Mother the Judge*, was published.[2] In her introduction, to the book, historian Naomi Black identified the need for a biography of Elsie Gregory MacGill.[3] To date, however, there are only a few short biographical articles devoted to MacGill.[4] By examining Elsie MacGill's largely unrecorded contribution to Canadian history, this thesis thus fills a major gap in the literature. Elsie MacGill constitutes a unique case study for addressing multiple themes in Canadian women's history and Canadian engineering history. For instance, this thesis will discuss her engineering training and career development as an aeronautical engineer, at a time when women's access to the male-dominated profession of engineering was extremely limited. Furthermore, her professional trajectory encompasses the Great Depression, the Second World War and the postwar era. As a result, MacGill was involved in the rapid development of aeronautics, during which cloth-covered biplanes gave way to turbojet engines and space technology began to develop.

This thesis will demonstrate a professional woman's commitment to her field. MacGill's belief in equality increasingly challenged her profession's ability to attract

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[2] Elsie Gregory MacGill, *My Mother the Judge: A biography of Helen Gregory MacGill*, Elsie Gregory MacGill, (Toronto: PMA Books, 1981).
[3] Naomi Black, "Introduction," in *My Mother the Judge: A biography of Helen Gregory MacGill*, Elsie Gregory MacGill, (Toronto: PMA Books, 1981), xi-xxiv.
[4] Susan E. Merritt, "Elsie MacGill (1905-1980): Aeronautical Engineer", in *Her Story III: Women From Canada's Past*, (St. Catherines: Vanwell, 1999), 180-193; Pamela Wakewich, ""The Queen of the Hurricanes": Elsie Gregory MacGill, Aeronautical Engineer and Women's Advocate", in *Framing Our Past: Canadian Women's History in the Twentieth Century*, Sharon Cook et. al. eds. (Montreal: McGill Queen's Press, 2001), 396-401; Crystal Sissons, "Engineer and Feminist: Elsie Gregory MacGill and the Royal Commission on the Status of Women, 1967-1970", *Scientia Canadensis*, Volume 29, No. 3, (2006), 74-97. An additional study on MacGill is also forthcoming, see: Bourgeoise-Doyle, Richard I. *Her Daughter the Engineer: A Biography of Elsie Gregory MacGill.* National Research Council Biography Series, Forthcoming 2008.

and retain women. In fact, after the war she publicly chose to become an advocate for women in the profession while also serving as a role model and mentor. MacGill's record is one of years of dedicated service to various professional societies. At the same time, she strongly believed that engineers needed to reach out beyond their field and interact with the larger Canadian society, such as in the arena of public policy.

This thesis also examines MacGill's key role within the Canadian women's movement between the 1950s and 1980s. Her family's feminist legacy clearly shaped her interventions on behalf of Canadian women during the 1950s, 1960s, and 1970s, including her participation as a member of the Royal Commission on the Status of Women, and after the Commission. This thesis will focus especially on the ways in which her engineering training influenced her feminism, and in turn how her feminist activism influenced her engineering.

Literature Review

The following literature review will discuss the scholarship related to the major themes in this thesis. The review will first look at the literature pertaining to the professions. It will then examine the works related to women in science and engineering, with a specific focus on women pioneers in engineering and women in engineering education. The scholarship related to working women and the Second World War will then be discussed. Finally, I will analyze the historical scholarship related to the Canadian women's movement, specially those works which discuss 1950s and 1970s.

The Professions

The professions have a long history of being male-coded. As a result, women have had to 'break-in' in order to create a space for themselves. As R.D. Gidney and W.P.J. Millar remind us in their seminal history of the professions in Ontario, the term profession is a historically grounded concept, which was originally gendered as male, thereby discounting half the population.[5] For his part, Eliot Friedson has illustrated just how powerful an organized profession can be.[6] Once established, Friedson reminds us, it has the power "to determine who is qualified to perform a defined set of tasks, to prevent all others from performing that work, and to control the criteria by which to evaluate performance..."[7]

Aspiring women professionals thus faced formidable challenges in the past. Mary Kinnear's study of Canadian professional women in the province of Manitoba between 1870 and 1970, expands upon the difficulties they encountered in accessing the professional world.[8] First and foremost, these women were led to believe that, thanks to the merit system, professions were "gender-blind", and any person with the necessary credentials could obtain that membership. This belief, however, proved to be false, thereby denying women the equal access they sought.[9] As the editors of a recent collection on Canadian women in the professions point out, it is essential to ask why this

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[5] R.D. Gidney and W.P.J. Millar, *Professional Gentlemen: The Professions in Nineteenth Century Ontario,* (Toronto: University of Toronto Press, 1994), xii, 8.
[6] Eliot Friedson, *Professionalism: The Third Logic, On the Practice of Knowledge*, (Chicago: University of Chicago Press, 2001).
[7] Ibid., 34-35.
[8] Mary Kinnear, *In Subordination: Professional Women, 1870-1970,* (Montreal: McGill-Queen's Press, 1995).
[9] Ibid., 9.

was the case; in their view, we must consider issues of power, and, more specifically, women's access to power in the working world.[10]

For its part, Penina Migdal Glazer and Miriam Slater's major study of American women in the professions between 1890 and 1940 discusses how special coping strategies were developed by professional women during this period, including, "superperformance", "innovation", "subordination" and "separatism".[11] This approach will be very useful when assessing Elsie MacGill's professional trajectory in the Canadian context.

Women in Science and Engineering

When considering the general historical literature on women in engineering, it is necessary to consider studies that cover both science and engineering as in many cases the two categories are discussed together. The Canadian scholarship on women in science and engineering is still relatively small. The 1990 edited collection, *Despite the Odds: Essays of Canadian Women and Science*, represented the first work dedicated to this area.[12] Its editor, Marianne Gosztonyi Ainley, who is largely responsible for opening the field in Canada, then argued that both Canadian women's history and the Canadian history of science had neglected women scientists; in turn, the latter often saw no point in keeping their letters and diaries for use beyond their own, and, as a result,

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[10] "Introduction", in *Challenging Professions: Historical and Contemporary Perspectives of Women's Professional Work*, eds. Elizabeth Smyth et al., (Toronto: University of Toronto Press, 1999), 15.
[11] Penina Migdal Glazer and Miriam Slater, *Unequal Colleagues: The Entrance of Women in the Professions, 1890-1940*, (New Brunswick: Rutgers University Press, 1987), 14, 210-211.
[12] Marianne Gosztonyi Ainley, ed., *Despite the Odds: Essays on Canadian Women and Science*, (Véhicule Press, 1990).

they were also part of the problem.[13] Significantly, Ainley's collection did not address women in engineering, which is telling of the state of the literature on this subject at the time.

Since the publication of *Despite the Odds*, the historiography on Canadian women in science and engineering has progressed slowly.[14] In 1989, The Montreal Massacre brought increased attention to the problem of the under-representation of women in engineering;[15] it also highlighted the under-development of the history of Canadian women engineers, which has recently begun to be addressed.[16]

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[13] Ainley, 18-19.

[14] Ruby Heap, "Writing Them Into History: Canadian Women in Science and Engineering Science the 1980s," in *Out of the Ivory Tower: Feminist Research for Social Change*, eds. Andrea Martinez and Meryn Stuart, (Toronto: SUMACH Press, 2003), 49-67.

[15] "On Wednesday, December 6, 1989, Marc Lépine enter[ed] classrooms in Montreal's École Polytechnique armed with a shotgun. Before turning the gun on himself, he [killed] fourteen young women engineering students and [injured] thirteen others." Heap, "Writing Them Into History", 49-51.
For more information École Polytechnique and the Massacre see Robert Gagnon, *Histoire de l'École Polytechnique de Montréal 1873-1990: Le Montée des Ingénieurs Francophones*, (Montréal: Boréal, 1991), 475-483.

[16] Ruby Heap, "Introduction: Women and Gender in Canadian Science, Engineering and Medicine," in *Scientia Canadensis*, Volume 29, No. 2 (2006), 5.
See also: Heap, "Writing Them Into History", 49-67.
Recent examples of the Canadian scholarship on women in engineering include: Ruby Heap, " "The only girl in such a big class" :Women Students at the University of Toronto's Faculty of Applied Science and Engineering during the 1920s and the 1930s," *Scientia Canadensis* Volume 29, No. 2 (2006), 45-73; Crystal Sissons "Engineer and Feminist: Elsie Gregory MacGill and the Royal Commission on the Status of Women, 1967-1970," *Scientia Canadensis*, Volume 29, No. 2 (2006) 74-97; Ruby Heap and Ellen Scheinberg, "Just One of the Gang": Women at the University of Toronto's Faculty of Applied Science and Engineering, 1939-50", in *Learning to Practise: Professional Education in Historical and Contemporary Perspective*, Ruby Heap, Wyn Millar, and Elizabeth Smyth, ed., (Ottawa: University of Ottawa Press, 2005), 189-211; and Wyn Millar, Ruby Heap, and Bob Gidney, "Degrees of Difference: The Students in Three Professional Schools at the University of Toronto, 1910 to the 1950s", in *Learning to Practise: Professional Education in Historical and Contemporary Perspective*, Ruby

Thankfully, the historiography devoted to women in science and engineering is more extensive in the United States and Europe. These studies include Margaret Rossiter's seminal work *Women Scientists in America before 1940.*[17] Rossiter found that women in science, largely "invisible" in mainstream histories of science, were in reality a significant part of that history. Rossiter unraveled the obstacles women faced within the scientific community, prior to significant government involvement in the field in the 1940s; she also expanded the range of themes which other historians could explore in various contexts, for instance, in depth analysis of educational and professional experiences.[18]

Another critical study is Pnina G. Abir-am and Dorinda Outram's edited collection on the careers of pioneering women scientists.[19] This collection focuses on the importance of family environments including parental support, marriage and children.[20] In my thesis, I will thus ask: To what extent did Elsie MacGill's family influence her training and career development as an engineer? Did marriage or children affect her professional life, and if so, how?

In 1995, Rossiter published the second volume of her exhaustive historical survey; she then argued that women were denied real advancement during what has been called the 'golden age of science' between 1940-1972, until they began challenging

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Heap, Wyn Millar, and Elizabeth Smyth, ed., (Ottawa: University of Ottawa Press, 2005), 155-187.

[17] Margaret Rossiter, *Women Scientists in America: Struggles and Strategies to 1940,* Volume 1, (Baltimore: The Johns Hopkins University Press, 1984).

[18] Ibid., xi-xii.

[19] Pnina G. Abir-am and Dorinda Outram, "Introduction", eds. Pnina G. Abir-am and Dorinda Outram *Uneasy Careers and Intimate Lives: Women in Science 1789-1979,* (New Brunswick, NJ: Rutgers University Press, 1987), 1-16.

[20] Ibid.

discriminatory laws and practices through legal channels.[21] The "second-wave" of the women's movement propelled and fed this campaign.[22] Her discussion on the interplay between feminism and science is pertinent for my study, since Elsie MacGill would herself become involved in the women's movement later in her career.

Susan Ambrose's edited collection on the various professional journeys of women in science and engineering illustrates how general trends can be identified when a significant number of biographical case studies have been compiled on women in these fields.[23] First, the authors found that supportive relationships with parents, teachers and mentors were important to many women. Secondly, many faced loneliness and frustration, while at the same time they found ways to reach out to understanding colleagues or organizations. Thirdly, most women had supportive spouses, partners and friends as well as other interests such as hobbies to balance their professional lives. Many women identified the importance of having a positive impact on society, and some achieved this through social activism. Finally, women scientists and engineers developed coping strategies to adapt to the challenges they encountered on account of their gender.[24] In the collection's foreword, scientist Lilli Hornig alerts us to the importance of studying the lives of individual women scientists and engineers as the

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[21] The "golden age of science" refers to the period when big science and big research was made possible due to government funding and infrastructure.
Margaret Rossiter, *Women Scientists in America: Before Affirmative Action 1940-1972,* Volume 2, (Baltimore: The Johns Hopkins University Press, 1995).
[22] Ibid., 370-371.
[23] Susan A. Ambrose, eds., *Journeys of Women in Science and Engineering: No Universal Constants?* (Philadelphia: Temple University Press, 1997).
For additional information on the range of historical science studies pertaining to women during the 1980s and 1990s see:
Sally Gregory Kohlstedt ed., *History of Women in the Sciences: Readings from Isis,* (Chicago: The University of Chicago Press, 1999).
[24] Ambrose, xviii-xix.

latter do not form a homogeneous group; despite common patterns, she contends there are no "universal constants" in their experiences.[25] My thesis supports this approach. It illustrates that while, in some cases, MacGill's life conformed to some of these patterns, her professional and personal trajectories were unique in other instances.

The historical scholarship pertaining to gender and technology has grown steadily in the United States and abroad, and will thus provide important insights on the relationship between the two. Gender must be considered in dealing with a pioneering woman engineer, as MacGill was entering a male-dominated field, wherein engineering as a profession and the technology it dealt with were gendered male. Insights from this literature will be used to explore various questions such as: How did gender affect Elsie MacGill's professional success? Did she herself see gender as a determining factor in her professional trajectory? Did her views on gender in the engineering profession change over time?

Ruth Oldenziel's study *Making Technology Masculine: Men, Women and Modern Machines*, is particularly useful; as its title suggests, this manuscript illustrates how technology became associated with masculinity during the nineteenth and twentieth centuries.[26] As the author puts it: "[t]here is nothing inherently or naturally masculine

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[25] "Even the most painstaking studies fall short of explaining the course of women's science careers fully...there is no adequate way to examine scientifically the myriad variables that make up a human life. People—male or female—simply do not fit into convenient boxes. Their personal histories and individual characteristics guide and inform their responses to education and opportunity in countless ways. Complex feedback loops make the various outcomes hard to analyze and compare in any rigorous way." From: Lilli Hornig, "Foreword," in Susan A. Ambrose, eds., *Journeys of Women in Science and Engineering: No Universal Constants?* (Philadelphia: Temple University Press, 1997), xii.

[26] Ruth Oldenziel, *Making Technology Masculine: Men, Women and Modern Machines in America, 1870-1945*, (Amsterdam: Amsterdam University Press, 1999). See also:

about technology. The representation of men's native and women's exotic relationship with technology elaborates on a historical, if relatively recent and twentieth-century Western tendency to view technology as [an] exclusively masculine affair".[27] Oldenziel carefully examines how gender and technology construct each other. She also explains how the professionalization of engineering led to its masculinization.[28]

Finally, my thesis will take into consideration the scholarship pertaining to feminism and engineering. Rossiter shows how during the 1960s and 1970s, many women scientists and engineers joined the ranks of the women's movement to improve their situation.[29] The movement's efforts culminated in 1972 with the adoption of the Equal Employment Opportunity Act and of Title IX in the United States, which extended the equal pay legislation to universities.[30] For her part, Ruth Schwartz Cowan argues that while women engineers challenged gender stereotypes in pursuing engineering careers, they generally avoided involvement in activities associated with feminism, thus avoiding the label of "feminist":

Ruth Oldenziel, "Multiple Entry Visas: Gender and Engineering in the US, 1870-1945", in *Crossing Boundaries, Building Bridges: Comparing the History of Women Engineers, 1870s-1990s,* Annie Canel et al, eds., (Amsterdam: Harwood Academic Publishers, 2000), 11-49. For earlier studies on this theme see: Joan Roathchild, ed., *Machina Ex Dea: Feminist Perspectives on Technology,*(New York: Pergamon Press, 1983); Martha M. Trescott ed., *Dynamos and virgins revisited: Women and technological change in history,* (Metuchen, NJ: Scarecrow Press, 1979).

[27] Oldenziel, *Making Technology Masculine*, 10.

[28] Ibid., 11. See also: Heap, "Introduction", 7; Nina E. Lerman, Ruth Oldenziel and Arwen P. Mohun, eds. *Gender and Technology: A Reader,* (Baltimore: Johns Hopkins University Press, 2003).

[29] Rossiter, *Women Scientists in America: Before Affirmative Action 1940-1972*, 361-382.

[30] Ibid., 376, 382.

> Most women engineers tend not to engage in organized political activity and not to identify themselves as feminists. Perhaps a person can only rock one boat at a time. Having challenged so many gender stereotypes women engineers may find that they need to remain apolitical...in order to achieve professional acceptance.[31]

Ruth Oldenziel argues, in turn, that the American women's movement had its greatest impact on the sciences, while women engineers often considered their field gender-neutral.[32] One notable exception is Nora Stanton Blatch (1883-1971), whose identity encompassed both engineering and feminism.[33] Such is also the case of Elsie MacGill. My thesis will thus challenge the idea that women engineers tended, overall, to stay away from feminism.

Women Pioneers in Engineering

Martha M. Trescott's 1984 study on women engineers in the United States between 1850 and 1975 reminds us that in choosing an education and career in engineering, many of these pioneers were working against the grain – even if they themselves did not perceive their situation in this way.[34] She notes: "I've heard the older women engineers say that they really liked a challenge, that if someone told them they couldn't do something, that was the very thing they would do!"[35] Trescott's study will help assess Elsie MacGill's own level of determination as well as her approach to engineering work.

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[31] Ruth Schwartz Cowan, "Foreword: Musings About The Woman Engineer As Muse", in *Crossing Boundaries, Building Bridges: Comparing the History of Women Engineers, 1870s-1990s,* Annie Canel et al, eds., (Amsterdam: Harwood Academic Publishers, 2000), xiv-xv.
[32] Oldenziel, "Multiple Entry Visas", 12.
[33] Ibid., 12-14.
[34] Martha M. Tresscott, "Women Engineers in History: Profiles in Holism and Persistence," in *Women in Scientific and Engineering Professions,* eds. Violet B. Haas and Carolyn C. Perrucci, (Rexdale: John Wiley & Sons Canada, 1984), 181-204.
[35] Ibid.,183-4.

Annie Canel, Ruth Oldenziel and Karin Zachman's recently edited collection explores the history of pioneering women engineers both in North America and abroad.[36] As Ruth Scwartz Cowan argues in the foreword, these women were 'mold-breakers' and 'gender-benders' who challenged societal norms, as they did not believe that male professional models presented to them were unchangeable.[37] The editors caution against easy generalizations on account of the wide range of situations and contexts experienced by women engineers; at the same time, they argue that these women "were never only victims nor heroines in the struggle against male oppression. Rather, they were active agents of history, facing real issues and dilemmas".[38]

My thesis will take these arguments into consideration; at the same time, I will assess the extent to which women engineers struggled against male oppression according to time and place. The relative infancy of both electrical and aeronautical engineering in the early twentieth century is also an important factor to consider. As Ruth Oldenziel explains, these areas were initially more open to women than the more established and highly masculinized engineering sub-disciplines, such as civil and mechanical engineering.[39]

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[36] Annie Canel, Ruth Oldenziel and Karin Zachman, *Crossing Boundaries, Building Bridges: Comparing the History of Women Engineers, 1870s-190s,* eds. Annie Canel et. al., (Amsterdam: Harwood Academic Publishers, 2000).
[37] Ruth Scwartz Cowan, "Foreword: Musings About the Woman Engineer as Muse", in *Crossing Boundaries, Building Bridges: Comparing the History of Women Engineers, 1870s-1990s,* eds. Annie Canel et. al., (Amsterdam: Harwood Academic Publishers, 2000), xiv.
[38] Ruth Olenziel, Annie Canel and Karin Zachmann, "Introduction", in *Crossing Boundaries, Building Bridges: Comparing the History of Women Engineers, 1870s-1990s,* eds. Annie Canel et. al., (Amsterdam: Harwood Academic Publishers, 2000), 9.
[39] Ibid., 6.

Women in Engineering Education

Richard White's comprehensive history of the University of Toronto's Faculty of Applied Science and Engineering (FASE) will help contextualize Elsie MacGill's studies at the university between 1923 and 1927.[40] His study offers an excellent discussion of the culture of engineering at FASE during this period. White also discusses the nature and development of the curriculum, and of the overall student experience.

The existing historical literature on Canadian women in engineering education is very recent and focuses mainly on the experiences of women at FASE. In the 2005 edited collection *Learning to Practise*, Wyn Millar, Ruby Heap and Bob Gidney explore the similarities and differences between the three professional schools of medicine, engineering and dentistry between 1910 and 1950. The authors remind us of the importance of studies on professional education and of a comparative approach in order to examine the variations within educational experiences.[41] Significantly, their analysis supports the argument that generalizations must be avoided as many differences existed between the students of the three schools and within each individual school itself, such as family background. For instance, they argue that women, in assessing women engineering students, were different from their male peers in areas such as socioeconomic background; and they came from a "higher proportion of professional and managerial families, and a smaller percentage from the lower middle class and

[40] Richard White, The Skule Story: The University of Toronto Faculty of Applied Science and Engineering 1873-2000, (Toronto: University of Toronto Press, 2000).
[41] Millar, Heap and Gidney, 155-187.

working class, than men. Their religious persuasions [also] showed less diversity".[42] The literature dedicated to women engineering students at FASE explores the obstacles and challenges these women encountered between the 1920s and 1950s.[43] Ruby Heap examines the experiences of the first generation of women students enrolled at FASE and asks "can a woman be a woman *and* an engineer?", to which her study answers in the affirmative.[44] Ruby Heap and Ellen Schienberg explore the experiences of women engineering students at FASE during this period, asking who these women were, why they chose engineering and how they coped in a male-dominated environment.[45] As Elsie MacGill's initial training took place at FASE in the early 20th century these studies offer more detailed insights that will help better contextualize her own experiences.

American historian Amy Sue Bix is also interested in women in engineering education.[46] Her work sheds light on women's challenges in entering American schools. Her focus on the Michigan Institute of Technology (MIT) is especially useful as MacGill spent two years at that institution prior to beginning aeronautical engineering work in Canada. She argues that while women were indeed present at MIT as early as 1871, they were more or less invisible until MIT became officially recognized as a co-educational institute in the mid-1960s.[47] Bix's work highlights the process of gender-stereotyping

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[42] Millar, Heap, and Gidney, 169-70, 180.
[43] Heap, " "The only girl is such a big class"; Heap and Schienberg.
[44] Heap, " "The only girl is such a big class", 45.
[45] Heap and Schienberg, 192.
[46] Amy Sue Bix, "'From "Engineeresses" to "Girl Engineers" to "Good Engineers": A History of Women's U.S. Engineering Education", *NWSA Journal,* 16(1) (Spring 2004), 27-49; and "'Engineeresses" Invade Campus", *IEEE Technology and Society Magazine,* (Spring 2000), 20-26.
[47] Amy Sue Bix, "Feminism Where Men Predominate: The History of Women's Science and Engineering Education at MIT", *Women's Studies Quarterly* Volumes 1&2 (2000), 24-45.

within engineering education. As she points out, the press was quick to pick-up those few women in engineering schools, portraying them mostly as objects of curiosity.

Canadian Women and the Second World War

The scholarship on Canadian women during the Second World War will help contextualize MacGill's professional trajectory during this critical period. In her classic study, Ruth Roarch Pierson has argued that even during the initial mobilization of women there was a consciousness that their unorthodox wartime work would only be temporary in nature.[48] While some women did benefit from the war, there were no real permanent changes to the status quo: "[t]he war's slight yet disquieting reconstruction of womanhood in the direction of equality with men was scrapped for a full-skirted and redomesticated post-war model, and for more than a decade feminism was once again sacrificed to femininity".[49]

More recently, Jeffrey Keshen has argued that both during and after the war, women believed that their experience had led to significant accomplishments, which allowed them to gain self-confidence and a sense of independence.[50] Moreover, he points out that while some working women were indeed ready to return to the home after the cessation of hostilities, some were not; after having proved their worth during war, they sought greater opportunities and responsibilities.[51] My thesis adds a new dimension to the existing literature as it focuses on a woman professional engineer. There are very

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[48] Ruth Roarch Pierson, *"They're Still Women After All": The Second World War and Canadian Womanhood,* (Toronto: McClelland and Steward, 1986), 20.
[49] Ibid., 218-220.
[50] Jefferey Keshen, *Saints, Sinners, and Soldiers: Canada's Second World War,* (Toronto: UBC Press, 2004), 4.
[51] Ibid., 165, 168, 171.

few studies devoted to professional women during the Second World War. Cynthia Toman's recent contribution on Canadian military nursing during this period offers important insights into a group of professional women, who, like women engineers, have been largely left out of the historical record.[52] Her work reminds us of the importance of paying close attention to the constructions of femininity and masculinity within a profession.[53] For her part, Mary Kinnear's study on professional women contends that, on a whole, this group fared relatively well after the Second World War compared to the working women discussed by Pierson and Keshen, as they enjoyed benefits such as higher wages and increased job security.[54]

The Canadian Women's Movement

The historical scholarship on the Canadian women's movement which is useful for my thesis can be divided into three parts: general works discussing the "second wave", studies on the Royal Commission on the Status of Women in Canada (RCSW), and the literature examining the post-Commission period. In 1993, Naomi Black argued that after the "first wave", which resulted in women's enfranchisement in the early twentieth century, the women's movement, while continuing to press for various reforms, was less active until the 1960s, when it experienced renewed strength and a "second wave".[55] In contrast, Jill Vickers, in looking at the intellectual origins of the women's movement, has argued that the activism deployed between the "waves" was an essential component

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[52] Cynthia Toman, *An Officer and a Lady: Canadian Military Nursing & The Second World War,*(Vancouver: UBC Press, 2007), 6.
[53] Ibid., 3.
[54] Kinnear, 162-163.
[55] Naomi Black, "The Canadian Women's Movement, The Second Wave," in *Changing Patterns: Women in Canada,* Second Edition, Sandra Burt, Lorraine Code and Lindsay Dorney, eds., (Toronto: McClelland & Stewart Inc., 1993), 151-176.

to the resurgence of action which was generated in the 1960s. More specifically, she contends that, "it is important to understand the forces of continuity in those movements across time", and that "this is especially true as we come to understand that women's movements are engaged in projects which are multigenerational in nature".[56]

Alison Prentice and her colleagues support the argument that women's organizations between the "first wave" and the "second wave" acted as bridges between these two phases:

> Rooted in the first women's movement, the established groups formed the bridge to the resurgent feminism of the late 1960s. They helped effect tangible improvements in the lives of Canadians, especially children, women, and the elderly. Women's organizations were often ahead of governments.[57]

As Catherine Briggs contends in her study of the creation of the Federal Women's Bureau in 1953 and its action up until the establishment of the RCSW in 1967, women's organizations engaged the federal government throughout this period.[58] My thesis will show indeed, that they persevered in social reform activities after the "first-wave". More specifically, Elsie MacGill and her colleagues maintained pressure on the federal and provincial governments in the 1950s and 1960s, advocated for the RCSW and then devoted themselves to the implementation of its report.

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[56] Jill Vickers, "The Intellectual Origins of the Women's Movements in Canada", in Constance Backhouse and David H. Flaherty eds., *Challenging Times: The Women's Movement in Canada and the United States,* (Montreal: McGill-Queen's University Press, 1992), 39-40.

[57] Alison Prentice et. al., *Canadian Women: A History,* Second Edition, (Scarborough: Nelson Thomson Learning, 1996), 411.

[58] Catherine Briggs, "Fighting for Women's Equality. The Federal Women's Bureau, 1945-1967: An Example of 'Early State Feminism in Canada.'" Doctoral Dissertation. Waterloo: University of Waterloo, 2001.

Cerise Morris' 1982 doctoral thesis is a pioneering contribution to the study of the RCSW.[59] In Canada, increased activism led to the federal government's response in the form of the creation of a royal commission on the status of women in 1967.[60] Later works have examined the RCSW in relation to liberal feminism, assessing its characteristics and its limitations, while others have reviewed its impact since the tabling of its report in 1970.[61] Jane Arscott's recent study is especially useful since it examines the internal operations of the RCSW when MacGill and her colleagues were working towards the completion of the report.[62]

My thesis will also take into consideration the scholarship which explores the work performed by women's organizations after the report was tabled. Cerise Morris and

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[59] Cerise Morris' comprehensive assessment of the Commission and its immediate results are available in: Cerise Morris, "No More Than Simple Justice: The Royal Commission on the Status of Women and Social Change in Canada", Doctoral Dissertation, (Montreal: McGill University, 1982).

[60] Ibid., 2.

[61] For studies dedicated to an analysis of the RCSW in relation to liberal feminism see: Judith Cummings, "The Report of the Royal Commission on the Status of Women: A Liberal Feminist Analysis", Masters Thesis, (Ottawa: Carleton University, 1991); Kimberly Marie Speers, "The Royal Commission on the Status of Women: A Study of the Contradictions and Limitations of Liberalism and Liberal Feminism", Masters Thesis, (Kingston: Queen's University, 1994). For studies of evaluation on the RCSW see: Monique Bégin, "The Royal Commission on the Status of Women in Canada: Twenty Years Later", in *Challenging Times: The Women's Movement in Canada and the United States*, eds. Constance Backhouse and David H. Flaherty, (Montreal: McGill-Queen's University Press, 1992), 21-38; Jane Arscott, "Twenty-five Years and Sixty-five Minutes After the Royal Commission on the Status of Women", *International Journal of Canadian Studies*, 11(1995), 33-58; Caroline Andrew and Sandra Rodgers eds., *Women and the Canadian State/Les femmes et l'État canadien*, (Montreal: McGill-Queen's University Press, 1997); Jane Arscott, " "More Women": The RCSW and Political Representation, 1970", in *Women and Political Representation in Canada*, Women Studies Series No. 2, eds., Manon Tremblay and Caroline Andrew, (Ottawa: University of Ottawa Press, 1998), 145-168.

[62] Arscott, "Twenty-five Years and Sixty-five Minutes After the Royal Commission on the Status of Women; and " "More Women": The RCSW and Political Representation, 1970".

Sandra Burt look at the instrumental changes that occurred within the federal government, including the creation of the Canadian Advisory Council on the Status of Women (ACSW),[63] while Jill Vickers, Pauline Rankin and Christine Appelle focus on the establishment of the National Action Committee on the Status of Women (NAC).[64] All these studies provide an important framework to contextualize MacGill's activism after the RCSW, as she played a key role within NAC and other feminist organizations.

Methodology

This thesis proposes a feminist case study of a Canadian pioneering woman engineer, who was also a social reformer and feminist activist. To this end, I have adopted the approach developed by feminist biographers. As Susan Mann Trofimenkoff has argued, feminist biography takes into consideration the life-cycle approach and further enlightens knowledge of the subject through the use of oral history.[65] She also points out that feminist biography comes with a political commitment inherent in feminist scholarship:

> The scholarship has to serve a purpose, however scary such a notion may be to traditional intellectuals. The purpose may be as simple as uncovering a past that

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[63] Morris, "No More Than Simple Justice"; Sandra Burt, "The Canadian Advisory Council on the Status of Women: Possibilities and Limitations", in *Women and Political Representation in Canada,* Women's Studies Series No. 2, eds., Manon Tremblay and Caroline Andrew, (Ottawa: University of Ottawa Press, 1998), 115-144.

[64] Jill Vickers et. al., *Politics as if Women Mattered: A Political Analysis of the National Action Committee on the Status of Women,* (Toronto: University of Toronto Press, 1993).

[65] Susan Mann Trofimenkoff, "Feminist Biography," *Atlantis,* Volume 10, No.2, (Spring 1985), 3.

> has been denied to women...or it may be as complex as exposing the patterns of patriarchal society in order to be able to change them.[66]

Trofimenkoff also contends that this approach allows for the subject under study to move from a position of passivity to that of an historical actor who can then be assessed in relation to historical constructs and stereotypes. She also makes the point that individual studies of this nature are essential in order to make sense of the life in question; moreover, it may provide evidence supporting general theories. Ultimately, Trofimenkoff argues that feminist biography is set apart on account of the fact that the sex of the subject makes a difference in relation to the experiences she or he will have during her or his lifetime; if, as she puts it, "the subject happens to be a woman she probably encountered constraints simply because of that fact".[67] My thesis will be informed by these precious insights when exploring MacGill's educational, professional and feminist experiences.

Following Trofimenkoff, Helen M. Buss has argued that feminist biography requires a multifaceted view of the individual's life and achievements in order to move closer to an understanding of her historical persona.[68] Similarly, Susan Ware contends in her study of Amelia Earhart that,

> A feminist interpretation of Amelia Earhart's life...does not dramatically change the details or the outcome of her life...but it shifts the field of focus... In such a retelling...the actual details of her record-setting flying career give way to an emphasis on her quest for a full and productive life and her role as an inspiration to other women. This slight shift in priorities opens up previously unexplored

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[66] Trofimenkoff, 3-4.
[67] Ibid., 3-5.
[68] Helen M. Buss, *Mapping Our Selves: Canadian Women's Autobiography in English*, (Montreal: McGill-Queen's University Press, 1993).

> connections between the life story of this unique individual and the broader patterns of twentieth-century women's lives.[69]

Meanwhile, Roberta Hamilton cautions that a biography does not claim to 'know' a historical personality.[70] Rather, biographical studies provide a means through which various aspects of an individual's history can be held up as witness to social realities of her time, and expand our knowledge of how the individual shaped the events she was a part of.[71] Alison Prentice, who has published several case studies of Canadian women physicists, also claims that biographical work helps to retrieve women's achievements from the past and to restore them to their rightful place in history.[72] Similarly, Natalie Riegler points out that in Canada, more specifically, the need for the biographical study of women is especially strong.[73]

Informed by these considerations, my thesis provides an original contribution to the existing scholarship within the fields of Canadian women's and Canadian engineering history. By studying a Canadian woman engineer it expands upon the small Canadian scholarship in this area. It contributes as well to the scholarship on the engineering profession through its assessment of MacGill's access to engineering education and of her subsequent employment within that field. Moreover, it sheds new light on Canadian professional women's experiences during and after the Second World War, and on the

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[69] Susan Ware, *Still Missing: Amelia Earhart and the Search for Modern Feminism*, (New York: W.W. Norton & Company, 1993), 12.
[70] Roberta Hamilton, *Setting the Agenda: Jean Royce and the Shaping of Queen's University*, (Toronto: University of Toronto press, 2002), 5, 7.
[71] Roberta Hamilton, 7-9, 14-15.
[72] Alison Prentice, " Three Women in Physics", in *Challenging Professions: Historical and Contemporary Perspectives of Women's Professional Work*, Elizabeth Smyth et al eds., (Toronto: University of Toronto Press, 1999), 119-140.
[73] Natalie Riegler, "Some Issues to be Considered in Writing of Biography", *CBMH/BCHM*, Volume 11 (1994), 5.

nature of their leadership within professional associations and organizations devoted to the promotion of women.

In addition, my thesis contributes to the existing literature on the Canadian women's movement by discussing the activism of Elsie MacGill and of other feminists prior to, during and after the Royal Commission on the Status of Women (RCSW). Finally, my thesis challenges the "classic" categories usually ascribed to "second-wave" feminism by exploring the various dimensions of feminism endorsed by MacGill, probing more specifically, into its strong linkages with her engineering work.

Sources and Collections

This thesis is based on an extensive collection of primary and secondary sources. The largest manuscript collection which I used was the MacGill Fonds at the National Library and Archives of Canada (NLAC). This 24-volume collection provided a rich source of material about Elsie Gregory MacGill's life and activities. Records pertaining to MacGill's correspondence and work with the Postwar Committee on the Manufacture of Aircraft were also located at the NLAC. Permission to access the recently donated Senator Lorna Marsden Fonds at the NLAC was granted from Marsden.[74] This access provided materials related to The Elsie Gregory MacGill Memorial Foundation, as well as various individual's written recollections of MacGill.

My thesis has strongly benefited from the rare insights on MacGill's life provided by personal interviews with her family and former colleagues. In speaking with her step-daughter, Ann Soulsby, and niece, Elizabeth Hughes Schneewind, information

[74] Temporary access number R/E 2007-0703.

pertaining to her family complemented views they were able to offer on her work as an engineer and participation in the women's movement. Colleagues, within the women's movement and engineering circles were able to further contextualize Elsie MacGill's life through their recollections of her activities as a social reformer, feminist activist and engineer. For instance, Monique Bégin, Dormer Ellis, Ursula Franklin, Wendy Lawrence, Lorna Marsden, Cathleen Morrison, Liz Neville, and Brigid O'Reilly supplemented my research on MacGill's involvement within the women's movement, while Victor Stevenson provided rich details on MacGill's work as Chief Aeronautical Engineer at Canadian Car and Foundry in Fort William, ON (presently Thunder Bay, ON) during the Second World War.

The Archives at the University of Toronto provided additional contextual information on the period during which MacGill was a student there between 1923 and 1927, including MacGill's application, yearbooks and newspaper clippings.[75] Finally, archival material was supplied by the Canadian Federation of Business and Professional Women's Clubs including club histories, copies of the publication *The Business and Professional Woman*, and the online index of national resolutions.[76]

My study also made use of a wide array of memoirs, autobiographies and biographies which mentioned MacGill and provided additional context to events and organizations that she was a part of, most notably the Royal Commission on the Status of Women

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[75] Specific material pertaining to her course schedule and transcripts was unavailable however, on account of the new privacy regulations at the university, "Freedom of Information and Protection of Privacy Act" (FIPPA) which became effective 12 June 2006. See the university's "Procedures related to FIPPA Requests" for more information: http://www.fippa.utoronoto.ca/Page16.aspx Accessed 21 June 2006.

[76] For access to the Canadian Federation of Business and Professional Women Club's Index see: http://www.bpwcanada.com/Resolutions/Index-Resolution.pdf Accessed 9 December 2007.

(RCSW) and the National Action Committee on the Status of Women (NAC). Finally, relevant newspapers and newsletters complete the list of primary sources that were consulted.

Outline

Susan Mann Trofimenkoff argues in her study that in writing a woman's life it is difficult to write in the chronological and linear style so common to studies of men, as women's lives are not usually focused in one direction, but encompass many directions at the same time.[77] This is certainly the case for Elsie Gregory MacGill. As a result, while the first two chapters are generally chronological in their discussion, chapters three and four run parallel to one another, as does chapter five with chapters six and seven. Thanks to this framework the multifaceted nature of MacGill's life as an engineer, social reformer and feminist comes to life more effectively.

My thesis is divided in seven chapters. The first two chapters discuss MacGill's family background, engineering education and initial work experiences. The next two chapters trace her trajectory as a professional engineering consultant and as a social reformer and emerging feminist activist. The final three chapters discuss the last stages of her professional career, as well as her role as a feminist during the 1960s and 1970s.

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[77] Trofimenkoff, 7.

Chapter 1: The Training of a Woman Engineer

Introduction

Elsie Gregory MacGill was born in 1905 in Vancouver, British Columbia. She was the youngest of four children. She had two step-brothers, Eric and Fred Flesher, from her mother's first marriage, and an older sister, Helen Gregory MacGill junior. Growing up in Vancouver provided a rich range of experiences for the children. Exploring the natural environment was encouraged by their parents through multiple outdoor activities and time spent at the family cottage at Buccaneer Bay near Howe Sound.[1] The youngest siblings stayed closely connected to each other through their initial education and play, and throughout their lives. In fact, Helen Jr. and Elsie were commonly referred to as "Hel-Nelsie" by their parents.[2] The siblings engaged in different paths. Eric Herbert Gregory graduated from the University of Toronto and went on to set up a successful logging business, while Frederic Philip Gregory traveled to San Francisco and worked in insurance with his mother's brother until he enlisted with the United States armed forces for the Second World War.[3] As we shall see Helen Jr. and Elsie both pursued university educations and graduate studies, in sociology and engineering respectively.

A study of Elsie Gregory MacGill requires an examination of her family background, and the supportive family environment she was raised within, with which she engaged throughout her life.[4] Numerous studies have confirmed the importance of family support

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[1] Elsie MacGill, *My Mother the Judge: A Biography of Judge Helen Gregory MacGill,* Reprint 1955, (Toronto: PMA Books, 1981), 105.
[2] Ibid., 105.
[3] Ibid., 89.
[4] Ibid., 29-30.

- both material and emotional in women's decisions to pursue non-traditional careers.[5] Elsie received this kind of support during her childhood and throughout her life. In addition, Elsie's life as a professional engineer, and as an activist was shaped by a family legacy which comprised the promotion of feminism, a quest for social justice and a belief in the virtue of higher education. This was especially important as while women's enrollment, by the 1920s, was increasing at universities across Canada, and the push towards women's higher education was well underway, by 1925 only a little over twenty-five percent of graduating students in Canada were women.[6] Moreover, most of these women graduated in the Arts.

Feminist Foremothers

MacGill's family featured successive generations of formidable women. Her great-great grandmother Ann Racey, was known on the Six Nations Reserve where she worked in a missionary capacity with the Native population by the name

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[5] Ruth Schwartz Cowan, "Foreward: Musings About the Woman Engineer as Muse," in *Crossing Boundaries, Building Bridges: Comparing the History of Women Engineers 1870s-1990s,* Annie Canel et. al. eds. (Amsterdam: Harwood Academic Publishers, 2000), xv; Susan A. Ambrose, et. al. in *Journeys of Women in Science and Engineering: No Universal Constants.* (Philadelphia: Temple University Press, 1997),13-23. W.P.J. Millar and R.D. Gidney, " 'Medettes': Thriving or Just Surviving? Women Students in the Faculty of Medicine, University of Toronto, 1910-1951," in *Challenging Professions: Historical and Contemporary Perspectives on Women's Professional Work,* Elizabeth Smyth et. al. (eds.) (Toronto: University of Toronto Press, 1999), 218. Ruby Heap and Ellen Scheinberg, " 'Just one of the gang': Women at the University of Toronto's Faculty of Applied Science and Engineering, 1939-1950," in *Learning to Practise: Professional Education in Historical and Contemporary Perspective,* eds. Ruby Heap, Wyn Millar and Elizabeth Smyth (Ottawa: University of Ottawa Press, 2005), 189-211.

[6] Neil Guppy, Neil, Doug Balson and Susan Vellutini, "Women and Higher Education in Canadian Society," in *Women and Education: A Canadian Perspective.* eds. Janke Gaskell and Arlene Tigar McLaren. (Calgary, Alberta: Detselig Enterprises, 1987), 175.

"Skay-end-ey-rie" or "One who has Great Knowledge".[7] Elsie's great grandmother, Jane O'Reilly, promoted women's voices in the public sphere through her public participation on the Boy's Industrial School in Hamilton, Ontario, while Jane's daughter, Emma Gregory, became a fierce defender of women's rights. As a child, Emma sought the same education as her brother, and later she worked to have women's voice heard in public regarding equality.[8] As chairman of a rally on women's suffrage at Union Square Hall, in San Francisco, she demanded that justice, specifically for women, be a key focus of the delegates. She asked them, "If elected, will you support a bill for women suffrage?"[9]

Emma Gregory did not shy away from sharp-witted debate, even with the Prime Minister of Canada. Emma thus challenged Sir John A. Macdonald about the Female Suffrage Clause he included in his Electoral Franchise Bill of 1885. The vote had only been extended to women property holders who were unmarried or widowed; all other women remained disenfranchised. In relation to her own situation, she asked: "Does Sir John believe that marriage indicates a certain mental weakness on the part of women? [...] Or that close companionship with the male sex leads to debilitation?"[10] Elsie would

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[7] NLAC MG31-K7 Volume 21 File 11: General Subject Files. "Skay-end-ey-rie" by Mary Carol Wilson.

[8] Jane O'Reilly "advocated that women have a voice in public matters and the spending of public money. She sat on the Board of the Boys' Industrial School in Hamilton, Ontario and campaigned for a similar industrial school for girl delinquents but was denied." Furthermore, this issue would be passed down through the female line most notably with the appointment of Helen MacGill Hughes as Judge of the Family Court, and Elsie's subsequent concern on penal reform for women. Mary Carol Wilson, 4; MacGill, 15.

[9] The delegates noted were Mr. Adolpho Sutro, Populist representative, and Mr. S. M. Shortridge, the Republican representative. Neither rejected the idea, but their affirmative answers were given with caution. MacGill, 85-86.

[10] Ibid., 45.

later define her grandmother's activism by noting: "Not to conform invites comment; not to conform takes courage!"[11]

Emma's daughter, Helen, followed in her mother's footsteps. Her passion for knowledge led her to pursue a higher education at a time when most women rarely looked beyond high school. She entered Trinity College, in Upper Canada, in 1883, earning a Bachelor's degree in music through British exams in 1886. By 1890, she had completed a Bachelor of Arts and a Master of Arts degree in Mental and Moral Philosophy, then considered to be "Trinity's most edifying, most distinguished and most difficult course."[12] Not only had she been awarded the first Bachelor degree at Trinity for a woman, but she was also the first woman in Canada and the Dominion to earn a Bachelor of Music. Moreover, Helen's earning of the Bachelor of Arts in 1889 was all the more remarkable given that "at Trinity's fountainhead Cambridge that same year the Senior Wrangler Miss Phillipa Garrett was not formally accorded the distinction she had won. Not until 1949, sixty years later...did Cambridge place women on an equal footing with men."[13]

After her degrees at Trinity, Helen went on to work as a journalist, traveling as far away as Japan, during which time she met, and married Frederick Charles Flesher, commonly known as Lee Flesher.[14] The Japan trip was initially prompted by John Brisben Walker, the editor of *The Cosmopolitan*, an American magazine, which covered the politics of the day. Admiring her early work, Walker believed she was just the

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[11] MacGill, *My Mother The Judge*, 39, 83.
[12] Ibid., 49.
[13] Ibid., 40-44, 47-49, 53.
[14] Ibid., 65.

person to cover Japan's evolving political scene.[15] Later, Helen pursued her journalistic work with her mother on various newspapers in both California and Minnesota.[16] This enabled her to support herself and her family, especially following Lee Flesher's death in 1900.[17]

Helen and her mother were also actively involved in the suffrage movement, in the United States and later in Vancouver, through journalism and public activism. Emma's continuing support, both on the home and financial front, allowed Helen to fulfill her obligations in the private and public sphere.[18]

A Reform Background

Helen re-married after Lee Flesher's death. Her new husband was a former classmate at Trinity, James MacGill. According to Helen Jr., her father, James Henry MacGill, earned a bachelor's degree and later also sought his Master of Arts.[19] He was awarded his masters degree *in absentia*, having moved west to Vancouver, British Columbia where he worked as a reporter amongst other odd jobs; he then studied law under the tutelage of great legal minds including E.J. Fulton, Joseph A. Russell and John

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[15] Upon hearing of this assignment, John Cameron of the Toronto *Globe* signed her for weekly articles on the Canadian western territories while en route to Japan.
MacGill, *My Mother the Judge,* 56, 60, 63, 65-67.

[16] It was on account of Lee's work that the family moved as much as it did. Elsie notes: "At the end of their first five years in California their capital gains stood at two children, one medical education and practice, one pharmacy and two newspapers."
Ibid., 78, 80, 86-88.

[17] Hughes, 72.

[18] MacGill, *My Mother the Judge,* 95, 100.

[19] After sharing some classes together at Trinity, Helen Gregory and James MacGill went their separate ways, and did not marry until 1902.
Helen MacGill Hughes, "Wasp/Woman/Sociologist," in *Society,* (July/August 1977), 72.

Campbell.[20] At twenty-four, he was called to the bar; at twenty-six, he enrolled in the Divinity course at Trinity, and then later was ordained as a deacon in 1897.[21] In assessing her father's multiple pursuits, Elsie commented, "Of the three callings the Press was most nearly his vocation, the Law became his livelihood, [and] the Church continued his abiding spiritual quest."[22] Both Elsie's parents would later encourage their children, including their daughters, to pursue higher education in the fields of their choice.

In 1902, the MacGills moved to Vancouver. Helen worked there with other women to advance their rights. Between 1917 and 1922, they were able to help British Columbia move to a leading position compared to the rest of Canada, the United States and Great Britain, with respect to social legislation.[23] Their first major victory was the granting of the franchise to women in 1917.[24]

Helen and her husband James were also active social reformers. They believed that social injustice could be righted with hard work and persistence.[25] Their activism was steeped in Protestant tradition; it was also shaped by the social reform movement which

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[20] MacGill, *My Mother the Judge,* 96-97.

[21] Helen Hughes recalls: "She and my father met at Trinity University in classes in mental and moral philosophy. There she was the only female, her presence being acknowledged by the lecturer with open ill will. He set out a chair for her apart from the class and paid her no further attention. She stuck it out and won her B.A. with honors." Hughes, 72.

[22] MacGill, *My Mother the Judge,* 98.

[23] Hughes, 73.
See also: Margaret Hilllyard Little, "Claiming a Unique Place: The Introduction of Mother's Pensions in British Columbia," in *Rethinking Canada: The Promise of Women's History,* Third Edition, Veronica Strong-Boag and Anita Clair Felman eds, (Toronto: Oxford University Press, 1997) 285, 303.

[24] MacGill, *My Mother the Judge, 149, 151, 153.*

[25] Hughes notes: "My parents believed that there was a great deal wrong with the world, but that intelligent and unremitting effort could right it."
Hughes, 73.

was sweeping across North America during the late nineteenth and early twentieth centuries. Led by middle-class Protestants inspired by Christian values, the movement maintained close connections with the feminist movement.[26]

The MacGills considered the law as key to social reform.[27] James MacGill's formal legal training and Helen's self-schooling in this field led them to consider major issues such as the status of women in society within a legal framework.[28] Helen's faith in the law had obtained its roots in her mother's own interest in legal training, and in the legacy of her prominent grandfather, Judge Miles O'Reilly.[29]

Both Elsie and her elder sister, Helen Jr., clearly remember their mother's involvement with the suffrage movement. Elsie recalled that the women suffragists of Vancouver were non-militant as compared to their British sisters, who were known for their provocative displays of militarism. Instead, they resorted to less drastic strategies to bring change. For example, some, including Helen, insisted on being present at the

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[26] See: Mariana Valverde, *The Age of Light, Soap, and Water,* (Toronto: McClelland & Stewart Inc., 1991); Ramsay Cook, *The Regenerators,* (Toronto: University of Toronto Press, 1985); Richard Allen, *The Social Passion,* (Toronto: University of Toronto Press, 1971); Veronica Strong-Boag, " "Ever a Crusader": Nellie McClung" in *Rethinking Canada: The Promise of Women's History,* Third Edition. eds. Veronica Strong-Boag and Anita Clair Fellman, (Toronto: Oxford University Press, 1997), 275-76.

[27] Helen recalls: "Jim MacGill was a pioneer lawyer there [Vancouver]. I was grown up before I realized an intriguing affinity in my parents [sic] vocations: each was fascinated by a particular index of the expansion of democracy, she the rules of parliamentary procedure, he in the revisions – over the centuries – of the Book of Common Prayer." Hughes, 72.

[28] Helen's initial interest in the active study of law developed in 1909 when she started to trace the history of the law as related to women and children – or social law. Elsie related: "She was never formally admitted as a student-at-law (women could not practice in British Columbia), yet the study and reading she engaged in was not unlike that which law societies everywhere recognized as qualifications for a solicitor." MacGill, *My Mother the Judge,* 119-128.

[29] Emma's interest in legal training had come about due to her work as a suffragette in California, where she studied law under Clara Shortridge Foltz, one of California's early female attorneys. Ibid., 86.

trials of adolescent prostitutes, so that these girls were not left to face their male judge and jury alone. Elsie notes:

> When my Mother and the wife of the Anglican bishop learned of the crass courtroom treatment accorded sixteen - and seventeen-year-old girls charged with being prostitutes, they sat through the trials though the magistrate publicly berated them in the court thronged with men, saying that no decent woman would stay to hear such sordid evidence.[30]

Their initiatives illustrated their conviction that middle class women should play an active role public life, and that the state should support their actions with increased social support services to ensure women's participation in the broader society.[31] Furthermore, Helen Gregory MacGill set an example for her daughters by standing up for her beliefs and by braving public opinion – a lesson Helen Jr. recalls caused her and Elsie both pain and pride: "We were by turns embarrassed and proud of our unusual mother - on into the late teens, when it was all pride."[32]

Helen MacGill was also known for her public writing, aimed at explaining legal and political procedures to the female population. But she is probably best known for her pioneering role in the Juvenile Court of Vancouver, to which she was appointed as its first woman judge in 1917.[33] The creation of the juvenile court resulted from a successful campaign led by British Columbia women suffragists, who wanted to raise

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[30] NLAC MG31-K7 Volume 21 File 11: Miscellaneous Speeches and Notes, n.d., 1960-1970. "Legalist Feminism in Canada" paper presented by Elsie MacGill at Conference of the Canadian Women's Movement, York University, Toronto, 1977, 3.
[31] Black, xxi.
[32] Hughes, 72.
[33] She was appointed Judge of the Juvenile Court of Vancouver in 1917 and served until 1945, except from February 1929 to June 1934 when she was dismissed for political reasons during the change of government. During this time Edith Louise Paterson served as Judge. NLAC, MG31-K7 Volume 17 File 4: Proposed Memorial Plaque to Judge Helen Gregory MacGill: Correspondence, 1959; MacGill, *My Mother the Judge*, 142, 144-5, 154, 201-215.

the status of family law to a level akin to other legal branches.[34] While Helen's appointment was legitimate, the government made a point of keeping juvenile courts of equal status to public commissions, as evidenced by appointing non-lawyers to the judgeship. The improvement of family law thus became a mission for Helen, along with the demand to have a proper family court. To do this required establishing a court of law with official magistrates. Helen worked toward this goal, although it meant her removal from the bench. Her goal was finally achieved in her 81st year, when she chose to retire.[35]

As the campaign for women's suffrage expanded across the country, Helen's two daughters received a first-hand education in feminism and public activism. As we shall see, Elsie can be considered a third and possibly even fourth generation feminist, on account of the legacy she inherited from her mother and forebearers.[36] Elsie herself believed that a person's life was steeped in purpose; reflecting on the women before her, she noted: "Our direction in life is determined by something within us, our real purpose our "golden thread"". Elsie further argued that for Ann, Jane, Emma and Helen, this "golden thread" was a strong empathy for the weak and the oppressed.[37]

The Pursuit of Higher Education

Helen and James MacGill encouraged their daughters to pursue education to the fullest degree. James initially suggested a boarding school for their grade-school education, to which Helen was adamantly opposed. As Elsie explained:

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[34] Black, xvii.
[35] Ibid.
[36] Hughes, 73.
[37] MacGill, *My Mother the Judge,* 93.

> My mother had been privately educated. A girls' private school was close at hand. But she learned that its graduates rarely went on to the university, and that fact decided our parents in favor of public school. Perhaps they [her parents] believed that they might have most influence there.[38]

Helen Jr. and Elsie MacGill were therefore enrolled at Lord Roberts Public School.[39] The sisters pursued their studies together. Despite a year's difference in age, they undertook the final year of high school in the same class, at the old Dawson schoolhouse, on account of Helen Jr.'s illness during the prior year.[40] The sisters' public schooling was further supplemented with piano and drawing lessons, from Ada Marshall and Emily Carr respectively, as well as participation in weekly Sunday School and the Junior Auxiliary at St. Paul's Anglican Church. The girls were also exposed to the larger world in 1911, during their father's business trip to Europe. On their mother's insistence, the children went along, as she believed that the girls would benefit from this experience.[41]

Helen Gregory MacGill also insisted that both sisters envisage a future beyond the domestic sphere, since she firmly believed that a woman had a right to fully develop herself as a thriving individual. She thus challenged the still largely held belief, that a

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[38] MacGill, *My Mother the Judge*, 152.

[39] Helen Hughes recalls that the education at Lord Roberts was probably old-fashioned, but what they missed in the classroom they got at home from their parents who did not keep the issues of the day from them. Elsie related in her mother's biography they also received education in French and water-colour painting.
Hughes, 73; MacGill, 110, 164.

[40] Helen Hughes recalls, "Through losing a year, I was in the same class with my sister...we had many friends but stayed together always." NLAC MG31-K7 Volume 17 File 5: Last Will & Testament & Correspondence of Helen Gregory MacGill, 1943-1949, paper by Helen Jr. Contained within, "The Family: Autobiographical Study- A Study in Family Organization – H.G. MacGill, 5 January 1927, 11.

[41] MacGill, *My Mother the Judge*, 131.

university education was wasted on a girl, since the latter was expected to marry.[42] As Elsie noted, through her own pursuit of education "she [Helen] had demonstrated that a woman too has a purpose and task in life beyond child-bearing and home-making; a contract to keep with life that demands her development as an individual". [43]

After high school, Helen Jr. and Elsie MacGill thus began studies at the University of British Columbia (UBC). Helen Gregory and James MacGill not only provided strong support, but they also became members of the UBC's Convocation. As a result, they helped to shape the development of the university.[44]

Helen Jr. pursued a degree in arts at UBC. Elsie, in contrast, chose applied science studies. Elsie recalls that she initially became interested in engineering because of a boyfriend's crystal radio; and this interest superseded that of art and music lessons.[45] Moreover, it led Elsie to pursue relevant courses at the university level. She was accepted, but her admission to the applied sciences program was not a regular one. As Elsie notes, she was admitted without the required science and math credits, which led

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[42] MacGill, *My Mother the Judge*, 226.
[43] Ibid.
[44] Helen Hughes recalls: "When the institution was established, a supporting public was created for it by the provision that anyone who had resided two months in British Columbia and had a degree from a British university might become a member of Convocation. The members of Convocation – my parents both belonged - voted on many matters of policy and served as an alumni association when the university was too young to have alumni. They had the effect of making broad public issues of the problems of education."
Hughes, 74.
[45] Black, xviii.
NLAC MG31-K7 Volume 13 File 1: Elsie MacGill: Consulting Engineer – Paper by J. Bannerman – n.d., 2. – Jean Bannerman, "Elsie MacGill: Consulting Aeronautical Engineer."

her to believe that she was admitted with the assumption that she would eventually drop out.[46]

In fact, she did not complete her schooling at UBC. Her father decided his daughters should transfer to the University of Toronto, at the start of their third year. His rationale was that he wanted the girls to graduate from the University of Toronto as their parents, step-brother and mother's uncle had before them, thereby carrying on the family tradition.[47] The transfer was smoother for Elsie than for Helen, who, after the first term, returned to Vancouver to complete her undergraduate studies at UBC. Helen Jr. later pursued a Master's and Ph.D. in sociology at the University of Chicago. The University of Chicago Press published her doctoral thesis under the title *News and the Human Interest Story*.[48]

For her part, Elsie opted for the field of electrical engineering at the University of Toronto. The University of Toronto led the way in its early acceptance of women.[49] While the Faculty of Applied Science and Engineering (FASE) did admit women in the first decade of the twentieth century, they studied other subjects, such as chemistry. Hildegarde Scott was the first woman to earn a degree, a bachelor of science in chemistry, from FASE in 1912. Female enrolment remained very low at only one percent during the interwar years. In fact, in 1929 of the 697 students at the FASE only

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[46] NLAC MG31-K7 Volume 13 File 1: Elsie MacGill: Consulting Engineer – Paper by J. Bannerman – n.d., 2. – Jean Bannerman, "Elsie MacGill: Consulting Aeronautical Engineer."

[47] NLAC MG31-K7 Volume 17 File 5: "Autobiographical Essay – H.G. MacGill"

[48] Hughes, 74-76.

[49] Both MacGill and Queen's universities discouraged women's entrance in engineering until 1930 and 1940 respectively. Ruby Heap, " "The only girl in such a big class": Women Students at the University of Toronto's Faculty of Applied Science and Engineering during the 1920s and the 1930s," in *Scientia Canadensis* Volume 29, No. 2 (2006), 54.

4 were women.[50] The trend of low female enrollment in engineering continued into the 1930s and 1940s. While the number of women studying at the University of Toronto overall had increased, female students were mainly enrolled in the Faculty of Arts. Still in1939-1940 the presence of seven women at FASE was considered a milestone.[51] In fact, women fared better in the other male-dominated professional schools, such as medicine, dentistry and architecture.[52] Therefore, in being accepted into the engineering program at FASE MacGill was breaking new ground, especially in choosing electrical engineering as she was the first woman to pursue these studies at FASE.[53]

Upon commencing her studies in 1923, Elsie MacGill had to enroll in the first year of the electrical engineering program at FASE. She argued, unsuccessfully, that she had already completed the first and second year courses in applied science at UBC.[54]

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[50] Richard White, *The Skule Story: The University of Toronto Faculty of Applied Science and Engineering, 1873-2000,* (Toronto: University of Toronto Press, 2000), 72-73, 119-120. For more information on general engineering enrollment in Ontario during this period see: A.B. McKillop, *Matters of Mind: The University in Ontario: 1791-1951,* (Toronto: University of Toronto Press, 1994), 334-341.

[51] Heap, " "The only girl in such a big class," 52-53.

[52] Female engineering students were also outnumbered by their counterparts enrolled in other male-dominated professional schools and faculties. In 1939-40, for instance, 64 women were enrolled in the Faculty of Medicine, and 20 in the Faculty of Dentistry. During that year there were 2,763 women at the university as a whole with 1,563 in the Faculty of Arts. Heap, " "The only girl in such a big class", 52-53. See also: Wyn Millar, Ruby Heap and Bob Gidney, "Degrees of Difference: The Students in Three Professional Schools at the University of Toronto, 1910 to the 1950s," in *Learning to Practise: Professional Education in Historical and Contemporary Perspective,* eds. Ruby Heap, Wyn Millar and Elizabeth Smyth (Ottawa: University of Ottawa Press, 2005), 155-187 and Annemarie Adams, and Peta Tancred, *"Designing Women" Gender and the Architecture Profession,* (Toronto: University of Toronto Press, 2000), 18-19.

[53] Heap, "Just one of the Gang", 13.

[54] Moreover, she had fast-tracked, moving up to the second year courses after only one term, and completing the entire year's work in the Spring. She attributed her low marks to the fact she had to do a great part of the work alone. Nevertheless, she had qualified for entrance into the third year at the University of British Columbia, either in applied

MacGill's initial year was a challenging one in many respects. First of all, changes to entrance requirements called for senior matriculation, where previously junior had been accepted. Secondly, the curriculum was revised during the 1922-1923 academic year to increase its rigor. Second year courses replaced the common first year, allowing for increased specialization. Furthermore, additional non-technical courses were added to increase the breadth of knowledge the students were required to master.[55]

MacGill was considered a freshman in the engineering program, despite her previous studies at the university level. Moreover, while in residence at St. Hilda's College, her mother was prompted to write a spirited letter of complaint when she learned that Elsie was expected to assist with the running of the residence on top of her studies,

> I am extremely disappointed with the way things have turned out in connection with...Elsie going to St Hilda's... Imagine then my indignation to find that she who has so heavy a course and is at the University until five o'clock is rated as a Freshman and must waste time doing fag duty and answering telephone calls...[56]

Finally, FASE had a long tradition of fall initiations. However, Elsie and the other first year woman student at FASE, Betty Lalor, who was in architecture, took no part in this ritual. As the Yearbook noted "our two freshettes were not with us." While the specific reasons for their absence are not stated, it can be surmised that they did not wish to take part in the "hospitality" offered to them and their fellow freshmen by the Sophmores,

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science or in the standard third year arts degree. University of Toronto Archives, File No. A73-0026/269(48) – Elsie MacGill's University of Toronto Application.

[55] Some of the non-technical course included: accounting, economics, and commercial law, subjects that "overloaded an already heavy curriculum." Heap, " "The only girl in such a big class", 55.

[56] NLAC MG31-K7 Volume 15 File 11: 3 December, 1923 – Helen Gregory MacGill's letter to Dr. Seager of St. Hilda's.

"[including] everything from tar soft soap, not forgetting the "staves".[57] MacGill's involvement in extra-curricular activities remained minimal, with the student Yearbook not mentioning her again until her graduation in 1927.

The challenges facing a woman engineering student are further illustrated in the School Night production at Hart House held in January 1924.[58] Part of the 1924 School Night production included an original play entitled "Insomnia" by Jack Dymond. While the play can clearly be classified as a spoof, it illustrates some of the prevailing views of women at FASE. It looked thirty years into the future of the University of Toronto and envisioned two new faculties: one for men, called the Faculty of Rugby, and a corresponding one for women called the Faculty of "Gold Diggers", where "girls are no longer bored with the study of moderns, but devote their entire time to the study of cosmetics, attitudes and others way of attracting the male".[59] This representation of women at FASE is telling of the attitudes attached to them by their male peers within the university environment. In this context, we can speculated that MacGill's pursuit of engineering studies would have met with some resistance, and question as to the level of her seriousness. As we shall see, while respectful to a degree, her peers did not see her as an equal.

It is difficult to obtain insights into MacGill's experiences since she did not keep a diary.[60] Given the demands of her program, and the fact that she met all the requirements within the four-year period we can speculate that she performed well. The

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[57] *Transactions and Year Book of the University of Toronto Engineering Society,* 37 (1923-1924), 132-133.
[58] Ibid.
[59] Ibid.
[60] The *Toronto Star* took note of her entrance in a brief note. *Toronto Star,* 13 April 1925.

memoirs of Professor John Hamilton Parkin provide some glimpses on MacGill as a female engineering student. She was the first woman Parkin had to contend with as a professor. Her presence proved to be an embarrassment to him given the nature of engineering terminology and its multiple double entendres – to the point that he felt the need to censor his lectures to avoid future discomfort on his part:

> Now the terminology of engineering abounds in words used in connotations full of surprises for a professor accustomed to lecturing to males only when the class includes a female. Such terms as male and female fittings, flat bastard file, or bastard thread are examples of a less embarrassing kind. The wily male students had evidently foreseen the possibilities raised by the presence of their female classmate which, unfortunately, the professor had not.... He [Parkin]was covered in confusion and blushes. From that point on his lectures were censored, and any word of double entendre was replaced.[61]

Other faculty members were concerned as well; such as G. Ross Workman, or "Workey", the Civil Section 10 Demonstrator. As noted in the student yearbook, the presence of a woman in drafting created challenges for all parties involved,

> Astonished were the faces of the men of 2T7 when, as freshmen, they realized that the sanctum of the First Year Drafting Room had been invaded by a bold, ambitious co-ed. The architectural "studios" had been used to the presence of ladies, and Miss Betty Lalor found a ready welcome there. But a lady in the den of iniquity, the first year drafting room? Where was Workey going to tell his stories? What new, polite exclamation of disgust were the poor freshmen to invent, for use when the ink spilled over their paper, in order not to shock the ears of so tender and unspoilt a creature? Would our "Elsie" outlive the freshman year and finally blossom forth as the only female electrical engineer of S.P.S.? [62]

In fact, Elsie did persevere as a woman. As Parkin notes: "a few of the students became quite stooped from carrying Miss MacGill's books and other impediments from lecture

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[61] J.H. Parkin, *Aeronautical Research in Canada, 1917-1957: Memoirs of J.H. Parkin.*, Volume 1, (Ottawa: National Research Council Canada, 1983), 140-141.

[62] *Transactions and Year Book of the University of Toronto Engineering Society, 40* (1926-1927).

to lecture".[63] Elsie thus garnered the respect of her peers and she was exposed to her classmates' gentlemanly behaviour. Indeed, she received a lengthy tribute in the engineering yearbook of 1927:

> [E]vents have shown that our worries were futile, Miss E.M.G. MacGill of Vancouver managed to look after herself in so masterful a fashion that, by the time this is published, she will be as good an engineeress as has ever worn overalls—if not better. With clever hand she steered her ship around the cliffs of annual examinations. So well did she uphold her dignity that one day, in a lecture, the boys were rudely awakened from their slumber by the unmistakable sound of two feminine hands coming into very sudden contact with two masculine cheeks.[64]

Despite MacGill's recognition by her peers, her achievements did not grant her full equality. Her identification as an "engineeress" established her as different; which was based on her femininity.[65]

For her part, MacGill strongly believed that gender-based distinction were detrimental to student life. She was willing to impart her views to the entire university community. In a letter to the editor of *The Varsity* on 22 January 1926, she challenged students in her "A Plea for Broad Mindedness,"

> Must the University of Toronto retain the high school tactics by dividing the sheep from the goats in all University affairs, save those of recreation? Can not there be more co-operation between the men and women in the University? Instead of the spirit of competition, ... cannot we unite as students for the good of the University as a whole? When a man or woman enters the University, would it not be better for the University (the primary interest) if he or she merged his or her personality as a man or woman, with that of the student, looking at

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[63]Parkin 140-141.

[64] *Transactions*, 40.

[65] Interestingly, during the Second World War, American women taking compacted courses in engineering to meet manpower demands of war were also described as "engineeresses".
Amy Sue Bix, "From "Engineeresses" to "Girl Engineers" to "Good Engineers": A History of Women's U.S. Engineering Education," *NWSA Journal* Vol. 16, No.1 (Spring 2004), 27-29.

university affairs from the standpoint of the student, seeking first the good of the University?

MacGill went on to compare the situation at the University of Toronto to that of UBC. She noted that at UBC and other smaller universities students had learned to share resources and not guard them jealously as privileges to male and female clubs or organizations. As a result they were able to all "have and share in the intellectual stimulus offered". Thus she challenged the student body to do the same, and work together for the betterment of each other. She summed up her argument by asking, "Can not the students of the University of Toronto sink their petty jealousies and from being "boys and girls" grow into university men and women?"[66] While the specific event(s) in question at the University of Toronto are not mentioned, it is highly possible that MacGill was referring to Hart House which barred women's participation except for special events until 1972.[67]

In 1927, Elsie MacGill graduated as the first woman to obtain a degree in electrical engineering in Canada. Her success was recorded in the *Toronto Star*.[68] While this media attention highlights MacGill's achievement, her mention in the Yearbook acknowledging her graduation requires a further comment. At least, she was included in this publication, in contrast to some of her American contemporaries who were deliberately left out.[69]

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[66] MacGill, Elsie, "A Plea for Board Mindedness," *The Varsity*, 22 January 1926.
[67] Martin L. Friedland, *The University of Toronto: A History*, (Toronto: University of Toronto Press 2002), 591.
[68] *Toronto Star*, 8 June 1927.
[69] Some of her contemporaries in the United States, most notably Nora Blatch, had the painful experience of being deliberately excluded from class photos by her classmates. In fact, her classmates arranged to have her taken on a date the same day the photo was scheduled to ensure her absence. Ruth Oldenziel, "Multiple Entry Visas: Gender and

Work and graduate studies in the United States

Like many other engineering graduates of her generation, both male and female, MacGill faced few prospects when she graduated in 1927. Indeed, during the interwar years, most students either gave up on their studies, went into business for themselves, or chose to relocate outside of the country. A significant percentage of Canadian engineering graduates found employment in the United States.[70] The few female graduates faced even greater difficulties in finding employment, despite their skills and determination.[71] Like many other Canadian female graduates at the time, they, too, searched for jobs in the United States.[72]

In effect, MacGill found work in engineering with the Austin Automobile Company in Michigan. She soon learned the importance of adaptability: while her degree was in electrical engineering, she was hired as a mechanical engineer.[73] Moreover, when the plant shifted to aeronautics, so did MacGill.[74] At the time, aeronautical engineering was similar to electrical engineering in its lack of a traditional masculine identity. Unlike the older branches of civil and mechanical engineering which required field work and often the ability to manipulate heavy objects, electrical and aeronautical engineering were largely contained in drafting rooms, and they emphasized analytic and problem-solving

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Engineering in the US, 1870-1945", in *Crossing Boundaries, Building Bridges: Comparing the History of Women Engineers, 1870s-1990s,* eds. Annie Canel et al. (Amsterdam: Harwood Academic Publishers, 2000), 21.

[70] McKillop, 340-341.

[71] Heap, "One of the Gang", 24-26

[72] Ibid., 24-25. See also: Judith Fingard, "Gender and Inequality at Dalhousie: Faculty Women Before 1950," *Dalhousie Review*, 1984-85, 64(4), 687-703.

[73] NLAC MG31-K7 Volume 21 File 6: Miscellaneous Notes and Memoranda n.d., 1977. See MacGill's draft speech at Queen's University, 1977.

[74] NLAC MG31-K7 Volume 13 File 1: Elsie MacGill: Consulting Engineer – Paper by J. Bannerman – n.d., 2. – Jean Bannerman, "Elsie MacGill: Consulting Aeronautical Engineer".

skills over hands-on applications. As Ruth Oldenziel notes: "women made the most headway in the laboratory-oriented and newer fields, which required more academic skills and where gender coding was not yet fixed: chemical analysis, electrical, and – after the Second World War – aeronautical engineering".[75] Furthermore, a switch to the new field of aeronautical engineering was relatively easy for an engineer trained in electrical engineering, as aerodynamical engineering required electrical applications. For instance, practitioners needed to develop and design instruments for recording and measuring the various forces which acted upon a aircraft during both simulation and real flight.[76] Moreover, much of the theory, symbols and equations could be transferred from one discipline to the other; and, as much of the machinery required in aeronautics depended on electrical systems the skills of an electrical engineer were invaluable.[77]

During her stay in the United States, Elsie also took advantage of educational opportunities not readily available in Canada. American engineering education in the traditional fields had developed rapidly since the adoption of the Land Grant Morrill Act of 1862. As Ruth Oldenziel notes:

> [T]he Land-Grant Morrill Act of 1862 helped establish several schools of engineering at land-grant state universities, colleges, polytechnique institutes, and private universities throughout the land...At places such as MIT, women, workers, and farmers attended courses in the early days. Industrialists had been the first to support education of workers and women, viewing them as potentially well-disciplined work force...Thus the co-educational land-grant institutions and state universities showed a more favorable attitude towards women's higher education in engineering than privately owned and sex-segregated institutions... MIT...Michigan...thus [leading] the way in engineering education for women.[78]

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[75] Oldenziel, "Multiple-Entry Visas", 22.
[76] James R. Hansen, *Engineer in Charge: A History of the Langley Aeronautical Laboratory, 1917-1958*, The NASA History Series, (Washington, D.C.: NASA, 1986), 48.
[77] Ibid.
[78] Ruth Oldenziel, "Multiple-Entry Visas", 19.

This legislation, further federal direction and generous funding from the Guggenheim Fund allowed a selection of institutions, including University of Michigan, between 1926 and 1933 to further expand their offerings in aeronautical engineering.[79] Wanting to learn more, MacGill thus started part-time studies at the University of Michigan in aeronautical engineering; a scholarship later allowed her to attend full-time and complete her degree in 1929. She was the first woman in North America to complete this particular course.

Personal Challenge

In 1929, while still a student in Michigan, MacGill suffered a serious attack of what her doctor diagnosed as "infectious myelitis."[80] It had been preceded by a severe cold, which lasted about a week, and then developed over thirty-six hours into "complete paralysis of the lower extremities."[81] In fact, MacGill contracted poliomyelitis, also

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[79] As early as 1916 the University of Michigan was noted as having a four-year program in aeronautical engineering. MIT and the University of Michigan were noted as the leaders in aeronautical engineering education in the early twentieth century. As a result Douglas argues that later increases in funding at these institutions happened in the post-land-grant era. Deborah G. Douglas, "The End of "Try-and-Fly": The Origins and Evolution of American Aeronautical Engineering Education through World War II", in *Engineering in a Land-Grant Context: The Past, Present and Future of an Idea,* ed. Alan I. Marcus, (West Lafayette, Indiana: Purdue University Press), 77, 82-87.

[80] Elsie always insisted that infectious myelitis was what she had contracted, not polio [which is the same thing]. Ann Soulsby, MacGill's step-daughter notes that in regards to medical information Elsie was not well versed and whether from pride and/or stubbornness did not press for additional information on her condition even in the latter years in her life when her health started to fail. Interview with Ann Soulsby 7 August 2006.

[81] NLAC MG31-K7 Volume 15 File 10: Personal Correspondence and Memoranda, Doctor's letter 15 June 1929.
True clarity of her diagnosis was not even apparent on 16 August 1933, when MacGill wrote to the Manager of the State Savings Bank in Ann Arbor, Michigan regarding the

known as "infantile paralysis" or paralytic polio.[82] The key problem was that the symptoms of the disease were easily confused with the flu; in 1929, there was minimal understanding of the disease and a correct diagnosis often occurred once the paralysis had set in.[83] Doctors gave MacGill minimal encouragement about her ability to walk again. However, before she left Michigan, her doctor noticed that from the time of her admission on 9 May 1929, she had made some progress with her right leg.[84] Despite this adverse situation MacGill managed to complete her studies. Indeed, while still in hospital, MacGill wrote her final exams for her master's degree in aeronautical engineering.

The support of MacGill's family was essential in helping her face this great challenge. Helen and her brother-in-law, Everett Hughes, passed up a trip to Europe to bring Elsie safely back home to Vancouver and help her fully recuperate.[85] MacGill did not let this interruption terminate her work as a engineer; instead she maintained her engineering skills by creating designs, writing articles, and publishing, the latter to help with the medical expenses her condition incurred. She also resolved to increase her physical strength and reverse the paralysis despite the pain caused by the exercises and physiotherapy.[86] Meanwhile, MacGill realized the value of upgrading her knowledge, after having been actively removed from the field. She thus took refresher post-graduate

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safety deposit box she had rented in 1928 noting, "In the spring of 1929 I was taken ill very suddenly with something akin to infantile paralysis and had to be taken back to my home in Vancouver, B.C., Canada." NLAC MG31-K7 Volume 15 File 10: Personal Correspondence and Memoranda, Letter to State Savings Bank, 16 August 1933.

[82] Sally Aitken, Helen D'Orazio and Stewart Valin, (eds.) *Walking Fingers: The Story of Polio and Those Who Lived With It,* (Montreal: Véhicle Press, 2004), 9.

[83] Ibid., 17-18.

[84] NLAC MG31-K7 Volume 15 File 11.

[85] MacGill, *My Mother the Judge,* 205.

[86] Bannerman, 3-4, Aitken, 27.

courses at Boston's Massachusetts Institute of Technology (MIT).[87] By that point, she could walk with the assistance of one or two canes.[88]

Polio left MacGill with a life-long physical disability. But she refused to let this alter her spirit, the course of her life, or define her as a person.[89] Here also, the example of her mother provided immense strength and comfort.[90]

Conclusion

As we have seen, Elsie Gregory MacGill was raised in a strong and supportive family environment. While her parents did not have engineering or science backgrounds, they were instrumental in her decision to study engineering, as they provided her with the necessary emotional and financial support to pursue her own interests. As Ruth Schwartz Cowan notes, this situation was typical of many women who chose to pursue engineering, especially those of the "pioneering generation" who tended to belong to

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[87] Bannerman, 3-4.

[88] Susan E. Merritt, "Elsie MacGill (1905-1980): Aeronautical Engineer," in *Her Story III: Women From Canada's Past,* (St. Catherines: Vanwell, 1999), 185.

[89] Unlike other patients because born with a physical challenge, polio victims led normal lives prior to illness, as a result, they fought to return to the activity level they had previously known. Aitken, 10.

[90] Moreover, her mother's example with her own physical trials including the experience of breaking her leg on three separate occasions and severe eye trouble had been a key example as Elsie noted,
"Nearsightedness...[s]he had reached the ultimate in lens, her oculist told her, and further deterioration of sight would mean blindness in a few years. It was a frightening and dismal prospect, but she gave no hint of despair, and showed all her old lightheartedness, playful wit and energetic fun, and the same ability to take an amused or wry look at herself and her doings. Annoyance – yes; indignation – yes, yes; anger – seldom; temper, vindictiveness, fear, despair – never." MacGill, *My Mother the Judge,* 155.

well educated and upper-middle class families, who supported their unconventional career paths.[91]

In addition, MacGill's pursuit of higher education was nurtured and encouraged by her parents, despite her choice of a non-traditional field. MacGill met and overcame a wide range of academic and personal challenges. Her pursuit of postgraduate work also provides strong evidence of her conviction that hard work and merit would lead to professional success. She was certainly not alone here, as many women entering the professions at the time believed they had to act as "superperformers" if they were to succeed.[92]

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[91] Cowan, xv.

[92] Penina Migdal Glazer and Miriam Slater, *Unequal Colleagues: The Entrance of Women into the Professions, 1890-1940.* (New Brunswick, NJ: Rutgers University Press, 1987), 8-14. See also: Pamela E. Mack, "What Difference Has Feminism Made to Engineering in the Twentieth Century?' in *Feminism in Twentieth-Century Science, Technology, and Medicine,* eds. Angela N.H. Creager et. al. (Chicago: University of Chicago Press, 2001).

Chapter 2: Becoming a Professional Woman Engineer

Introduction

How does one become a professional engineer? Does gender matter? In the affirmative, what would be the main differences in the professional trajectories of women and men? These are some of the overarching questions which this chapter seeks to answer. As we shall see, Elsie Gregory MacGill was able to hold her own in relation to her colleagues in industry; she was also independent and determined to pursue the best possible career path. On the other hand, she did not escape discrimination; how she coped will be discussed in this chapter.

MacGill's career path sheds light on the impact of the Second World War on professional women. The war certainly boosted her career, with MacGill even achieving celebrity status; but as we shall see it was not the only factor accounting for her success in the engineering profession. For example, MacGill's reputation was further strengthened through her desire to actively participate in relevant professional societies in her field, thereby increasing her knowledge and networking resources.

Returning to Professional Work

After three years of recovery from her initial attack of poliomyelitis, MacGill decided to pursue post-graduate studies to upgrade her knowledge in aeronautics. Her determination to pursue further education was such that she was willing to borrow money to this end.[1] She subsequently spent two years studying at the Massachusetts

[1] MacGill, *My Mother the Judge*, 221

Institute of Technology (MIT) in Boston, Massachusetts. The choice of MIT may be explained in two ways. On the one hand, female students had obtained some degree of access to higher education since 1871, when Ellen Swallow was admitted as a "special student", and later earned a degree in chemistry in 1873.[2] Moreover, on account of Swallow's pressure, a MIT Women's Lab was created to provide female students a space of their own. In MacGill's case however, the institution's strong reputation in engineering and the technical sciences was most likely the determining factor that drew her to MIT.[3] She certainly had experienced male-dominated environments before, first at the University of Toronto, and later in Michigan.

After two years of further post-graduate work, which ended in 1934, Fairchild Aircraft Limited drew MacGill away from MIT.[4] MacGill later stated that industry and private consultation were far more open to women engineers than academia and the civil service, both, of which she felt, were highly conservative milieux with respect to women's employment rights:

> Engineering in industry holds out the greatest promise for any engineer. Industry in the main is progressive; energy and initiative are rewarded in terms of salary and advancement, and advancement may be very rapid. Convention and

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[2] MIT did not become officially co-educational until the mid-1960s. Women students until that point were largely considered invisible. See:
Amy Sue Bix, "Feminism Where Men Predominate: The History of Women's Science and Engineering Education at MIT", *Women's Studies Quarterly* 1&2 (2000), 24.

[3] MIT was one of the first universities in the United States to have a graduate aeronautical engineering program. Jerome C. Hunsaker was in charge of its creation and implementation starting in 1913. Tom D. Crouch, *Rocketeers and Gentlemen Engineers: A History of the American Institute of Aeronautics and Astronautics...and What Came Before,* (Reston, VA: American Institute of Aeronautics and Astronautics, 2006), 7-9.

[4] D. Fraser, "Elsie Gregory MacGill: Aeronautical Engineer," *Archivist,* 14 (January-February 1987), 8-9.

> public opinion exert little pressure. Management is more concerned with problems of work and costs than the social question of the sex of the engineer.[5]

Moreover, industry was financially attractive especially since North America was still battling with the Great Depression of the 1930s. Certainly, a full-time job was a strong draw for a student in a precarious financial situation.[6] Fairchild's location was an added bonus as Helen MacGill Hughes and her husband were residing in Montreal, where Everett Hughes had found work at McGill University. With Fairchild Aircraft Limited., located in Longueil, near Montreal, on the south shore of the St. Lawrence River, Elsie would be moving close to her family.[7]

Fairchild Aircraft Limited

While sources do not provide extensive information on MacGill's work at Fairchild, we know that she was actively involved in the design and testing of aircraft at the plant. That her first job in Canada was with the only Canadian company working on new aeronautical designs during the challenging 1930s gave her an edge in this still emerging

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[5] Elsie MacGill, "Position of Women in Canada in the Engineering Profession," *World of Women* in *Saturday Night,* 19 October 1946, 28.

[6] This was clearly a reality of Elsie's life during this period, and she notes in a later letter to her family,

"Friday afternoon, Wynne Green and I went shopping for clothes for me. I needed a coat badly, having split the old one down the back. Got quite a nice one, and a dress too. Yesterday Bonks [Helen Jr.] went with me and I bought a hat, which I needed badly. The joke is that, while in the near future I will be receiving a good salary, at present I am none too flush, and will have to skimp a bit to get my train fare etc." NLAC MG31-K7 Volume 15 File 11: Family Correspondence and Notes, 1923-1980, Letter to family 7 May 1938.

Between 1929 and 1933, thirty percent of the Canadian labour force was unemployed, with one out of every five Canadians dependent on government aid to survive. James Struthers, "Great Depression," in *The Canadian Encyclopedia,* http://thecanadianencyclopedia.com/index.cfm. Accessed 3 August 2007.

[7] Helen and Everett Hughes resided in Montreal until 1938 when they moved to Chicago, Illinois. Hughes, "Wasp/Woman/Sociologist", 76.

field.[8] Moreover, in 1938, with the Second World War on the horizon, aviation production in Canada started to expand. The workers at the plant brought their training and experience to several companies, including MacGill who then moved to Canadian Car & Foundry.[9]

Recalling her experience at Fairchild, MacGill later explained that she worked mainly on stress testing and that she flew as an observer on test flights, including those of the Fairchild Super 71P.[10] She further explained that "Alec Schneider [the test pilot] test flew those aircraft and I was Observer on the flights. I think they took place in the spring of 1935. There was no heat in the cockpit, of course, and the flights were bitterly cold."[11]

MacGill's work on a later project, the Sekani (prototype), illustrates several important trends in aviation which would impact on her career.[12] First, civilian production was decreasing at the time, on account of needed war production:

> The Sekani [a civilian project], like other prototype aircraft developed immediately prior to the outbreak of World War II never had a chance of having "the bugs" taken out of it – and all prototypes have bugs. The urgency was turned to enlarging the plant, and getting war production underway, a more certain market than civilian aircraft development and production, and more compelling.[13]

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[8] Kenneth M. Molson, "World War Two Aircraft Production in Canada: A Reminiscent Look at the Unprecedented Growth of a Key Industry in A Country Newly at War." *CAHS Journal* (Winter 1992), 139.
[9] Ibid.
[10] For more information on the Fairchild 71P see: K.M. Molson and H.A. Taylor, *Canadian Aircraft Since 1909*, (Stittsville, ON: Canada's Wings, Inc., 1982), 319.
[11] NLAC MG31-K7 Volume 12 File 9: Correspondence RE: History of Specific Aircraft, 1958-1966. Correspondence with Mr. Molson.
[12] For more information on the F-45 Sekani see: Molson and Taylor, 324-326.
[13] MacGill approximates the wind tunnel testing on this prototype taking place from about late 1936 to early 1937. NLAC MG31-K7 Volume 12 File 9: Correspondence RE: History of Specific Aircraft, 1958-1966. Correspondence with Mr. Molson.

Secondly, work on the F-45 Sekani project provided MacGill the opportunity to establish important professional ties with the National Research Council (NRC) during development tests, which she maintained during the war and beyond.[14] Furthermore, MacGill's interaction with the NRC staff, is suggestive of her determination and professional demeanor. Mr. Kenneth F. Tupper, an engineer at NRC during this period, thus recalled,

> [W]e first became acquainted when [MacGill] was working for Fairchild Aircraft in Montreal and I was one of J.H. Parkin's small staff working with the National Research Council's old seven-by-ten tool wind tunnel at the laboratories at the corner of John and Sussex Sts. in Ottawa. Elsie was one of the first customers to make use of these facilities, bringing models up to Ottawa from Montreal in her own car. She did this in the icy snowy days of mid-winter in spite of her crippling legacy from poliomyelitis. We admired her spunk. She never asked for any assistance, and as we got to know her better it was seldom offered.[15]

Canadian Car and Foundry

In 1938, MacGill was appointed Chief Aeronautical Engineer at the Canadian Car & Foundry Company Limited's plant in Fort William, Ontario.[16] She wrote to her family announcing the good news. She outlined the details of the offer, which was quite lucrative, at $350 per month. She also related that she had successfully negotiated a favourable date when she would begin at the plant. MacGill had in fact, been offered at

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[14]Parkin notes that MacGill was working as an aircraft designer with Fairchild and witnessed some of the tests. Parkin, *Aeronautical Research in Canada*, Volume II, 443-444.

[15] Senator Marsden's Fonds at National Archives of Canada – Gatineau. R/E 2007-0703 Volume 1 File: Trustees: Honorary Selection. Letter to Ms. Elizabeth Neville, Chairperson, Elsie Gregory MacGill Memorial Foundation from Mr. Kenneth F. Tupper, 8 August 1985.

[16] Bannerman, 4. Fort William required a long-distance move on MacGill's part as it was on the north western side of Ontario, over a full-day's continuous journey in distance.

the same time a federal position with the Civil Aviation Branch. Since the branch was unable to match the offer of Canadian Car & Foundry (Can Car) MacGill declined. Clearly, the financial rewards tied to the industrial job were a stronger financial incentive than the more secure and "gentle" world of the federal civil service.[17]

MacGill's ability to obtain such a favourable deal provides evidence of her ability to negotiate, while the company's willingness to meet her demands indicates that MacGill's strong qualifications dismissed possible gender-related concerns. MacGill's account thus explains that:

> Canadian Car and Foundry is a big company with headquarters in Montreal. They build railway cars. For the last year they have been building aeroplanes. Their present Chief Engineer [Mr. Michael Gregor] is leaving them in the fall. They wrote asking me if I would consider the job... I forced their hand somewhat [regarding a summer job switch and loss of summer holidays] and, in order to be sure of getting me, they made me the offer at once. However, I imagine the present Chief Engineer will not stay on as long now, and so they want me to start on phases of new work that I would have to take over when he left.[18]

At the plant she also would be the first woman in Canada to design a plane, the Maple Leaf II, and to oversee its construction. MacGill was quite aware of the importance of her new position. Significantly, she felt that her age, not her gender set her apart.

> Of course I am awfully pleased over the whole thing. It is a great chance for me. If I make good, I will be on top of the world. Probably I would get a good

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[17] "On Friday I spent some time with the Civil Aviation branch on Company business. While there the Dept. offered [me] a job! They said (this is strictly confidential and NOT TO BE REPEATED. I mean please no one say they offered me a job, because the job being in the Civil Service has to be advertised etc. and while I could probably beat any applicants, the competition is supposed to be open.) They said however, that they could only offer me $2700 a year, as it would not be possible to get a more advanced classification for me. I thanked them and refused, saying that the salary did not interest me. I am on very friendly terms with those people there." NLAC MG31-K7 Volume 15 File 11: Family Correspondence and Notes n.d., 1923-1980. EGM's letter to her family from Longueil, Quebec, 7 May 1938.

[18] Ibid.

> raise in salary within six months, and then of course there is the prestige which goes with the position. *To be Chief engineer at 33 years of age is not bad.*[19]

MacGill's attention to her age, and not her gender, suggests that she had yet to see any inherent inequalities within the engineering profession.

One of the first tasks that MacGill undertook at Can Car was to re-run the stress analysis on the Grumman Fighter (Can Car Fighter) which had previously been designed and stress-tested to meet the *US Air Corp's Stress Analysis for Aeroplanes*, which was not acceptable in Canada by the Department of National Defence.[20] She therefore ensured that it complied with *Air Publication 970 – Design Requirements for Aeroplanes for the Royal Air Force* in the Aerobatic Category to secure its certificate of airworthiness.[21] While Elsie was unable to become a pilot herself, due to the remaining limitations of poliomyelitis, she insisted on accompanying the pilot on all test flights of her designs, including the dangerous first flights, the only way, in her opinion, to accurately access the performance of the aircraft.[22]

The new Maple Leaf II plane was the result of the continuation of Canadian Car & Foundry's contract with the Mexican Air Force for a training biplane.[23] The original attempt had been called the "Maple Leaf Trainer" and as the name was liked, it was kept,

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[19] NLAC MG31-K7 Volume 15 File 11: Family Correspondence and Notes n.d., 1923-1980. MacGill's letter to her family from Longueil, Quebec, 7 May 1938.
[20] The Grumman Fighter was based on the US Grumman FF-1 or SF-1 for which Can Car obtained the license for in 1936, and was the one of the first aircraft produced at the Fort William Plant. Gordon Burkowski, *Can-Car: A History 1912-1992*, (Thunder Bay, Ontario: Bombardier Inc., 1995), 31-52.
[21] MacGill notes in a letter to Mr W.J. Wheeler of Toronto on 27 January that the fighter was flown first in December 1938 by George Ade at Bishop's Field, Fort William. NLAC MG31-K7 Volume 12 File 9: Correspondence RE: History of Specific Aircraft, 1958-1966. MacGill's letter to Mr. William J. Harvey RE: Can-Car Fighter Biplane, 8 October 1964.
[22] Merritt, *Her Story III*, 185.
[23] Burkowski, 45-47.

with "II" being added to ensure that the records between the two planes would remain separate. Other than the name, the two planes were completely different.[24] Despite the difference in the two planes, MacGill was able to complete the project efficiently and effectively. In fact, the Maple Leaf II was successfully test flown in 1939, and later registered in January 1940.[25]

The Second World War

The outbreak of the Second World War ensured that the Maple Leaf II never went into full Canadian production. The Royal Canadian Airforce (RCAF) decided that the plane did not fulfill its requirements for a Service trainer, and Canadian Car & Foundry was unable to invest any additional time in the Maple Leaf II. In 1938, the British Royal Airforce (RAF) awarded the plant a contract to produce Hawker Hurricane fighter planes, and all additional time and resources had to be spent on re-tooling the plant for wartime production.[26] The work on the Maple Leaf II was made possible despite this contract as the needed parts for the lower wings were sub-contracted to De Havilland of

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[24] The design was original in all aspects, except that the old fin and rudder were re-used with some minor changes. Molson and Taylor, 165-167.

[25] "The prototype Canadian Registration No. 2606 (CF-BPU) was completed, test flown and put through its type test trials in the autumn of 1939, O.C.S. Wallace flew as Test Pilot and I flew as Observer". Moreover, MacGill notes that this was the Type Certificate of Airworthiness, acrobatic category (Certificate No. 427). NLAC Volume 12 File 9: Correspondence RE: History of Specific Aircraft, 1958,1966. MacGill's letter to Mr. W.J. Wheeler of Toronto 27 January 1966.
See also: *The Engineering Journal* January 1940, 33; Pamela Wakewich, " "The Queen of the Hurricanes": Elsie Gregory MacGill, Aeronautical Engineer and Women's Advocate," in *Framing our Past: Canadian Women's History in the Twentieth Century*, ed. Sharon Anne Cook et. al., (Montreal: McGill-Queen's Press, 2001), 397.

[26] The plant had been closed between 1921 and 1937, and mass-production of airplanes required a complete re-haul of the plant. Helen Smith and Pamela Wakewich, "Representations of Women and Wartime Work in The Canadian Car and Foundry Company Newspaper, *The Aircrafter*." *Papers & Records* (1997), 66-67.

Canada with remaining parts produced by MacDonald Brothers Aircraft of Winnipeg.[27] Ultimately, the Maple Leaf II was exported in 1940 to the United States and then to Mexico.[28]

The decision by the RAF to use the Fort William site was not arbitrary, but based on the design of neighbouring Port Arthur's Liberal MP, C.D. Howe.[29] Howe envisioned moving Canada into industrial mass production throughout, and more importantly, after the war.[30] The RAF contract required the plant to mass-produce Hawker Hurricane fighter planes for use in the British offensive.[31] As MacGill was stationed at the plant, her career and responsibilities were shifted in a new direction.[32] At the same time, MacGill made sure that such a great opportunity was not wasted.[33] She was more than ready to meet the challenges ahead, as she later recalled in a paper entitled "Factors Affecting the Mass Production of Aeroplanes", which she presented to the Lakehead Branch of the Engineering Institute of Canada on 18 April 1940,

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[27] Molson and Taylor 167.
[28] The plane was shipped to Columbia Aircraft Corporation, located in Port Washington on Long Island in October 1940, and then to Mexico. Ibid., 167.
[29] Fort William and Port Arthur were towns beside each other located in the Lakehead Region on the northern shores of Lake Superior. In 1970 they amalgamated to form the current City of Thunder Bay and the names are retained for sectors within the city.
[30] "Initially, the 1938 British Air Mission investigating Canada's ability to produce aircraft for Britain refused to visit Can Car, considering the area too remote and lacking in the requisite human resources. However, with the assistance of Port Arthur's Liberal MP...[C.D. Howe] Can Car won the British contract for Hawker Hurricanes and later, in 1942, the American contract for Helldivers." Helen Smith and Pamela Wakewich, " 'I Was Not Afraid to Work' Female War Plant Employees and Their Work Environment" in *Canadian Environments: Essays in Culture, Politics and History,* Canadian Studies No. 2. Serge Jaumain Series Ed. eds. Robert C. Thomsen and Nanette L. Hale, (Brussels: P.I.E. – PETER LAND S.A., 2005.), 231-232.
[31] Merritt, 185.
[32] MacGill's immediate colleagues were David Boyd the Works Manager and Alan Norton the head of the Tool and Design.
Helen E. H. Smith & Pamela Wakewhich, " 'I Was Not Afraid to Work'", 236.
[33] Hansen, xxxv.

> The production engineer cannot, at will, put any commodity on a mass production basis. Aeroplanes are not like baby carriages. The easy acceptance of the applicability of mass production methods to aeroplane construction arises from sad ignorance of the problems involved.[34]

The blitz attacks on Britain in April 1940 led to increased production during the summer and fall months of 1940. Within the space of two years, and with an increase of over 4,000 employees, the plant was outfitted to its new assignment, producing at its height in excess of a hundred Hawker Hurricanes per month.[35] Looking back in 1945 on the initial re-tooling and preparations required to produce the planes, MacGill remembered how getting the plant ready to deliver them in a high quantity was no easy feat. The employees had to contend with irregular demand orders from the RAF, as the British needs changed throughout the course of the war, and with the wartime delays of materials.[36]

In addition to the re-tooling and the mass production of the Hawker Hurricane, MacGill was also involved with additional design details, most notably those that allowed the plane to be considered winterized. These modifications included the addition of skis and a de-icing system for the wings.[37] The work kept her in touch with the National Research Council (NRC), where researchers, such as George Klein provided vital input for her designs.[38]

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[34] *The Engineering Journal,* March 1941, 143.
See also: NLAC MG31-K7 Volume 13 File 3: "Factors Affecting The Mass Production of Aeroplanes – by E.G. MacGill, 1940.
[35] Bannerman, 5.
[36] NLAC MG31-K7 Volume 15 File 10: Personal Correspondence and Memoranda, 1929-1942. MacGill's Account of working at Can Car – n.d.
[37] Jim Lyzum, *Aviation in Thunder Bay,* (Altona, Manitoba: The Thunder Bay Historical Museum Society Inc., 2006), 38; Burkowski, 65-67.
[38] Richard I. Bourgeois-Doyle, *George J. Klein: The Great Inventor.* NRC Press Biography Series No. 2. P.B. Bavers ed. (Ottawa: NRC Press, 2004.), 23, 82-83.

Public criticism of the plant's production abounded on account of a deep misunderstanding of the complex procedures involved in building the planes. An example of the rumours was that the plant was sending half built machines overseas. The reality was that they were sending complete airframes and arranging for other firms to supply parts they did not manufacture such as the special landing wheels. The general population also did not understand the time required (one year) for re-tooling of the plant and thought that the company was paying the employees to be idle.[39] MacGill stood up for the plant employees, dispelling the rumours concerning the plant's production, as she argued they were based on ignorance of the realities of the work at hand. She publicly challenged the negative views of the plant noting the need to look beyond the rumours, and to appreciate the dedication of the workers to the war effort:

> War effort is the extra contribution of the individual. War effort is a man staying and working an extra hour, or two or five hours a day – without extra pay; it is a woman cutting short her noon hour to get back to finish the job: it is someone taking home his problems to solve them after dinner; it is someone coming back in the evening to finish an assignment. War effort is something that is as [microscopic] in the unit as the individual, but as mighty in the sum total as an army. It is from that kind of war effort that the production figures of our plant result.[40]

MacGill knew what she was talking about, as the aeronautical engineers at the plant often worked overtime until seven or eight in the evening with only one day off per week.[41] In fact, considering the circumstances, the plant's rate of production was quite remarkable given the challenges of mass production, which included re-tooling of

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[39]NLAC MG31-K7 Volume 15 File 10: Personal Correspondence and Memoranda, 1929-1942. MacGill's Account of working at Can Car – n.d. See also: Burkowski, 63-64.

[40]NLAC MG31-K7 Volume 15 File 10: Personal Correspondence and Memoranda, 1929-1942. MacGill's Account of working at Can Car – n.d.

[41] Interview with Victor Stevenson, 22 December 2006.

machines and the training of hundreds of workers on the job. That the plant was able to get a contract from the United States to produce Curtiss-Wright Helldivers attests to the success of such an undertaking.[42] The engineering profession as a whole was affected by the war. In fact, some even heralded the Second World War as the "engineer's war", and MacGill agreed, but with some reservations:

> To the shame and glory of the engineering profession the world over, this war is described as an 'engineers' [sic] war. To our shame, we engineers devote the years of peace to designing and planning for war. To our glory, we are the group to which our country turns in time of war. Heavily upon us, as individuals and as a professional unit, our national duty rests terrible and clear.[43]

Historians have shown how World War II gave working women the opportunity to assume a wide range of non-traditional occupations on the home front.[44] For her part, MacGill did not feel that wartime had benefited her as a woman engineer. While she did acknowledge that this period was, indeed, a watershed in her life, she attributed her success to the professional context in which she worked, " 'Aeronautics, a rapidly developing field, grew up with the War, and I grew with it'".[45] In fact, she would publicly proclaim that engineering did not actively exclude women: "While [engineering] is not a field which has attracted [women] in any considerable number it

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[42] For more information on Hawker Hurricanes and Helldivers see:
David D. Kemp, "Can-Car Re-Tools for Victory Hurricane," *The Beaver,* (June/July 1992), 24-32; Burkowski, 53-81.
[43] MacGill, Elsie. "'Aircraft Engineering in Wartime Canada'", *The Engineering Journal.* November 1940, 470-471.
[44] See Ruth Roach Pierson's classic study on the idea of the temporary nature of women's advancement. Ruth R. Pierson, *They're Still Women After All: The Second World War and Canadian Womanhood,* (Toronto: McClelland and Stewart, 1986). For a more recent assessment of women's increased opportunities both during and after war see: Jeffrey A. Keshen, *Saints, Sinners, and Soldiers: Canada's Second World War,* (Vancouver: UBC Press, 2004), 6.
[45] Bannerman, 5.

has never been [a profession] that excluded them".[46] MacGill's belief in the lack of barriers within engineering during this point of her career suggests she saw the profession as egalitarian. However, as she progressed throughout her career MacGill would admit that this was in fact not necessarily the case.

Elsie MacGill's appointment as Chief Aeronautical Engineer attracted considerable media attention. During the war, MacGill achieved national and international celebrity status in both newspapers and magazines. In 1941 *Chatelaine* deemed her "the human pivot around which turns one of the most vital operations of the Canadian war effort." A full-scale depiction of her life was even produced by the American *True Comics War Heroes Series* entitled "Queen of the Hurricanes Elsie MacGill".[47] As Smith and Wakewich argue, "Media representations of MacGill during wartime celebrated her engineering accomplishments but continued to present the subjectivities of 'woman' and 'professional engineer' as discordant".[48] As a result, despite her important achievements more attention was focused on efforts to enhance her femininity.[49]

What was it like for MacGill to work at Canadian Car and Foundry during this period? How was she perceived by her co-workers? On account of the war context, MacGill was not the only woman working at the plant. In fact, by 1944, forty percent of its workforce, was female.[50] These women, who worked in a variety of jobs ranging

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[46] Elsie Gregory MacGill, "Position of Women in Canada in the Engineering Profession," *Saturday Night,* 19 October, 1946.
[47] Susan E. Merritt, "Elsie MacGill (1905-1980): Aeronautical Engineer," in *Her Story III: Women From Canada's Past,* (St. Catherines: Vanwell, 1999), 190; "Queen of the Hurricanes: Elsie MacGill," *True Comics,* No. 8 (January 1942), 17-21.
[48] Smith and Wakewich, "'I was not afraid to work'", 237-8.
[49] Ibid..
[50] Ibid., 229-230; Burkowski, 85.

from sewing to work in welding and riveting, were commonly referred to as "Rosies".[51] However, since MacGill worked at the management level, she interacted mostly with male colleagues, rather than with the women on the plant floor. Indeed, she found herself in a rather unique situation: that of a professional woman engineer in a position of high authority.

The recollections of some of her male co-workers shed light on aspects of personality and on her relationship with them. MacGill was known for her attention to detail and her focus on the job at hand. She had little patience for distractions or idle conversation. She did clash at times with colleagues regarding how to proceed. As a result, to secure a compromise was at times a challenge.[52] But Victor Stevenson, an aeronautical engineer hired by MacGill, also recalled that MacGill had the ability to motivate those around her by pointing out their skills and by emphasizing the critical importance of the job at hand. He remembers her as a very thorough, respectful and understanding colleague. For instance, on his first day MacGill gave him an air intake to design; the results were so bad that he felt he deserved to be fired. Instead, MacGill encouraged him, with later work earning her praise.[53]

For their part, despite the intense publicity surrounding MacGill which provided its own challenges, Jim Carmichael and Alex Horbow recall that MacGill was a colleague they could talk with, and someone who supported the workers and took interest in their

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[51] For more information on general Canadian women's work during WWII see: Jeff Keshen, "Revisiting Canada's Civilian Women During World War II," *Histoire sociale/Social History* 30(60) 1997, 239-266. See also: Sherna Berger Bluck, *Rosie the Riveter Revisted: Women, The War, and Social Change*, (Boston: Twayne Publishers, 1987).

[52] Interview with Victor Stevenson.

[53] Ibid.

lives.[54] According to Carmichael, who rode to work with her, " 'our conversations were stimulating, as we were discussing the war news each morning; it was hair-raising to see her drive, lifting her bad leg by hand to place her foot on the clutch to shift gears!'"[55] Similarly, Horbow recalled that MacGill's disability did not deter her from her professional responsibilities:

> She was a very colourful personality; she had a lot of charisma. She would walk down to the shop with her cane; she had difficulty walking. She'd come to see how the men were doing with her work. She would cheer the men up, anytime she came walking through the shop; she had a lot of respect from the workers of Can Car.[56]

Professional Activities

Membership in professional societies, organizations and institutes constitutes a key element in the life of a successful professional. In turn, these organizations serve as gatekeepers to those occupations having achieved professional status.[57] Elsie MacGill was well aware of the importance of belonging to, and more importantly, of being actively involved in her field's professional organizations. She thus eagerly applied to them, not hesitating to fight discrimination to gain admission. She then quickly assumed key roles, within these same organizations.[58]

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[54] Burkowski, 46-47.
[55] Originally quoted in Gordon Burkowski's *Can Car*. Jim Carmicheal started at the company on 1 March 1938, in the position of Shop Engineer. Burkowski relates that for the following five years Carmichael worked in Methods Layout and Subcontracting for the Hawker Hurricanes. Ibid., 46, 212.
[56] Originally quoted in Gordon Burkownski's *Can Car*. Alex Horbow joined the company 9 August 1937, in Production and worked his way up to Draftsman. Ibid., 46, 213.
[57] As class status gave way to merit, apprenticeship gave way to university training and professional organizations. Gidney and Millar, *Professional Gentlemen* 320-21.
[58] *The Engineering Journal* July 1943, 430.

One of the Elsie's earliest experiences with overt sexual discrimination occurred in 1936 with the Institute of Aeronautical Science in New York (IAS). The secretary, Lester D. Gardner, made it quite clear that the organization was not willing to accommodate full-membership to women:

> Our annual dinner and other functions are held at the Columbia Faculty Club and the University Club of New York. At these dinners, owning to regulations over which we have no control, ladies cannot be present and therefore, we have been placed in an embarrassing position regarding two or three young women who clearly rate membership in one of the grades.[59]

Moreover, the Council had postponed any discussion on this matter until a significant number of women applied, in the range of forty or fifty applicants. Gardner also argued that some women lacked MacGill's level of qualifications, and that opening the membership to women could thus cause additional problems of exclusion on account of the different levels of qualification between applicants. To soften his rejection, Gardner offered MacGill access to what amenities she could partake in, including a special rate for the subscription to the *Journal of Aeronautical Sciences.*[60]

MacGill dissected Gardner's letter and dismissed his arguments one by one. First of all, she argued, "mixed societies all over the world [overcome] these difficulties as matters of everyday routine. In face of this common fact, it can hardly be a question of the Council's ability to cope with the problem." Secondly, she asked, "What do they do with men applicants whose qualifications do not meet the requirements of a full member,

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[59] NLAC MG31-K7 Volume 15 File 10: Personal Correspondence and Memoranda. Letter to MacGill from Lester D. Gardner of the Institute of the Aeronautical Science Inc., 23 May 1936. Lester Durand Gardner was one of the four initial founders of the IAS in 1932 along with David Lasser, G. Edward Pendray and Jerome Hunsaker. For more information see: Tom D. Crouch, *Rocketeers and Gentlemen Engineers: A History of the American Institute of Aeronautics... and what came before,* (Reston, VA: American Institute of Aeronautics and Astronautics, 2006).

[60] Ibid.

yet who deserve some recognition?" More importantly, before there were enough qualified women, she would have to wait five to ten years, because of the specialized nature of the field to be admitted; by then her need to join the organization would no longer be pertinent. As she explained:

> denial of membership cuts me off from being at one with my fellow professionals and robs me of the very real support that membership in such organization[s] gives to the more inexperienced. I take this denial very seriously because I consider that it hinders me professionally. [61]

MacGill thus asked the institute to reconsider her application.[62] Mr. Gardner responded that her arguments contained perfect logic and agreed to put her application before the Council again. He advised her to also apply to the Royal Aeronautical Society first; since she was Canadian, this move could also help her case.[63]

Why did MacGill receive this negative response despite her pioneering achievements up to 1936? Many reasons are possible. First, the IAS was based on the Royal Aeronautical Society of Great Britain (RAeS) founded in 1866, which was highly exclusive. As a result, when the IAS was created it had a well-defined membership

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[61] NLAC MG31-K7 Volume 15 File 10: Personal Correspondence and Memoranda, Letter to Lester D. Gardner of the Institute of the Aeronautical Sciences Inc., from MacGill, 6 June 1936.
The IAS worked from its founding to be exclusive and prestigious. At its first annual meeting Dr. Auguste Piccard of Switzerland and noted professor of Physics at the University of Brussels had agreed to address the audience. The audience included key members of the aviation society such as George Mead, the director of United Aircraft and Transport to Theodore von Kàrmàn a key physicist and contributor to aviation and astronautics. Crouch, *Rocketeers and Gentlemen Engineers: A History of the American Institute of Aeronautics...and what came before,* 62-63.

[62] NLAC MG31-K7 Volume 15 File 10 : Personal Correspondence and Memoranda, Letter to Lester D. Gardner of the Institute of the Aeronautical Sciences Inc., from MacGill, 6 June 1936.

[63] NLAC MG31-K7 Volume 15 File 10: Personal Correspondence and Memoranda, Letter to MacGill from Lester D. Gardner of the Institute of the Aeronautical Sciences, 10 June 1936.

grading system.[64] The section most applicable to MacGill would have been that of an Engineering Member. As Tom Crouch notes, these were expected criteria:

> [T]o be at least 30 years of age and to have had charge of "important aeronautical engineering work." Alternatively, they could qualify on the basis of five years of work as an aeronautical engineer. Aeronautical designs created, publications, or membership in other engineering societies would be proof of "recognized standing."[65]

However, in 1936, MacGill's prestige in the field was not significant enough to convince the organization to admit her.

In fact, the founders had chosen to exclude women from the very start. As Gardner's response to MacGill indicates, he was sympathetic to her case, but even when he called a second ballot during the initial meetings of the organization to make sure the founders were serious on women's exclusion, the vote remained unchanged. Thus, all women involved in aviation, even Amelia Earhart, were excluded. It was not until January 1939 that the Council finally altered its policies by offering Miss M. Elsa Gardner an invitation to join.[66] As we shall see, MacGill obtained membership in other professional organizations where she would become well established through her presentations, publications and active service.[67]

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[64] There were nine grades: Honorary Fellows, Benefactors, Fellows, Scientific Members, Engineering Members, Industrial Members, Junior Members, Pilot Members and Technical Members. Crouch 59-60.

[65] Ibid., 59.

[66] Miss M. Elsa Gardner was an aeronautical engineer and editor of the *Technical Data Digest* at Wright Field in Dayton, Ohio. It is unclear as to whether there was any family relation between Elsa and Lester D. Gardner. Ibid., 61.

[67] One of the organizations in which she received membership on 29 November 1955 was the American Rocket Society (ARS). The ARS later merged with IAS in 1963 to form the American Institute of Aeronautics and Astronautics (AIAA), thus including MacGill with the members of both organizations. See also: NLAC, MG31-K7 Volume 21 File 2: Miscellaneous Correspondence and Notes, 1949-1968.

In 1938, MacGill applied to the Engineering Institute of Canada (EIC) for membership.[68] Dr. J.H. Parkin recalls the reaction of Dr. Boyle, his supervisor at the National Research Council, who received her application: "[h]e was shaken to the foundations, and it required considerable effort ... to restore his equilibrium."[69] MacGill proved her value to the organization however when she presented a paper entitled "Simplified Performance Calculations for Aeroplanes" before the Aeronautical Section of the Ottawa Branch of the EIC on 22 March 1938.[70] In the paper she "showed by the use of logarithmic curves how to determine in simple manner the ceilings and high speed, climbing speed and the maximim rate of club at any altitude for any aeroplane."[71] She wrote to her family:

> Now to tell you about my Ottawa trip. The lecture went off very well. Had a good sized audience, and a lot of interest was shown. I left a copy of my paper with some of the men, and they wrote down that they had gone over it and agreed with my method, and considered the paper a "valuable contribution". It is to be published in the Journal of [the] Engineering Institute. In the midst of all the present excitement I have been busy in my off time preparing the graphs and figures for publication.[72]

See also her resume in 1967 with her membership listings contained in the Royal Commission on the Status of Women *Guidebook Outlines for Organization of Commission* in 1967. NLAC MG31-K7 Volume 3 File 1: Guide-Book: Outlines for Organization of Commission, Internal Administration and Research Program, 1967.

[68] For additional information on the EIC during this period see:
Janet Martin-Nielson, "The Very Model of a Modern Engineer: Education and Status at the Engineering Institute of Canada, 1925-1932," *Scientia Canadensis* 30(1) 2007, 53-73; *In Principle but not in Practice: Professional Engineering Organizations in 20th Century Canada*, University of Toronto, Master's Thesis, 2006.

[69] Parkin, 140-141.

[70] "Recently Miss MacGill read a paper before the Ottawa Branch on "Simplified Performance Calculations for Aeroplanes,"...We are informed that the paper reflected great credit on the author and made a definite contribution to the art of flying." *The Engineering Journal* June, 1938, 238. See also *The Engineering Journal* August 1938 for the article.

[71] Ibid.

[72] NLAC MG31-K7 Volume 15 File 11: Family Correspondence and Notes n.d., 1923-1980. EGM's letter to her family from Longueil, Quebec, 7 May 1938.

Prior to leaving for Fort William in 1938, MacGill received the news that she had been elected an Associate Member of the Engineering Institute of Canada. This was significant as she was the first woman to be awarded corporate membership in the organization.[73] Since the Montreal branch of the EIC was unaware that she was leaving to take up work in Fort William, it had to rush to hold a reception for her. MacGill reported to her family various amusing aspects of the reception. For instance, she was provided with a chaperone, a duty performed by the president's wife who also served the tea. MacGill described the reaction to her arrival:

> The amusing thing was that when I arrived – they seemed doubtful as to whether I was "Miss MacGill". They all expected someone rather hatchet-faced- you know the idea. And I arrived wearing a very giddy hat etc. It was funny. The Secretary had sent out an item to the newspaper about it...in which he spoke of me as a "Woman". He said, just before he had left – "I'd never have sent in that item that way if I had known you – you're not a woman, you're a girl".[74]

The response to MacGill's arrival reflects the nature of the stereotypes her male colleagues had attributed to her prior to her arrival, and their beliefs in the differences between a "woman" and a "girl", in both cases she was not seen as equal, but as the "other" and different. MacGill did make a good impression at the club, however, and she was told that the Montreal members would contact the Fort William and Vancouver Clubs regarding her membership, an offer that would introduce her to the wider membership of the national organization. The president, Mr. J.B. Challies, commented that the club was sorry she was not staying in the Montreal area given the value of her work at Fairchild. He told MacGill that he had spoken about her with Mr. Pasmore, one

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[73]NLAC MG31-K7 Volume 15 File 11: Family Correspondence and Notes n.d., 1923-1980. EGM's letter to her family from Longueil, Quebec, 7 May 1938.
[74] Ibid.

of her colleagues at Fairchild, who had also expressed the company's regret in her departure.[75]

MacGill's new colleagues within the Engineering Institute of Canada extolled her abilities. After the Annual General Meeting in Toronto, Febraury 1940, Mr. Challies was compelled to write to her mother regarding Elsie's presentation entitled "Factors Affecting the Mass Production of Aeroplanes" :

> It was my privilege, as immediate Past President, to introduce Elsie to the meeting prior to the presentation of her very able and brilliantly presented paper. Ernest Brown, Dean of Engineering at McGill University, whom you will see standing between us, was the chairman of the meeting. To say that Elsie 'stole the show' expresses the real situation very mildly. I never was so proud of a friend as I was of her that day; indeed, all through the Institute meeting she was the centre of a practically continuous series of admiring colleagues. The best of it was that it didn't spoil her a bit. You have every reason to be proud of your daughter; as a matter of fact, she comes upon her brilliance and winsomeness naturally, for, as I explained to the group at a private dinner, Elsie very wisely chose an ideal mother.[76]

Conclusion

An assessment of Elsie MacGill's initial professional work in engineering illustrates the various requirements of the field. To become a successful professional engineer MacGill needed to secure employment and rise within it, while at the same time taking an active role in the relevant professional organizations. While her professional

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[75]NLAC MG31-K7 Volume 15 File 11: Family Correspondence and Notes n.d., 1923-1980. EGM's letter to her family from Longueil, Quebec, 7 May 1938.

[76]NLAC MG31-K7 Volume 15 File 11: Family Correspondence and Notes: 1923-1980, Letter J.B. Challies, Civil Engineer of Montreal, Quebec to Judge MacGill c/o Juvenile Court Vancouver B.C. n.d. See the EIC Journal for a summary of the paper. *The Engineering Journal* (February, 1940), 53. See also: "Practical Flight Testing Forms Described By Only Woman Member Engineering Institute – Human element in Testing Discussed as Difficulty – Scientists Attempting to Reduce Factor of Personal Judgment – Say "Harmonium" Offers Possibilities" *Canadian Aviation* March 1940 (46)

trajectory during this period did not differ largely from her male contemporaries in similar roles, her success must be considered in relation to the specific Canadian context within which she worked.[77] First of all, as a professional, MacGill was trained in the 1920s and 1930s in a new field, and, as a result, possessed those skills that were needed at a time when such training was rare for both men and women. Secondly, MacGill's career must be viewed in relation to other professional women. As Mary Kinnear notes, women in the professions must be considered as a separate category especially by the end of the Second World War, as they enjoyed higher salaries and status than non-professional women due to their higher qualifications.[78]

Finally, as Elsie MacGill herself notes, the specific make-up of the engineering profession must be taken into account. In aviation, change was occurring at a rapid pace due to the infancy of the field and the demands of war; therefore, it was less prone to full professional closure compared to the more established sub-disciplines of engineering.[79] Moreover, on account of her pre-existing professional qualifications before the Second World War MacGill had an advantage in securing a professional position during wartime.[80] MacGill strongly believed the aviation field was more open to women,

> With the War the Canadian aircraft industry had moved out of the bush league into the international ring and [MacGill] had become known in the intimate, factual world of engineering. Engineers she regarded with enthusiasm, declaring

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[77] For more information of MacGill's contemporaries in the field see James R. Hansen's *Engineer in Charge: A History of the Langley Aeronautical Laboratory, 1917-1958*, The NASA History Series, (Washington, D.C: NASA, 1986).
[78] Mary Kinnear, *In Subordination: Professional Women, 1870-1970*, (Montreal: McGill-Queen's Press, 1995), 162.
[79] See discussion on the professions and their development in the Introduction. See also Chapter 1 for a discussion on the established sub-disciplines of engineering and the idea of 'newer' versus 'older' sub-disciplines.
[80] This situation is also documented in the United States. Rossiter, *Women Scientists in America: Before Affirmative Action*, 14.

them to be well-adjusted, the best-adjusted group to establish squatters' rights on the professions – for they made women professionals welcome![81]

[81] MacGill, *My Mother the Judge*, 238.

Chapter 3: Engineering Consultant

Introduction

Elsie Gregory MacGill's work at Canadian Car and Foundry ended in 1943.[1] Midway through that year she moved to Toronto and began work as an independent consulting engineer. As noted previously, this is a natural progression in the engineering career, as engineers often move into management and private work after initial experience as a means of advancing their careers.[2] On 4 June 1943, she married E.G. Soulsby in Chicago, Illinois. MacGill and Soulsby had worked together over the years both in Quebec and in Fort William, with Soulsby holding the position of Plant Manager in Fort William.[3] While MacGill went into private consultant work, Soulsby accepted the position of manager at Victory Aircraft Limited in Malton, Ontario.[4]

What impact did MacGill's marriage have on her professional life? In many respects, MacGill worked to ensure that it minimally affected her career; in fact, she controversially insisted on maintaining her identity as Elsie Gregory MacGill instead of

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[1] Both Ann Soulsby and the National Film Board documentary "Rosies of the North" by Kelly Saxberg allude to the firing of Elsie MacGill and E.G. Soulsby from Canadian Car and Foundry in 1943, however, no documentary evidence was located to provide further information on this allegation. Interview with Ann Soulsby, 7 August 2006; Kelly Saxberg, *Rosies of the North*, (National Film Board of Canada, 1999) documentary.

[2] *The Engineering Journal* July 1943, 430.
Eliot Friedson, *Professionalism: The Third Logic, On the Practice of Knowledge*, (Chicago: University of Chicago Press, 2001), 168.

[3] Interview with Ann Soulsby, 7 August 2006.

[4] *The Engineering Journal* July 1943, 430.

becoming Mrs. Soulsby.[5] Marrying E.G. Soulsby also came with reduced family demands as he was a widower and already had two children in the pre-teen and adolescent years.[6] She thus did not face the pressure to have children and raise a family.[7] Her choice to become a consultant, however, can be seen as both a move towards increased professional independence, and an innovative means to balance her public and private life. As a self-employed consultant MacGill was able to decide when and at what pace to work. As Glazer and Slater point out, this was not unusual for women drawn into new professional fields such as science, and was much more feasible in many cases than trying to remain in the same competitive environment as her peers.[8] In MacGill's case, however, while she did define her work pattern, she did not remove herself from the daily presence of engineering work. As a consultant, she bid on and competed for contracts at a variety of levels.

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[5] MacGill, *My Mother the Judge*, 238.
Her decision would cause future problems (i.e. with obtaining a passport), but MacGill became a champion of women's rights to retaining their own identity on passports despite marriage, especially during her work on the Royal Commission on the Status of Women. NLAC MG31-K7 Volume 18 File 17: Canadian Passport Laws Relating to Women: Correspondence and Reports n.d., 1971.
NLAC MG31-K7 Volume 21 File 11: Miscellaneous Speeches and Notes, n.d., 1960-1970. MacGill's Memo to Commission regarding change of name 26 March 1970.

[6] Ann Soulsby was the younger of the two children, and John Soulsby was her older brother. Interview with Ann Soulsby, 7 August 2006.
Even if MacGill had wanted to have children of her own, she may not have been able to on account of her age, 38 years, and the resulting long-term disability from polio.

[7] Ann Soulsby noted MacGill was not a distant figure in the children's lives, and she credited her with having a large impact on her educational and social upbringing. She noted that Elsie encouraged her to attend McGill University, and instilled in her the importance of a woman having her own economic independence.
Interview with Ann Soulsby, 7 August 2006.

[8] Penina Migdal Glazer and Miriam Slater, *Unequal Colleagues: The Entrance of Women into the Professions, 1890-1940*, (New Brunswick, NJ: Rutgers University Press, 1987), 209-211, 217-219.

Working as an Independent Consulting Engineer

Having relocated to Toronto in 1943, MacGill set up an office as an independent consulting engineer. MacGill's company was located in the Physicians & Surgeons Building at 86 Bloor Street West, Toronto, Ontario.[9] She maintained a small office employing only one full-time secretary. The nature of her company provides further evidence of her extensive network within the field of aviation, as she contracted employees as required. In 1950, she noted that due to her active participation in the aircraft industry for over a decade, she was able to utilize equipment and secure required expertise from various Canadian aircraft companies and universities, as well as the National Research Council (NRC) in Ottawa.[10]

As a consultant, she endeavoured to use all her available connections to find clients. One of her first steps was to contact Ralph P. Bell Esq., the Director General of the Aircraft Production Branch of the Department of Munitions & Supply in Ottawa, Ontario. MacGill not only inquired about potential work, but she also outlined the project she wanted to undertake. One of her specialties was determining aircraft

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[9] She located her office in Suite 365-370 of the building from 1943 to 1965, when she started working out of her home at 3 Bennington Heights Drive, Toronto, Ontario. No reason is cited for the move, but given her acknowledgement of the decline in Canadian aviation and her increased involvement with the women's movement during this period, it can be speculated that the amount of work was not enough to warrant an office or a full-time secretary. See letterhead attesting to the change: NLAC MG31-K7 Volume 12 File 8: Correspondence Re: Federal Gov't Contracts and Certificates of Airworthiness, 1965-67.

[10] NLAC MG31-K7 Volume 12 File 8: Correspondence Re: Federal Gov't Contracts and Certificates of Airworthiness, 1965-1967. MacGill's letter to Major Harold J. Dumont – 23 October 1950. For more general information on aeronautical engineers, and to see: Hansen, *Engineer in Charge*. Also see Walter G. Vincenti *What Enginers Know and How They Know It: Analytical Studies from Aeronautical History* (Baltimore: The Johns Hopkins University Press, 1990) and Eugene S. Ferguson, *Engineering and the Mind's Eye,* Cambridge, Mass.: The MIT Press, 1993).

performance figures, and since the federal government was encouraging post-war aircraft design, she believed she was the right person to determine whether the proposed designs actually met the desired federal requirements.[11]

Correspondence between MacGill and the Aircraft Production Branch of the Department of Munitions & Supply was conducted between January 1944 and May 1944. During this time she also actively promoted herself to obtain work. In fact, she went directly to the minister responsible for the department, the Honourable C.D. Howe.[12] She explained that she was currently working on a single-engined air freighter for the northern areas of Canada and for other countries, and a twin-engined medium weight aircraft for airline operation. As clear procedures for designers had not yet been established for Canadian aircraft in the post-war period, she asked whether there was a need to submit the designs of these projects to the Post War Committee. More importantly, she outlined the areas of expertise that she could offer to the department, including a wide range of design-related skills, supervisory abilities, and overall report and project management experience.[13]

MacGill's efforts did not go unnoticed. C.D. Howe forwarded her letter to Ralph P. Bell, who informed her, on 21 April 1944, that there were presently only rough outlines in regards to policies and procedures for designers, which he enclosed. In discussing future production, Bell provided information on the aircraft that had been recently considered and explained that the Department of National Defence for Air had already

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[11] NLAC RG28 3-P-12 Volume 155: Post War Committee on Manufacture of Aircraft, Miscellaneous. Letter Elsie Gregory MacGill to Ralph P. Bell Esq., 10 January 1944.
[12] As MacGill had worked as Chief Aeronautical Engineer at Canadian Car and Foundry, she would have been known to Howe.
[13] NLAC RG28 3-P-12 Volume 155 File: Post War Committee on Manufacture of Aircraft, Miscellaneous: Letter to C.D. Howe from MacGill 17 April 1944.

moved to ask the Post War Committee to initiate a call for competitive submissions in connection with a two-engined Utility Trainer.[14]

MacGill's inquiries illustrate her determination to use her war contacts, such as C.D. Howe, to pursue work suitable to her talents; but they also ensured her future as a consultant by keeping her involved in the rapidly changing aircraft industry of the time.[15] More importantly, assessing MacGill's actions provides insight on the Canadian aircraft industry during the switch from war to civilian production. In general, the field was small and pre-occupied with war production, but as her involvement in the Postwar Committee indicates the impact of aviation in the postwar world was being discussed and planned. Eager to be involved in this planning, MacGill was the only private consultant in 1944 to actively propose plans for aircraft. The only other proposal received was from Mr. J. Grant Glasco of de Havilland Aircraft of Canada, Limited.[16] MacGill's efforts were rewarded, and she successfully obtained work at the federal level with the Post War Committee's Sub Committee on the Post War Manufacture of Aircraft.

MacGill also kept in touch with other key individuals, such as her former engineering professor, J.H. Parkin, who acted as chairman of the Technical Subcommittee on Post-

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[14] NLAC RG28 3-P-12 Volume 155 File: Post War Committee on Manufacture of Aircraft Miscellaneous: Letter to EGM from Ralph P. Bell 21 April 1944.
[15] The most important transition in the global field at this point was the development of the turbojet engine, a technology the leaders of the North American market eagerly wanted to develop. For more information see: Edward W. Constant II, *The Origins of the Turbojet Revolution*, (Baltimore: The Johns Hopkins University Press, 1980).
[16] NLAC RG28 3-P-12 Volume 155 File: Post War Committee on Manufacture of Aircraft Miscellaneous: Letter Mr. Ralph P. Bell to Mr. J.H. Parkin – 15 May 1944.

war Manufacture of Aircraft in 1943 and 1944.[17] Parkin sent her the initial draft of the minimum requirements for post-war aviation designs and projects, "Preliminary Information to be submitted by a Prospective Constructor of Post-war Aircraft."[18] MacGill's connection with the Technical Subcommittee continued throughout the 1940s, and it would eventually lead to her active participation in the Subcommittee on Aircraft Structures.[19] However, on account of the nature of the work, which was in many cases highly confidential, evidence is lacking to assess her overall contribution.

Meanwhile, MacGill developed international contacts and achieved notoriety in the aeronautical world. In 1944, she was sent to England by a client where she obtained first hand information on British developments in the field.[20] She also served as a Canadian

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[17] NLAC RG28 3-P-12-2 Volume 155 File: Committee on Postwar Manufacture of Aircraft Memoranda to the Minister: Memorandum to the Honourable C.D. Howe, 1 July 1943 from Ralph P. Bell.

[18] NLAC RG28 3-P-12-6 Volume 156 File: Postwar Committee on Manufacture of Aircraft Technical Sub-Committee on Postwar Manufacture of Aircraft: Letter J.H. Parkin to MacGill 24 May 1944.
The Department of Munitions and Supply was set up with C.D. Howe as Minister in early 1940, and he became Minister of Reconstruction and Supply from 1946-1948.

[19] "In reply to your letter of January 6, I have gathered together a list of references on aircraft skis and ski installations covering aerodynamic, design and strength phases of the subject. This has been done quite hastily in order to get it to you prior to the 15th.

It should be noted that this list is secret and is made available to you for your personal use as a member of the Subcommittee on Aircraft Structures." Additional information is not readily available as to MacGill's evolving role in these files. NLAC MG31-K7 Volume 14 File Number 3: Ski Reports: Reference List, 1947. Letter to MacGill from Margaret L. Parkin, Secretary, Committee on Aircraft Structures, 9 January 1947.

[20] On account of the nature of the work MacGill did, sometimes it was classified as confidential. In this case she does not name the client. It is possible that the government sent her, and with the rapid evolution of the field in Britain. Kenneth F. Tupper's, of the NRC, recollection that she was issued a car for getting around by the M.A.P. (Ministry of Aircraft Production) supports this idea.
NLAC MG31-K7 Volume 15 File 10: Personal Correspondence and Memoranda, 1929-1942, Interview Till & MacGill. Letter to Ms. Elizabeth Neville, Chairperson, Elsie Gregory MacGill Memorial Foundation from Mr. Kenneth F. Tupper, 8 August 1985.

representative to the International Civil Aviation Organization (ICAO), which was affiliated with the United Nations in 1946. She was selected as the first woman Technical Advisor for the ICAO after attending a session on airworthiness. She subsequently assisted in establishing airworthiness regulations pertaining to the design and production of commercial aircraft, and in 1947 she was selected as chair of the Stress Analysis Committee, which was one of the five regular committees within the ICAO.[21] MacGill downplayed the importance of her appointment by noting that there were few people of either sex in Canada with her qualifications and with twenty years of experience; her appointment however, stands as testament to her expertise and representation in the field.[22]

Non-Governmental Work

In the mid 1940s, one of MacGill's earliest non-governmental post-war contracts was with Victory Aircraft Limited of Malton, Ontario where she worked on the Lancaster XPP monoplane.[23] A copy of the Application for Certificate of Airworthiness for Export indicates that she was working to adjust it to winter climates. In making these

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Senator Marsden's Fonds at National Archives of Canada – Gatineau. R/E 2007-0703 Volume 1 File: Trustees: Honorary Selection.

[21] NLAC MG31-K7 Volume 13 File 1: Elsie MacGill: Consulting Engineer – Paper by J. Bannerman – n.d.. - Jean Bannerman, "Elsie MacGill: Consulting Aeronautical Engineer," 5-6.

[22] NLAC MG31-K7 Volume 15 File 10: Personal Correspondence and Memoranda, 1929-1942, Interview with Can. Cron. (airworthiness Dev. PICAO)

[23] There may have been some connection in MacGill obtaining this contract with the fact that E.G. Soulsby was the manager of the plant, however information on this possibility was not readily available.

adjustments she enabled the plane to fly during cold weather and to deal with the problem of ice build-up around its powerplant.[24]

She was also confident enough to apply for work in the United States. Her letter to Major Harold J. Dumont, the Commanding General, Air Material Command of Wright-Patterson Air Force Base in Dayton, Ohio, in October 1950, provides important insights into her work:

> I do work for both government and corporations. Such jobs are usually of special character – something outside of their routine – and by employing my office they are able to obtain the services of a skilled professional without disrupting the work of their permanent personnel. Some of this work, such as the investigation of methods of attack of certain aerodynamical and stress problems, is highly specialized and highly confidential.

She elaborated on her experience, stating that on behalf of her clients she had attended technical conferences at the national and international levels, for example, the Commonwealth Conferences. Moreover, she noted she had been responsible for obtaining the Canadian certificate of airworthiness for modified Lancaster bombers for commercial use.[25]

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[24] NLAC MG31-K7 Volume 11 File 5: Applications for Certificates of Airworthiness for Export n.d., [1945].

[25] MacGill also enclosed her brochure, which was not in her files, and listed her rate of pay, including a per diem of seventy-five dollars with a decrease to 50 dollars for longer jobs. It can be speculated that as longer jobs represented a more consistent income, she was able to take the duration into consideration and average her fees.
In addition to her confident portrayal of herself, the work she had done and services she could offer, she illustrated the degree of her connections to the highest levels of the aeronautical field in Canada by citing as references: C.D. Howe Esq., Minister of Trade & Commerce, Ottawa; Brooke Clazton Esq., Minister of National Defence, Ottawa; Dr. J.J. Green, Deputy Director General of the Defence Research Board., Scientific Advisor to the Chief of Air Staff, Ottawa and Harold Hookstra Esq. Chief Engineer Aircraft Division, Department of Commerce, Civil Aeronautical Administration, Washington, D.C. NLAC MG31-K7 Volume 12 File 8 Correspondence RE: Federal Gov't Contracts and Certificates of Airworthiness, 1965-1967. MacGill's letter to Major Harold J. Dumont – 23 October 1950. There is no evidence to suggest that MacGill was

In 1959, the Canadian aircraft industry suffered a major setback with the cancellation of the CF-105 or Avro Arrow. Prime Minister John Diefenbaker's Conservative administration cancellation of project was based largely on fiscal arguments including the lack of a market for the aircraft.[26] The Canadian aircraft industry, however, was sent into a tailspin.[27] The cancellation also affected MacGill, who, in turn, lost her largest consulting account.[28] While further information on her work with the Avro Arrow is lacking, MacGill's determination to seek additional consulting contracts continued undeterred.[29] In fact, MacGill felt that it was necessary to work even more diligently. In response to a request for her to be part of a symposium entitled "Engineering Destiny in the Decade of the 1960's" with the Society of Women Engineers, MacGill responded that she was unable to attend due to lack of prior notice and financial constraints:

> I know I do not have to tell you about the low state of the Canadian a/c [aircraft] industry as a result of the past and continuing cancellations. You have probably heard all about it. The past year has been a grim one from the standpoint of getting work and keeping things going – and the present does not

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successful in obtaining a contract at the Wright-Patterson Air Force Base. This could be because she was unsuccessful, or because the work was classified. Her initiative, however, illustrates the range of her connections and determination to secure employment.

[26] J.M. Bumstead, *The Peoples of Canada: A Post-Confederation History,* Toronto: Oxford University Press, 1992, 268-270.

[27] The Avro Arrow was a fighter aircraft designed to intercept bomber aircraft, and was considered to be a significant achievement in Canadian Aviation at the time. For more information on the Avro Arrow Cancellation see: Palmiro Campagna, *Requiem for a Giant: A.V. Roe Canada and the Avro Arrow,* (Toronto: A Hounslow Book, 2003); Palmiro Campagna, *Storms of Controversy: The Secret Arrow Files Revealed,* Third Edition, (Toronto: Stoddart Publishing, 1998); Stewart, Greig, *Shutting Down the National Dream: A.V. Roe and the Tragedy of the Avro Arrow,* (Toronto: McGraw-Hill Ryerson Limited, 1988).

[28] Bannerman, *Leading Ladies*, 316.

[29] Upon cancellation of the project all records on the Avro Arrow were destroyed. Stewart, xi-xii.
MacGill did not retain information pertaining to the details of her involvement as consultant.

> appear hopeful. This is not a year in which I can afford time or money [away] from business.[30]

In 1961, MacGill became a consultant for Husky Aircraft Ltd., out of the Vancouver International Airport. Correspondence indicates that this contract lasted into 1962.[31] Husky's goal was to reproduce the Fairchild Husky aircraft. MacGill was asked to research the previous two models and, based on her findings, to determine whether it was feasible under current airworthiness guidelines to produce a new model with the proposed name: Husky F11-3.[32]

MacGill's 1961 report indicated that production of a Husky F11-3 was possible. The report provided evidence of changes to airworthiness certification in Canada as MacGill explained that the original F11 had been evaluated under U.S. airworthiness requirements CAR 04 (1946), while the F11-2 was under U.S. airworthiness requirements CAR 4a, and in generating the feasibility of the F11-3 MacGill had referred to the U.S. airworthiness requirements CAM3.[33] This work highlights some of

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[30] As she had just lost her largest contract in 1959, she would have have been limited by her financial situation to undertake additional travel. NLAC MG31-K7 Volume 23 File 10: Society of Women Engineers: Correspondence and Newsletters, 1952-1978. Letter from Elsie MacGill to Elizabeth Plunkett, Chairman of SWE Program Committee, 6 April 1960.

[31] NLAC Volume 13 File 10: Investigation Re: Certificate of Airworthiness for Fairchild Husky Aircraft: Reports and Correspondence, 1961; NLAC Volume 13 File 11: Investigation Re: Fairchild Husky Aircraft: Correspondence and Notes 1952-1962.

[32] Report HA3-1 Investigation regarding Certificate of Airworthiness (based on U.S. CAM3) for Fairchild Husky Aircraft. By E.G. MacGill, 31 October 1961. NLAC MG31-K7 Volume 13 File 10: Investigation Re: Certificate of Airworthiness for Fairchild Husky Aircraft: Reports and Correspondence, 1961, 3. For additional information on the Husky see: Dirk Septer, "Fairchild's Underrated Husky: The F-11 Never Fully Realized its Potential as a Bushplane," *CAHA Journal* Fall 1997.

[33] Report was entitled: *Report HA3-1: Investigation regarding Certificate of Airworthiness (based on U.S. CAM3) for Fairchild Husky Aircraft* and dated 31 October 1961.

the complexities MacGill faced, as airworthiness certification was constantly evolving and was largely based on American requirements.[34] Moreover, the research into the aircraft alone was challenging. The original records were scattered and took time to collect, and on account of their condition their readability was compromised.[35]

Despite MacGill's report and the clear interest to reproduce the Husky, it was not to be. Dick Septer explains that the problem in reproduction was ultimately political, not technical, and would see the DHC – 2 Beaver rise above the Husky and seize the recognition as Canada's best known bush aircraft.[36] The fate of the Husky provides another illustration of the degree to which science and technology is ultimately mediated by government policy, a reality with which MacGill would continue to be confronted at a various levels.[37]

Another area of aviation that MacGill worked in was air accident investigation or aviation safety. An example of her work in this respect was her report on an accident with a Piper Tri-Pace Aircraft. The incident had resulted in the death of the four occupants of the aircraft.[38] MacGill was asked to review all the findings and evidence and respond to four queries related to the crash. Ultimately, MacGill concluded in the

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Report HA3-1 Investigation regarding Certificate of Airworthiness (based on U.S. CAM3) for Fairchild Husky Aircraft. By E.G. MacGill, October 31, 1961. NLAC MG31-K7 Volume 13 File 10.

[34]Canada still had no airworthiness policies of its own at this period and thus had to look beyond its borders.

[35]The report was based on 58 reports located in both Ottawa and Fort William, Ontario. MacGill explains further difficulties in assessing them due to legibility. NLAC MG31-K7 Volume 13 File 10, 6.

[36] Septer, 116.

[37] Essentially the DHC-2 Beaver was chosen for production over the Husky on account of what Septer refers to as bureaucratic red tape and government restrictions. Ibid.

[38] The deceased were: Theodore G. Stevens (pilot), J.B. Barclay, W.N. Dutko and J.F. Dowling. NLAC MG31-K7 Volume 13 File 24: Report RE: The Accident to Piper Tri-Pacer Aircraft, 1963, 1.

report that she was satisfied with the conclusion reached by The Department of Transport (DOT) that the accident had most likely been caused by wing failure on account of over stressing of the aircraft's design.[39]

Canadian Aviation Policy

During the 1960s, Canadian aviation was also in a state of flux.[40] Up until then, the formal development of civil aviation in Canada had been slow. The federal Department of Transport (DOT) was established in 1936. The Glasco Report, produced by the Royal Commission on Government Organization in 1963, had a significant impact on DOT, leading to the adoption of the National Transportation Act of 1967, and the subsequent creation of the Ministry of Transportation (MOT).[41]

It was within this context, that MacGill was able to establish herself as a professional within the civil service. In June 1965, MacGill actively worked to obtain further government work. In this year alone, she inquired at the Secretary of State for External Affairs, the External Aid Office, the Department of National Defence, the Ministry of Forestry, the Ministry of Public Works, the Department of Defence Production and the Department of Industry about the possibility of additional work. Her proactive effort resulted in general interest in her offerings expressed by the various departments.

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[39] NLAC MG31-K7 Volume 13 File 24: Report RE: The Accident to Piper Tri-Pacer Aircraft, 1963, 3, 7.

[40] Prompted by the American Hoover Commission, in 1960, a Royal Commission on Government Organization (informally known as the Glasco Commission), under the chairmanship of J. Grant Glasco was initiated.

[41] John W. Langford, *Transport in Transition: The Reorganization of the Federal Transport Portfolio, Canadian Public Administration Series*, J.E. Hodgetts ed. (Montreal: McGill-Queen's Press, 1976), 26.

Within a month of her inquiries, she was rewarded for her efforts.[42] On 5 July 1965, she received an offer from the Department of Transport Canada Air Services through W.M. McLeish, the Chief Aeronautical Engineer of the Civil Aviation Branch.[43] McLeish requested her input on the draft of the department's "Approved Aeronautical Engineer Procedure" which he hoped to release by the end of the year. He noted that,

> A lot of discussion, study and research has gone into the document and it is the Department's feeling that the principle is sound and worthy of adoption. Further, the system has flexibility for future development in Canadian Civil Aviation, and its offers flexibility to the public irrespective of the nature or size of the company, and there should not be any unreasonable costs to design overhead.[44]

MacGill's involvement in this project demonstrates her credibility as an aeronautical engineer in a variety of ways. First of all, she was a logical choice on account of her experience with both British and American airworthiness certifications in her capacity as designer, as well as her ability to integrate international aviation knowledge on account of her experience with ICAO. Secondly, MacGill's work would establish a place for her in the active creation of new standards for the Canadian context. She noted in the draft of the aviation department's "Approved Aeronautical Engineer" that for too long, Canada had lacked its own air worthiness requirements, choosing to mediate between those of the United Kingdom and the United States. More importantly, she argued, it was time to provide the country with adequate aviation regulations: "The procedure must recognize

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[42] See letters NLAC MG31-K7 Volume 12 File 8: Correspondence RE: Federal Gov't Contracts and Certificates of Airworthiness, 1965-1967.
See also: Canada, *Royal Commission on Government Organization,* (Ottawa: Queen's Printer, 1963).

[43] The Federal Department of Transport, formed in 1936, and it evolved to become one of the larges federal bureaucratic institutions. Langford, 23. NLAC MG31-K7 Volume 12 File 8: Correspondence RE: Federal Gov't Contracts and Certificates of Airworthiness, 1965-1967. Letter to MacGill from W.M. McLeish, 5 July 1965.

[44] Ibid.

the disadvantages of the U.S. orientation, which is not compatible with Canadian legislative, judicial, federal/provincial trends, nor even the geographic resources [and] influences on future Canadian growth."[45]

Thirdly, on account of consulting MacGill about the draft document, she was, in turn, brought up-to-date with the current realities of the Department of Transport's Air Services and offered a clear view of their proposed future development plan. As a result, not only did she submit a detailed list of comments on 23 July 1965, she was kept informed of future developments as they occurred.[46] Upon receiving word that the final report was complete and would be effective as of 1 May 1967, MacGill once again demonstrated her proactiveness. Identifying the potential opportunities in the final draft, which McLeish had included, MacGill offered to do the specified work outlined for the position of Design Approval Representative (DAR). She argued that as an independent consultant, she was qualified as a Design Approval Representative in Structures and in Performance.[47]

MacGill's initiative was rewarded, McLeish notified her on 31 May 1967 of her appointment to both positions. Additionally he enclosed her first assignment, on the

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[45]NLAC MG31-K7 Volume 12 File 8: Correspondence RE: Federal Gov't Contracts and Certificates of Airworthiness, 1965-1967. "DOT APPROVED AERONAUTICAL ENGINEERS [DRAFT]", 1-2.

[46]NLAC MG31-K7 Volume 12 File 8: Letter to Mr. W.M. McLeish from Elsie Gregory MacGill 23 July 1965.
Evidence of this link was illustrated after the draft had reached its final form, as Mr. McLeish wrote to her to inform her of the related developments. McLeish thanked her for her important input from 23 July 1965, and noted that the final draft was entitled "Design Approval Representatives", and was slated to become effective on 1 May1967.
NLAC MG31-K7 Volume 12 File 8: Letter to Elsie Gregory MacGill from Mr. W.M. McLeish 22 December 1966.

[47] NLAC MG31-K7 Volume 12 File 8: Letter to Mr. W.M. McLeish, 10 March 1967.

draft of the Operating Procedures for the DAR Program.[48] Formal confirmation of her appointment came on 12 November 1968, by which time she had been serving in the role for approximately one and a half years.[49] The timing of MacGill's new position allowed her to be directly involved with policy changes related to aviation, and added to her knowledge and expertise within the field.[50]

Further Professional Activities

In the meantime, MacGill continued to participate in activities and organizations related to the engineering profession. Her involvement helped to prepare her for future leadership roles. In 1949, she became a fellow of the Royal Aeronautical Society and of the Royal Society for Encouragement of the Arts Manufacturers and Commerce. This was followed by her membership with the American Rocket Society in 1955 and her subsequent recognition as a fellow of the Canadian Aeronautical Institute in 1960. Moreover, in 1953, MacGill was informed that she would be included in the Gevaert Gallery of Canadian Executives.[51] She was the only woman selected within this group of professionals. Recognition in the Gevaert Gallery is important as it provides evidence

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[48]NLAC MG31-K7 Volume 12 File 8: Letter to Elsie MacGill from M. Jeluwick for Mr. W.M. McLeish, 31 May 1967

[49] NLAC MG31-K7 Volume 12 File 8: Letter to Elsie MacGill from Mr. W.M. McLeish 12 November 1968.

[50] "By 1968, Air Services, numbering about 11,300 officials, comprised several branches and authorities responsible for (1) the licensing of aircraft and personnel; (2) safety regulations; (3) investigations of air accidents; (4) construction, maintenance, and operation of air terminals and aerodomes throughout Canada; (5) the operation of telecommunication facilities in support of civil aviation and meteorological observation and forecasting."
Langford, 24.

[51] NLAC MG31-K7 Volume 21 File 2: Miscellaneous Correspondence and Notes, 1949-1968. For more information on The Gevaert Gallery and copies of her photo see: NLAC MG31-K7 Volume 19 File 14: Gevaert Gallery: Pamphlet, 1953.

that MacGill's achievements were beginning to be acknowledged beyond engineering circles.

MacGill's interest in aviation and its potential is encapsulated in the brief she submitted to the Royal Commission on Canada's Economic Prospects. The Commission's guiding question asked "What will be Canada's economic potentialities over the next twenty-five years and what must we do if they are to be fully realized?"[52] MacGill's chief objective in her report was to analyze the top speeds to be expected of aircraft by 1980, and the various problems experienced by high speed air transportation and transportation systems within Canada. However, what stands out is her argument against the strongly focused military domination of the field at the expense of civilian aviation and public knowledge. She argued that a knowledge transfer from military to civilian aviation was crucial.[53]

MacGill's arguments expressed a frustration with the classification of information. She had encountered this reality through her experience with both government and industry work in aviation. As her second recommendation, to overcome "unnecessary secrecy in military research" in order to create a 'military-civilian liason' illustrates, she believed in the importance of bridging the gap between military and civilian industry. MacGill argued that the division between the two areas could be resolved through better

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[52] MacGill's Report was entitled: *Some Results of Anticipated Increases in the Speed of Commercial Air Transport on Canadian Transportation Systems & Industry of the Next Quarter-Century.* NLAC MG31-K7 Volume 14 File 4: Some Results of Anticipated Increases in the Speed of Commercial Air Transport on Canadian Transportation Systems & Industry of the Next Quarter-Century: Report and Correspondence, 1956. The Commission's Final Report was published in 1957 entitled: *Royal Commission on Canada's Economic Prospects: Final Report.*

[53] NLAC MG31-K7 Volume 14 File 4: Some Results of Anticipated Increases in the Speed of Commercial Air Transport on Canadian Transportation Systems & Industry of the Next Quarter-Century: Report and Correspondence, 1956, 10-11.

dissemination of ideas facilitated by the increased publication of results. She elaborated by noting that if important scientific and technical knowledge remained concentrated solely in the aviation and electronics industries, two of the fastest growing Canadian industries, even after official secrecy had been removed, it would negatively impact the wider civilian population and society's advance.[54] Her report was well received; indeed, MacGill received nineteen requests from government departments, university departments and various libraries for copies.[55] MacGill's submission provided evidence of her ability to look toward future developments in the aviation field, as well as her appreciation of the importance of technology's impact on society.

While highly engaged as a consultant, MacGill never allowed her participation in the Engineering Institute of Canada (EIC) to waver. In fact, as time passed she became more and more involved in the organization, serving actively on its executive.[56] John Fisher, who reported on the EIC Convention in 1949, recorded one of the most notable events in which MacGill participated.[57] Fisher drew attention to the rapidly changing technological world that was unfolding in which engineers played leading roles, and also made note of the presence of Elsie MacGill and Dr. Lillian Gilbreth. In fact, Dr. Lillian Gilbreth, considered the "First Lady of Engineering" in America and widely recognized for her achievements in management engineering, was a keynote speaker, and was

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[54] NLAC MG31-K7 Volume 14 File 4: Some Results of Anticipated Increases in the Speed of Commercial Air Transport on Canadian Transportation Systems & Industry of the Next Quarter-Century: Report and Correspondence, 1956, 10-11.
[55] Ibid. See file for additional correspondence requesting copies of her report.
[56] For more information see: NLAC MG31-K7 Volume 18 File 31: Engineering Institute of Canada: Annual Reports and Miscellaneous 1959-1979.
[57] NLAC MG31-K7 Volume 18 File 12: CBC, John Fisher Reports – Transcript, 1949. "John Fisher Reports" 15 May 1949.

introduced by MacGill.[58] This situation prompted Fisher to note that while the American Gilbreth was widely known MacGill was not. While this can be taken as evidence of the marginalization of Canadian women in engineering at the time, Fisher suggests an additional cause – the secrecy or internalization of the engineering society within itself.[59] He urged engineers to share their knowledge more actively with the public via the creation of "social bridges", an idea that MacGill supported and would develop fully in later years.

MacGill served on the executive of the EIC, first as the chair of Admissions & Membership from 1960 to 1963, and then as a Councillor from 1964 onward. Her dedicated work was recognized by her colleagues in the annual meeting on 16 January 1962 when she was seated at the head table on account of her committee's success. This recognition is not surprising given that in 1960, she was credited with encouraging and assisting in the creation of the Oakville Branch of the EIC.[60]

As a private consultant, MacGill needed to establish connections with other consulting engineers, a task she accomplished through the auspices of the Association of Consulting Engineers of Canada (ACEC). On 31 October 1949, MacGill became a member.[61] The organization's objectives would have met with her approval. The ACEC advocated ethical standards and practices, and the promotion of proper relations amongst

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[58] See: Jane Lancaster, *Making Time: Lillian Gilbreth – A Life Beyond "Cheaper by the Dozen,* (Boston: Northeaster University Press), 2004.
[59] He referred to all the great technological discussions he had heard only at the conference. NLAC MG31-K7 Volume 18 File 12 CBC, John Fisher Reports – Transcript, 1949. "John Fisher Reports" 15 May 1949.
[60] NLAC MG31-K7 Volume 18 File 31: Engineering Institute of Canada: Annual Reports and Miscellaneous, 1959-1979. EIC Annual Report – Toronto Branch – 1960. "Chairman's Remarks", 1.
[61] NLAC MG31-K7 Volume 17 File 13: Association of Consulting Engineers: Reports and Correspondence, 1949, 1964-1975 – 1948 – Association Specifics.

members and with clients. It was also dedicated to monitoring legislation on the profession while at the same time working to standardize the practice of engineering by consultants.[62] MacGill became an active member of the ACEC, serving in various positions on the executive. In1966, she was noted as the Director of the Ontario Chapter.[63]

Through her participation in the ACEC, she was able to serve as a bridge with society at large. On 17 January 1966 she spoke at the ACEC & Learned Societies joint meeting, calling on engineers to reach outside of their specific disciplines. She noted that membership in ACEC required at least one membership in a learned society – a requirement, which she argued, was integral to the professional accountability and status of the engineer. Moreover, she pointed out that an engineer's professional reputation relied on his or her competence, something in her opinion that was much more important than simply the "image" or "status" of the engineer.[64]

MacGill further outlined her understanding of, and belief in, the importance of the impact of science and technology on society. Using the examples of the medical and legal professions, she argued that by interacting with learned societies engineers could better adapt to the changing demands society placed on the profession.

> In the social context, meeting in a professional manner means assuming an obligation to the public, and an obligation to the profession. More and more we find that because technology shapes social and economic change, we are required to anticipate not only the technical but also the social and economic

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[62] NLAC MG31-K7 Volume 17 File 13: Association of Consulting Engineers: Reports and Correspondence, 1949, 1964-1975 – 1948 – Association Specifics.
[63] NLAC MG31-K7 Volume 21 File 11: Miscellaneous Speeches and Notes., n.d., 1960-1970. Letter September to T.M. Medland, Executive Secretary of ACEC from E.G. MacGill, Director Ontario Chapter ACEC, 25 September 1966.
[64] NLAC MG31-K7 Volume 11 File 6: A.C.E.C. and the Learned Societies – Speech Given by E.G. MacGill, 1966.

> consequences of our work, bringing subjectivity into an otherwise fairly precise profession. The extra-disciplinary contacts and additional knowledge that membership in learned societies can give, helps us to supply wise advise in public engineering matters, and to acquit ourselves of our obligation to the public.[65]

MacGill was also involved in the ACEC's move to see consulting engineers accredited.[66] In a letter to L.G. Cazaly, the Secretary of the Ontario Chapter of the ACEC, MacGill outlined the possibility of working towards a provincial bill with the suggested title: *Institution of Consulting Engineers' Act*, using the existing Engineers' Act as a model. MacGill's familiarity with the Act and her understanding of how it would work in relation to the ACEC's bylaws and legislation, allowed her to look beyond the province-specific limitations and contemplate a professional act at the national level.[67] She found a national act beneficial as it would be more inclusive of the various areas where consultants could be found:

> A point favouring the federal approval rather than the provincial Act is that the provincial Act would not cover mines and mineral and chemicals and geologists, mineralogists, bactriologists etc as these are at present excluded under the Ontario Professional Engineers' Act and so I presume would be excluded from an Institution of Consulting Engineers Act also [sic]"[68]

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[65] NLAC MG31-K7 Volume 11 File 6: A.C.E.C. and the Learned Societies – Speech Given by E.G. MacGill, 1966, 3.

[66] NLAC MG31-K7 Volume 17 File 13.

[67] This might be done by having ACEC approach various federal departments to accredit its specific members, or alternatively each member of ACEC approaching the particular federal department(s) having federal jurisdiction in his field of engineer, for accrediting in a manner similar to that now practiced in aeronautical engineering under the Department of Transport.
NLAC MG31-K7 Volume 17 File 13: Association of Consulting Engineers: Reports and Correspondence, 1949, 1964-1975 – 1948 – Association Specifics. Letter MacGill to L.G. Cazaly – n.d. but due to context probably 1966.
As a registered engineer in Ontario, MacGill was also a member of the Association of Professional Engineers of Ontario (APEO).

[68] NLAC MG31-K7 Volume 17 File 13: Association of Consulting Engineers: Reports and Correspondence, 1949, 1964-1975 – 1948 – Association Specifics. Letter MacGill to L.G. Cazaly – n.d. but due to context probably 1966.

MacGill's plea for a national act for consulting engineers reflects the struggle to regulate the engineering profession at a national level. The EIC and the provincial engineering organizations attempted consolidation towards a national engineering body first during the 1930s, and then later in the 1960s. Ultimately, both attempts failed.[69] MacGill's views on the ACEC displayed her concern about regulation's impact in relation to federal/provincial jurisdictions on the expansion of the Canadian engineering profession.

Dedicated Alumna

MacGill never forgot her roots. She thus retained her ties to her graduating class at the University of Toronto through active participation in its alumnus activity. While social events including dinners, reunions, and other various celebrations were very much a part of the Class of 2T7's activities, it also worked hard to promote engineering education, a focus that MacGill strongly supported.[70] On account of MacGill's promotion of the idea, a 2T7 Memorial Loan Fund was created in April of 1955 to provide financial assistance for students in engineering while at the same time paying tribute to her class as a whole.[71]

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[69] Janet Martin-Nielson, "In Principle but not in Practice: Professional Engineering Organizations in 20th Century Canada," Masters Thesis, University of Toronto, (2006), 81-82, 88-89.
[70] Class of 2T7 refers to the graduating class of 1927 at the University of Toronto.
[71] NLAC MG31-K7 Volume 24 File 7: University of Toronto: Alumni Correspondence and Notes, 1955-1973, Letter MacGill to K.C. Hendrick Esq., Chairman, 15 April 1955.

MacGill's interest in the fund never wavered; she kept herself well informed of all aspects of its management, carefully watching it and quickly noticing any deficiencies.[72] However, as additional funding for universities became available, the need for the loan fund decreased. MacGill then assessed other venues for investing the funds. In 1966, she helped initiate and sustain a discussion on the topic within the executive.[73] Ultimately, the suggestion of annual book donations to the School of Practical Science's library was carried at the class' 40th Anniversary reunion in May 1967. MacGill played a key role in ensuring that the class of 2T7 remained active. Charlie Morrison, the class president, paid tribute to her dedication, noting how, "Elsie MacGills [sic] abundant energy has evidenced itself in the effective needling tactics she has been exercising on your President and Secretary".[74]

Society of Women Engineers (SWE)

Aware of her unique position as a pioneering woman engineer, MacGill worked to ensure that other women entering the profession and those already in the field would have support networks. Hence, her involvement with the American Society of Women

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[72] NLAC MG31-K7 Volume 24 File 7: University of Toronto: Alumni Correspondence and Notes, 1955-1973, Letter from MacGill to Charlie Morrison, Bill Weaver and John Fox, 8 April 1959.

[73]NLAC MG31-K7 Volume 24 File 7: University of Toronto: Alumni Correspondence and Notes, 1955-1973, Correspondence between MacGill, Charlie Morrison et. al. June 1966 to May 1967.

[74] NLAC MG31-K7 Volume 24 File 7: University of Toronto: Alumni Correspondence and Notes, 1955-1973, Letter to Fellow Members 2T7 School from C.A. Morrison, 5 January 1967. He had earlier expressed his personal thanks in June 1966: "Thank you very much Elsie for keeping things alive. I don't know what we would do without you." NLAC MG31-K7 Volume 24 File 7: University of Toronto: Alumni Correspondence and Notes, 1955-1973, Letter from C.A. Morrison to MacGill cc. J.Fox. – 14 June 1966.

Engineers (SWE).[75] SWE, in turn, recognized her legacy as a pioneering woman engineer on 28 March 1953 at its second annual Society of Women in Engineering Award.[76] In her acceptance speech, she pointed out that the award further strengthened the link between engineers, and women engineers specifically, in North America. She referred to Dr. Lillian Gilbreth's appointment as one of the Engineering Institute of Canada (EIC)'s twenty-six honourary members, and noted that her award from SWE would further strengthen the link between the two organizations.[77] MacGill concluded by identifying engineering's attractive features. She used aviation as an example: "Some work to fly faster; some work to fly cheaper; some work to fly safer. All work primarily to fulfill themselves".[78]

MacGill's involvement in SWE also included participation in committees such as the scholarship fund, and more specifically, the memorial for the late Lillian Gilbreth. MacGill thus served as the chairman of the scholarship committee in Gilbreth's honour from 1958 to1959. As MacGill became further involved in other engineering and

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[75] SWE was formed in 1949, to inform the public about women in engineering and to encourage its members and young women to pursue and/or continue pursing engineering. NLAC MG31-K7 Volume 23 File 10: "Society of Women Engineers: Correspondence and Newsletters, 1952-1978. Objectives of SWE document.

[76] NLAC MG31-K7 Volume 23 File 10: "Society of Women Engineers: Correspondence and Newsletters, 1952-1978.

[77] NLAC MG31-K7 Volume 14 File 23: Misc. Reports & Notes 1946-1955, 1978. "Short Response by Elsie Gregory MacGill on Receiving the Award for 1953 From the Society of Women Engineers on March 28 in New York", 1.
She was known to a degree in the area as attested to in the *Chicago Daily Tribune* article on 8 September 1952 on page 14. NLAC MG31-K7 Volume 21 File 4, National Defence: Press Clippings, 1952, 1979-1980 – "What's Wrong with Our Air Force". Lillian Gilbreth was also previously honoured by SWE as Honorary Member Number One in 1950. Lancaster, 334-335.

[78] NLAC MG31-K7 Volume 14 File 23: Misc. Reports & Notes 1946-1955, 1978. "Short Response by Elsie Gregory MacGill on Receiving the Award for 1953 From the Society of Women Engineers on March 28 in New York", 3.

women's organizations, her contribution to SWE was often reduced to a financial contribution.[79] But MacGill did remain a notable figure within SWE. In 1963, Florence R. Smith, a prominent American engineer, asked MacGill, on behalf of SWE, if she could suggest the names of potential delegates for the first International Conference of Women Engineers and Scientists (ICWES), scheduled to take place at the United Engineering Center, in New York City. Unable to attend on account of her commitments as president of the Canadian Federation of Business and Professional Women's Clubs of Canada, MacGill nevertheless appreciated the importance of this groundbreaking initiative and sent a donation to help cover the cost of the event.[80]

Conclusion

After the war, Elsie Gregory MacGill effectively carved out a niche for herself as an independent consulting engineer. This career move gave her flexibility to define her own career trajectory, and the opportunity to be involved in the development of civil aviation through policy development. At the same time, MacGill maintained and expanded her involvement in professional associations as she sought to bridge the worlds of engineering and society, to assist in regulating the engineering profession in Canada and to promote women in the field. These various experiences provided her with a firm foundation from which to base her subsequent feminist activism and professional service.

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[79] NLAC MG31-K7 Volume 23 File 10: Society of Women Engineers: Correspondence and Newsletters 1952-1978. Letter to Elsie MacGill from Florence R. Smith, Chairman, Delegates Committee, 15 July 1963; Letter to Aileen Cavanagh, President Society of Women Engineers from Elsie Gregory MacGill, 17 March 1964.
[80] Ibid.

Chapter 4: Feminist Activist

Introduction

After 1945, Elsie Gregory MacGill increasingly promoted the rights of women in Canada and abroad. What factors were conducive to MacGill's increased feminism? While her feminist-infused upbringing can be credited with establishing the seed of her activist potential, celebrating her mother's legacy certainly acted as an important trigger in the development of her own feminism. In addition, her participation in the Canadian Federation of Business and Professional Women's Clubs of Canada provided precious opportunities to develop leadership skills and to articulate her own brand of feminism in the key decades of the 1950s and 1960s.[1] Moreover, as we shall see, as the duration of Elsie MacGill's feminism increased she was able to act as an important bridge between the two "waves" of the Canadian women's movement.

Ensuring Her Mother's Legacy

As we saw earlier, Elsie Gregory MacGill grew up in an activist household that was strongly marked by feminism. Elsie listened to the accounts of her mother's involvement with suffragism and she and her sister Helen Jr. even participated to a degree in the work. As Helen Jr. reflects, this was a colourful aspect of their childhood

[1] For more information on Feminism in Canada during the 1950s and 1960s see: Catherine Briggs, "Fighting for Women's Equality. The Federal Women's Bureau 1945-1967: An Example of Early "State Feminism" in Canada", Doctoral Dissertation, (Waterloo: University of Waterloo, 2001), 11-17.

experience; as she puts it, "[l]ocal society was strongly homogenous, [her] mother's interests brought diversity right into the living room".[2]

Helen Gregory MacGill cultivated contacts with leaders of the feminist movement from both the United States and England, thus keeping her abreast of developments in North America and around the world.[3] Prominent feminists were welcomed warmly in her home, and introduced to the local women of Vancouver. On one occasion, Helen Jr. recalled a visit from the renowned British feminist, Mrs. Pethwick-Lawrence; she and Elsie were allowed into the drawing room to listen, and Mrs. Pethwick-Lawrence ensured that all present would hear her by standing on a window seat. Helen remembered that she was "[a]n impassioned speaker in a big feathered hat,... [who] told about being forcibly fed with other suffragettes in prison in London."[4]

Helen Gregory MacGill undoubtedly provided her daughters with a strong exposure to feminism. In addition, the support they received from other members of the family also helped nurture their interest in women's rights. As Helen Jr. points out, with the support and sympathy expressed by her father and brothers for women's voice, it was only natural that she and Elsie would grow up and identify themselves as feminists in their own right.[5]

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[2] Hughes, "Wasp/Woman/Sociologist" 73.

[3] These contacts included Jane Addams, whom Helen met at a Women's International League for Peace and Freedom convention in Washington, Charlotte Perkins Stetson, Emmeline Pankjurst, and Mrs. Pethick-Lawrence, to name a few. Hughes, 73.

[4] Ibid., 73-74.
Mrs. Pethick-Lawrence was engaged in the militant British women's suffrage struggle which included tactics such as arson and eccentric public displays. MacGill, *My Mother the Judge,* 124.

[5] Helen Jr. felt her own feminism developed more slowly; while Elsie was already an active feminist in mid-twentieth century, she believed her feminist consciousness was not fully raised until she attended the Women's Caucus of the American Sociological

Helen Gregory MacGill died in February 1947. The relationship with her daughters had been a strong one; but her ties with Elsie had been particularly binding.[6] Not surprisingly, Elsie decided to celebrate her mother's accomplishments and those of her feminist sisters by writing a biography entitled: *My Mother the Judge: A Biography of Judge Helen Gregory MacGill.*[7] The catalyst to the project was described in an article on Elsie that appeared in *The American Soroptimist* in September 1966:[8]

> Some years ago Elsie and her husband [Bill Soulsby] arrived late at a party where a terrific discussion was going on as to whether woman's suffrage had accomplished anything at all. The men hotly contended that it had simply doubled the number of voters and accomplished nothing. Then Elsie waded in and confronted them with the Testator's Family Maintenance Act, The Equal Guardianship (of Children) Act, the Minimum Wage Act and others, all of them sponsored by women. As none of the men could refute her statements, the women won hands down.[9]

The incident convinced MacGill that further public education on women's achievements since the franchise was sorely needed, and provided her with enough incentive to begin

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Association in 1969 in San Francisco, "I discovered that my constitutional feminism, legacy of my grandmother and mother was not showing! I had to legitimate myself by becoming an organized feminist." Hughes, 73-74.

[6] She spent many of her last days Elsie.

[7] Elsie MacGill, *My Mother the Judge: A Biography of Judge Helen Gregory MacGill*, Reprint 1955. (Toronto: PMA, 1981).

[8] Mary Carol Wilson, "Skay-end-ey-rie" *The American Soroptimist* (September 1966), 14-15.
See also: NLAC MG31-K7 Volume 23 File 14: Soroptimist Clubs: Newsletters and By-Laws, 1953-1980.NLAC MG31-K7 Volume 21 File 11: Miscellaneous Speeches and Notes, n.d., 1960-1970. "Skay-end-ey-rie" by Mary Carol Wilson, 4.
Elsie MacGill was an active member of the Toronto Chapter of Soroptimist International. Soroptimist International is "a worldwide organization for women in management and professions, working through service projects to advance human rights and the status of women." As noted in the organization's history, "[t]he name Soroptimist was coined from the Latin *soror* meaning sister, and *optima* meaning best. Soroptimist is perhaps best interpreted as 'the best for women'. For more information see: http://www.soroptimistinternational.org/ ;"History" http://www.soroptimistinternationl.org/html/history.htm/, Accessed 3 December 2007.

[9] Specific dates for related to this quote are lacking, however MacGill worked on the biography from 1947 until its publication in 1955. Wilson, 15.

the book project. An unfortunate accident – breaking her good leg in 1954 – provided precious time to bring the work to fruition. The book was published by Ryerson Press in 1955.[10] MacGill reflected afterwards on what motivated her to write it:

> It was when studying and delving into the facts of her life that I became aware that her efforts seemed to follow a pattern, and to be a continuation of those of the women of her family before her, and also that universal manhood suffrage was comparative[ly] recent and the women's suffrage struggle, far from being the solitary struggle I had envisaged it, was simply a continuation of the general suffrage struggle. I wanted these ideas in the book.[11]

MacGill's thoughts provide insights into her own feminist "consciousness raising". Writing the book was a learning experience. It did more than just preserve Helen's memory, as it also helped Elsie shape her personal views as feminist activist. At the same time, MacGill's work provides evidence of her role as an amateur biographer and historian.[12] She was aware of the need to be 'objective' so that her account would be credible. As a result, she wrote in the third person and used Justice Manson's speech as a framework for her account. By fashioning her chronicle in this way, she hoped to escape from the sentimentality of which family-written biographies were often accused.[13]

> It occurred to me that use of the speech made by Mr Justice Manson at the time of the unveiling of the plaque in her honour [4 May 1947 at the University of

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[10] Precise information on MacGill's writing process is lacking. As Wilson relates, she collected information off and on as a hobby after her mother's death, intending to have someone else write it. Ultimately, it was her three and a half month stay in hospital which led to her writing of the biography.

[11] NLAC MG31-K7 Volume 16 File 13: Helen Gregory MacGill: Correspondence RE: My Mother the Judge, 1955-1957.

[12] Throughout her life MacGill would also promote the retention of women's documents and their proper placement in archives in order to ensure a legacy of women's history for generations to come.

[13] Justice Manson gave the eulogy at Helen Gregory MacGill's funeral. Elsie MacGill broke it apart and used the lines as headings for the sections of her mother's biography.

> British Columbia] would give the statements authenticity and would even take the curse off a daughter's publication....[14]

MacGill's work in this endeavour did not end when the first edition's publication run ceased in 1966. Determined to see that this chronicle was not lost, MacGill worked to produce a second edition.[15]

The Canadian Federation of Business and Professional Women's Clubs (CFBPWC)

MacGill's first major incursion in the women's movement occurred after the war, when she joined the Canadian Federation of Business and Professional Women's Clubs (CFBPWC) Toronto Club. Involvement in the organization ran in the family in a very significant way. Helen Gregory MacGill had been instrumental in founding a businesswoman's club in Vancouver, and she actively supported its growth into a national organization in 1930.[16] Elsie MacGill and her sister witnessed early meetings of the group, which met regularly at the family's cottage.[17] It is not surprising, then that Elsie as a business and professional woman, would be interested in joining.

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[14]NLAC MG31-K7 Volume 16 File 13: Helen Gregory MacGill: Correspondence RE: My Mother the Judge, 1955-1957.

[15] She suffered several setbacks, but with the support of Dr. Naomi Black, a Canadian professor of political science and a feminist, the book registered with another publisher. Elsie died before seeing the second edition. Elsie's husband, Bill Soulsby, and Black carried on the revisions, with Black writing the new introduction. The second edition was published in 1981. See contract and other supporting documents in: NLAC MG31-K7 Volume 16 File 14: Helen Gregory MacGill.

[16] MacGill, *My Mother the Judge,* 187-188.

[17] NLAC MG31-K7 Volume 2 File 13: CFBPW'C Speech by Dr. Helen Hughes – 1965.

Elsie MacGill actually joined the Vancouver branch of the CFBPWC before transferring her membership to Toronto, once it became her permanent home in 1943.[18] She quickly moved beyond the local branch; by 1951, she was serving on the Ontario body, first as Chairman of the Jury Study, a position she would hold for two years, and then as Chairman of the Penal Reform Committee, from 1954 to 1956.[19]

The Penal Reform for Women's Joint Committee (PRWJC) was established on 23 March 1953, when eighteen interested women's groups met to discuss the reforms required to improve the treatment of women in Canadian penitentiaries. One of the women present was Agnes Macphail, the first woman member of both the Canadian House of Commons and the Ontario Legislature, who also had extensive knowledge of the issue.[20] On 4 May 1953, the committee met and approved recommendations addressing probation, detention and rehabilitation. Overall, the recommendations were modest, as they called only for those services and facilities as already provided for Ontario male prisoners since 1927 under "The Ontario Plan" of the Department of Reform Institutions. They included a call for eleven women probation officers, a better

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[18] The exact date she joined and transferred is not contained within her files, and thus far has not been determined by the Vancouver or Toronto Clubs, however, her membership in Vancouver must have started when she was recovering from polio during the early 1930s. NLAC MG31-K7 Volume 16 File 3: Biographical Notes and Curriculum Vitae, 1967, 1979. An undated note in her file re: MacGill's status as a BPW Club member – appears to be a note of introduction.

[19] The CFBPWC is organized on multiple levels. There is the local level (i.e. Toronto), the provincial level (i.e. Ontario) the national level (i.e. Canada) and all of these are under the international umbrella of the International Business and Professional Women's Club. NLAC MG31-K7 Volume 16 File 3: Biographical Notes and Curriculum Vitae, 1967-1979.

[20] Elsie MacGill, "The Penal Reform for Women Joint Committee: "A Brief Summary of the Work of the Penal Reform for Women 1952-1953", 1. Agnes Macphail (1880-1954) was engaged in penal reform throughout her political life. For more information see: Terry Crowley, *Agnes MacPhail and the Politics of Equality*, (Toronto: James Lorimer & Company, Publishers, 1990).

reception centre, a more effective mechanism to classify prisoners at the Andrew Mercer Reformatory for Females, and enhanced rehabilitation support both during and after the terms were served.[21]

The PRWJC also actively promoted reform through public education. One method followed was the production and distribution of pamphlets informing the public about the PRWJC's agenda.[22] As we shall see, this would become one of MacGill's most common strategies in the pursuit of her own feminist agenda.

While still active at the provincial level, MacGill was building up her experience at the national level. As early as 1952, she began a four-year term as Chairman of the Survey and Research Committee of the CFBPWC.[23] Her responsibilities were divided into two parts: first, to act as the national historian of the federation; and, second, to work on any specific project assigned to her by the Board. In 1953, the Committee was instructed to conduct a survey on "The Work of Reformation among Female Offenders in Canada", to examine the situation of women prisoners at the provincial level and to consider if reform was occurring.[24]

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[21] MacGill, "The Penal Reform for Women Joint Committee", 1-2.
[22] For more information see: NLAC MG31-K7 Volume 22 File 12: Penal Reform: Reports, Speeches, Debates and Newsletters 1957-1978.
[23] MacGill would hold this position for four years, 1952 to 1956. In 1955 she was responsible for composing the First Authoritative List of Women in Public Life, which was subsequently published in the May-June 1955 edition of *The Business and Professional Woman*. Elizabeth Forbes, *With Enthusiasm and Faith: History of the Canadian Federation of Business and Professional Women's Clubs*, Book I, (Victoria: The Business and Professional Women's Clubs, 1974), 65.
[24] NLAC MG31-K7 Volume 1 File 3: CFBPWC Reports 1952-1954 (cont.) "Report of Survey and Research Chairman: Miss Elsie Gregory MacGill, 1952-1954. Interestingly, Lillian Gilbreth served a similar role in the American Business and Professional Women Clubs as National Research Chair. Jane Lancaster, *Making Time: Lillian Moller Gilbreth – A Life Beyond "Cheaper by the Dozen,"* (Boston: Northeastern University Press, 2004), 292.

MacGill's work at the provincial and national levels proved exemplary. The President of the Ontario clubs, Margery Pewtress, acknowledged MacGill's key contribution in her biannual report:

> This committee, under the chairmanship of Elsie Gregory MacGill, did a tremendous amount of research and the final recommendations, endorsed by all the organizations represented on the Committee had considerable impact on the Government Committee. In fact, the conviction has been expressed that under Miss MacGill's guidance and enthusiastic impetus, The Archambault Report may yet be implemented.[25]

At the time, the CFBPWC held conventions at the provincial and national levels. The national conventions were held bi-annually. The Biennial Convention of 1954 testifies to the wide range of activities which the CBPWC engaged in nationally, while highlighting the caliber of the women in its network.[26] The convention thus asked the

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[25] Despite the persistence of various organizations including the CFBPWC, the Archambault Report was never fully implemented. The Archambault Report, led by Justice Archambault, was the Royal Commission on Penitentiary Reform, and tabled in 1938. One of the key findings was that many prisoners were repeat offenders and that a penal reform board was necessary. "Through Adversity, 1920-1939," *Corrections Canada: An Interactive Timeline,* Correctional Service Canada, http://www.css-scc.gc.ca/history/1920/third_e.shtml Accessed 8 December 2007.
NLAC MG31-K7 Volume 1 File 4: CFBPWC Reports, 1954-1956. "The CFBPWC – Report of the Provincial President for Ontario – Mrs. Margery Pewtress, 1952-1954", 39, 42-45.

In 1960, her committee voted to disband, realizing that while it had had some effect in regards to penal reform, a stronger effect could be rendered with its disbanding and the individual organizations lobbying the their respective governments separately on a frequent basis. Afterwards, MacGill agreed to serve as chair of the PRWJC History Committee, to ensure that a final report was written, records were deposited in the proper archives, and any remaining money was properly distributed. See: MacGill, "The Penal Reform for Women Joint Committee PRJWC", 5-6 and NLAC MG31-K7 Volume 22 File 12: Penal Reform: Reports, Speeches, Debates and Newslettes 1957-1978. Letter to Mrs. W.R. Carruthers, President of Big Sisters Counselling Service from Elsie Gregory MacGill, 17 May 1966.

[26] Dr. Lillian M. Gilbreth, a noted American woman engineer, was invited to give a speech entitled "Women's Horizons Unlimited", at the closing banquet. Her speech had the same title as the theme of the convention. Forbes, 65. Note that the last time

federal government to ratify the UN Convention of the Political Rights of Women, and the UN Convention on Equal Pay. The CFBPWC Convention also agreed to lobby towards the implementation of equal pay for work of equal value in areas under federal jurisdiction, and the appointment of more women to the Senate and Civil Service Commission.[27]

The 1954 convention witnessed the first of MacGill's national addresses entitled, "A Blueprint for Madame Prime Minister". In it she submitted a plan for social reform in Canada, outlined through the use of a hypothetical woman prime minister.[28] The plan included changes to Canadian international relations, including ratification of UN Conventions, such as the UN Convention on the Political Rights of Women, increased size of the health and welfare department with a comprehensive national health

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MacGill and Gilbreth were featured at a Canadian conference was in 1949 at the EIC Convention. See Chapter 3.

[27] NLAC MG31-K7 Volume 1 File 4: CFBPWC Reports, 1954-1956. CFBPWC Montreal Reports 1954-56 – Report of the National President – Mrs. Hazel Laycock 1954-56. See also: NLAC MG31-K7 Volume 1 File 4: CFBPWC Reports, 1954-1956. CFBPWC Montreal Reports, "Report of Employment Conditions Committee" Miss Margaret P. Hyndman, Q.C. at the CFBPWC Convention Montreal, 1954-1956 and "Report RE: UN Convention of Political Rights" 63-69. NLAC MG31-K7 Volume 1 File 8: CFBPWC – Reports 1958-1960. CFBPWC Seventeenth Biennial Convention" Winnipeg, July 11-15, Reports 1958-1960, 64-69. The Convention on the Political Rights of Women was ratified by Canada on January 30th, 1957, and the ILO Convention on Equal Pay was note ratified until November 16th, 1972. http://untreaty.un.org/temp/WEBBACKUP_OLD/final/ts2/newfiles/part_boo/xvi_boo/xvi_1.html Accessed 7 December 2007.
See also: http://www.ilo.org/ilolex/cgi-lex/ratifce.pl?C100 Accessed 7 August 2007.
See also: BPW Canada – Index of Resolutions "Request Legislation 1954-21", 141. This resolution specifically requests equal pay for work of equal value. Moreover, it was sponsored by MacGill's home club the Toronto Business and Professional Women Club. The issue of equal pay for equal work was a major concern at the 1954 convention both provincially and federally, and followed up again at the 1956 convention. NLAC MG31-K7 Volume 1 File 4: CFBPWC Reports 1954-1956, Forbes 75-78, 136.

[28] NLAC MG31-K7 Volume 21 File 9: Miscellaneous Speeches by E.G. MacGill 1954-1975. Speech: "A Blueprint for Madame Prime Minister."

insurance, improvements in the Department of Labour to prevent mass unemployment, revision of the Federal Equal Pay act to include "sex" in the list of non-tolerated discriminations, changes to the Criminal Code, such as the closing of the Kingston's women's penitentiary, and a national Department of Education.

The speech also reviewed women's suffrage activities since the early 1900s, and then assessed how women had used the vote to sway politicians towards larger investments in Canadian social policy. MacGill then identified the key role of the CFBPWC in ensuring that the opportunities to effect change since the vote was granted:

> Our Federation petitioned for and supported anti-discriminatory legislation. In each province, our Clubs work with other women's organizations for a great variety of causes penal reform [sic], child welfare, part-time employment for women, employment for older workers. I mention these recent activities simply to show that the work started by the suffragists is still being carried on, and if anything, at an accelerated pace. In a singlemindedness that is awesome, this work has always [been] directed toward people, and has operated to humanize Canadian law.[29]

According to MacGill, the qualities of "humaneness, cooperation and determination" should be the basis of the "Blueprint for Madame Prime Minister". Since these reforms were especially needed in education and health care, MacGill called for a reform to the BNA Act that would eliminate federal-provincial conflicts in these critical fields.

When discussing the future, MacGill compared it to the horizon, in accordance with the Convention's theme,

> The theme of our Convention is Women – Horizons Unlimited. By analogy there are many horizons – horizons of opportunity, accomplishment, aspiration. Like the natural horizon, the limitation they place on us is only a psychological one, not a real one, and we are limited only to the extent that we recognize the limitation. If we stand still our horizon is static; if we advance it moves forward too; if we draw back it closes in on us. It is to the long view, the wide horizon of

[29] NLAC MG31-K7 Volume 21 File 9: Miscellaneous Speeches by E.G. MacGill 1954-1975. Speech: "A Blueprint for Madame Prime Minister."

> relatively few people that we of the human race owe everything that is worthwhile....[30]

In her view, the future of civilization would be determined by the personal horizons of women and men; those who refused to be limited by their horizons would assume increasing responsibilities in public life, and, in the end, personal fulfillment. Women, she insisted, should not be denied this opportunity:

> A public position is a stepping stone. It gives a chance to do a job of work and to fulfill the urge to accomplish. It provides a vantage point for demonstrating capacity for greater responsibility, and for obtaining that public recognition that is so essential for advancement in public life. I think it is important to realize that it is the position itself, the job, that builds up the individual in the public eye and wins that national recognition upon which depends the popular acceptance of the individual as a candidate for top office. No matter how able she is, a woman cannot be king-sized in a little job. The king size jobs go by appointment! It is because few women are appointed to kingsize jobs that few women are known the length and breadth of Canada, that few women have national reputations and are recognized as leadership material.[31]

In the 1950s MacGill increasingly spoke publicly on women's issues in Canada. In 1955, she spoke on penal reform at the Quota Club convention, drawing international attention to this topic.[32] Published in *The Quotarian*, her paper was entitled "Danger! Women Thinking". MacGill argued that the real danger was not that women were capable of thinking, but rather, that their views and ideas did not inform public policy. MacGill insisted that creative thought was a powerful weapon, which should be used by

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[30] Underlining is MacGill's. NLAC MG31-K7 Volume 21 File 9: Miscellaneous Speeches by E.G. MacGill 1954-1975. Speech: "A Blueprint for Madame Prime Minister."

[31] Ibid., 10.

[32] NLAC MG31-K7 Volume 15 File 9: Miscellaneous Correspondence: (1938-1980). The Quota Club International was founded in 1919 as the first women's service organization. It motto is "we share" and the name Quota represents that as the Latin translation means "a share of one part of a whole" For more information see: "History" http://www.quota.org/gtku/aq.hist.htm Accessed 3 December 2007.

women's organizations to effect change through innovative policies and public leadership.[33]

Provincial President of Ontario

In 1956, MacGill was elected president of the Ontario Business and Professional Women's Clubs for a two-year term.[34] She took this appointment extremely seriously and worked to ensure that the Ontario clubs worked effectively. Her 1957 report to the national federation demonstrated her work ethic and resolve. It detailed the progress of the Ontario clubs and submitted recommendations from them to reinvent the CFBPWC within Ontario and nationally.[35] These included strategies to improve equal pay campaigns, and a call for the nation-wide distribution within the CFBPWC of the first study by the Women's Bureau of the Department of Labour on "Women at Work in Canada".[36]

MacGill's report was a follow-up to her initial address at the 11th Convention of the Ontario Business and Professional Women's Clubs. In 1956, she chose "The Answer is

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[33] NLAC MG31-K7 Volume 21 File 6: Miscellaneous Notes and Memorandum, N.D., 1977. "Danger! Women Thinking" in *The Quotarian* October 1955, 4.

[34] In 1956 the CFBPWC also hosted the International Business and Professional Women's Congress in Montreal. This was the first time that the congress was held in North America. The national Biennial Convention of the CFBPWC was held immediately afterwards. Forbes, 65-66.

[35] NLAC MG31-K7 Volume 1 File 6: CFBPWC Reports – 1956-1957. "1957 Report"

[36] Ibid., 64.
See also: Canada. Women's Bureau. *Women at Work in Canada: A Fact Book on the Female Labour Force of Canada,* (Ottawa: Queen's Printer, 1957)
As Forbes notes the federal Women's Bureau was established in September 1954, after being promised by Labour Minister Milton Gregg in May 1953. It was directed by Miss Marion Royce and there was an extremely close liaison between the Bureau and the CFBPWC. The "Women at Work in Canada" document was essential in providing needed statistics and information about working women to the CFBPWC to aid their goal to advance the condition of working women in Canada. Forbes, 82-3. See also: Briggs, 111-114.

Woman Power", as the event's main theme. In her closing speech MacGill outlined the challenges ahead, including the shortage of creative ideas, the lack of trained personnel in technical, scientific and educational fields, and the absence of women administrators and executives. She pinpointed various issues related to women's paid work, such as how much they should invest into a career, and the extent to which their investment would foster their advancement.[37] Unfortunately, she noted, women's talents and abilities were still not being used to the fullest. She drew a plan of action for the Ontario Clubs, reminding them that, as the only women's organization largely focused on women's 'economic and gainful employment' they should actively promote women's talent for business, industry and the public service; promote the training of girls for careers; expose unfair and discriminatory practices in the workplace; support fellow club members in developing their own self-confidence; and encourage girls to look beyond a women's profession and consider careers in science, technology, math and engineering.[38]

In the meantime, MacGill actively worked with the Ontario clubs to create provincial districts, each with its own vice president on the provincial executive. She also oversaw the creation of two new committees to further enhance provincial activities, including a Clubs Promotion Committee, and a Public Relations and Publicity Committee.[39]

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[37] NLAC MG31-K7 Volume 8 File 21: Miscellaneous Reports, Resolutions and Correspondence n.d., 1956-1980. "The Answer is Woman Power."
[38] Ibid.
[39] This was achieved by restructuring the format established in 1955 in the 'Rules of Procedure' through the introduction of four Electoral Districts identified as "A", "B", "C", "D". MacGill had noted in her initial presidential address in 1956 that the need for a reform of this type had been identified as early as 1954 on account of the vastness of the province and the increasing number of clubs prohibiting adequate attention to all by the president. NLAC MG31-K7 Volume 8 File 21: Miscellaneous Reports, Resolutions

MacGill also worked on the revisions of the members' handbook of club protocol, and attended regional meetings, at the same time holding herself and the Ontario members accountable for their advocacy work.[40] Her own activities included extensive correspondence and memos and the delivery of powerful speeches on women's public role in society. Elsie remained very active at the provincial level after her mandate ended. In 1959, she accompanied the new president Nazla Dane and the Ontario delegates to expand on their submission of demands to Premier Frost, including equal pay for work of equal value, and the appointment of women members on the Anti-Discrimination Committee about to be created.[41]

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and Correspondence n.d., 1956-1980. "President's speech - Sixteenth Biennial Convention", 2.

[40] MacGill was realistic about her objectives. When working to revise and reprint the Ontario handbook for the clubs, it was deemed more advantageous to work on a handbook that would benefit all the clubs in Canada, thus the members of the revision team joined national members to work towards this end. NLAC MG31-K7 Volume 1 File 7: CFBPWC Reports – 1956-1958, 35.

[41] CFBPWC had a history of sending delegations to the Provincial Premiers and to the Prime Minister of Canada to present and follow-up on their resolutions passed at conventions. For instance a previous brief to the Ontario Premier in 1951 from the equal pay campaign committee of the Ontario BPW noted:

"It is our hope that the word "men" was used in its generic sense [regarding the Speech from the Throne]. Otherwise, we ask that, in legislation contemplated by your government, there be included a prohibition of discrimination on the grounds of sex, as well as race, colour or creed."

NLAC MG31-K7 Volume 18 File 35: Equal Pay for Equal Work: Briefs, Reports and Correspondence, 1948-1958.

NLAC MG31-K7 Volume 1 File 8: CFBPW'C – Reports 1958-1960. "Report of Provincial President for Ontario" Miss Nazla L. Dane, 1958-1960.

As early as 1951 the BPW of Ontario had been lobbying not just for equal pay for equal work, but for equal pay for work of equal value. NLAC MG31-K7 Volume 18 File 35: Equal Pay for Equal Work: Briefs, Reports and Correspondence, 1948-1958. Memorandum for the Premier of Ontario RE Equal Pay for Equal Work. 5 February 1951.

The Road to the National Presidency

In the late 1950s, MacGill was given additional experience at the national level and became intimately familiar with the inner workings of the federation. She was then appointed chair of the new committee established to review the existing national constitution and to submit the necessary recommendations to bring it up to date.[42] In March 1959, MacGill also attended what would be the first of her many meetings with the CFBPWC and the Prime Minister of Canada.[43] The purpose of this meeting with Prime Minister Diefenbaker was to further discuss the resolutions they had submitted to the government in brief form. Those pertaining to revisions of the Federal Income Tax Act were especially critical, including those in relation to married women's income. All this work constituted precious training that would benefit MacGill later on. Writing briefs required research and analytical skills, as well as knowledge of Canadian politics. Indeed, president Isabel Menzies acknowledged the excellence of her work at the Seventeenth Biennial Convention in July 1960.[44]

Elsie MacGill's involvement with the CFBPWC also included activities at the international level. In 1961, she took over from Senator Muriel McQueen Fergusson as the International Federation Committee Chair.[45] MacGill appreciated the importance of the international women's movement. She had lauded the adoption of the UN

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[42] Forbes, 69.
[43] As National President Elsie MacGill would head two delegations to present the July 1962 Convention resolutions to Canadian Prime Minister Diefenbaker in November 1962, and subsequently in July 1963 to Prime Minister Pearson on account of an election. NLAC MG31-K7 Volume 1 File 10: CFBPWC – Reports 1962-1963. Forbes, 93.
[44] NLAC MG31-K7 Volume 1 File 8: CFBPWC – Reports 1958-1960. CFBPWC Seventeenth Biennial Convention" Winnipeg, July 11-15, Reports 1958-1960, 1.
[45] As chair she served as a link between the CFBPWC and the International Business and Professional Women's, a federation of which the CFBPWC was a member.

Declaration of Human Rights as early as 1955.[46] As chair, she pressed the National Board of Directors to call for the increased presence of women, including Canadians in leadership roles in the UN.[47]

In July 1962, MacGill was elected national president of the CFBPWC. She quickly adapted to her new role and responsibilities. Immediately following the 1962 Convention, she led a Canadian delegation to the International Business and Professional Women's Congress in Oslo, Norway.[48] Upon her return to Canada, MacGill wasted no time in motivating the Federation into action. She challenged the membership to work to triple its size in the next five years to 25,000.[49] MacGill's engineering background most evidently shaped her presidency. Familiar with the changing nature of technology, she was eager to educate the clubs on technology's impact on society, especially in relation to automation, through her speeches, articles and internal memos. For instance, in one of her messages to the clubs in *The Business and Professional Woman* of 1962 she wrote:

> If scientists were to send a signal today from Earth to the star Arcturus, it would be 66 years before we would receive the return signal. Thus if, in the year 2028, our descendants are to pick up reflections from Arcturus or other stars or planets (to assist them in establishing communications between planets) it will only be because we sent those signals today.
>
> In our Clubs, too, what we do today determines drastically the position of our Federation in the years to come...[50]

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[46] NLAC MG31-K7 Volume 21 File 6: Miscellaneous Notes and Memorandum, N.D., 1977. "Danger! Women Thinking" in *The Quotarian*, October 1955, 4.
[47] NLAC MG31-K7 Volume 2 File 2: CFBPW'C Miscellaneous, n.d., 1955-63. CBPWC Report of the Survey & Research Chairman: Elsie Gregory MacGill, 1.
[48] NLAC MG31-K7 Volume 2 File 22: IFBPWC – Congress 1962 (OSLO), 6.
[49] Elsie MacGill, "President's Message" *The Business and Professional Woman* Volume XXVIII, No. 2 (September-October, 1962), 1.
[50] Elsie MacGill, "President's Message" *The Business and Professional Woman* Volume XXVIII, No. 2 (September-October, 1962), 1.

In 1963, during a cross-country tour, MacGill focused on the impending impact of automation on Canadian society, and more specifically on women. She identified that recent concepts such as "self-serve" and "do-it-yourself" had become commonplace, as well as the increased labour-saving technologies in the home which allowed women more freedom from household work.[51] She also pointed out that as industrialization continued, so would mechanization and further automation.[52] As a result, the need for trained, skilled, and professional workers would only continue to rise, and re-training would become a requirement throughout an individual's working life.[53] Work would also change in nature, as there would be fewer jobs requiring brute strength and more jobs requiring increased education. Thus, jobs formally labeled as "men's work" could change to "women's work".[54]

MacGill saw the changes in the home and industry as largely labour-saving and positive. Moreover, they could lead to a new conception of family life:

> Industrialization is based on technology, and it is the rise of technology that – for the first time in human history – is freeing humanity from want and grinding toil, and bringing closer the age-old dream of abundance and leisure for all.
>
> This is an awesome prospect which points to great changes in our daily life, the only life we know, or have ever heard of, is one in which most people face

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[51] NLAC MG31-K7 Volume 7 File 21: Speeches Given by E.G. MacGill to C.F.B.P.W.C., 1958-1964, 1975. "The Changing Patterns of Women's Employment", 2.
[52] NLAC MG31-K7 Volume 7 File 21: Speeches Given by E.G. MacGill to C.F.B.P.W.C., 1958-1964, 1975. "Spotlight on Women Who Work"; "Viewing Change as Opportunity", 1. See also: NLAC MG31-K7 Volume 1 File 10: CFBPW'C – Reports 1962-1963. "Report of Chairman of Employment Conditions" Una MacLean Evans.
[53] NLAC MG31-K7 Volume 7 File 21 Speeches Given by E.G. MacGill to C.F.B.P.W.C., 1958-1964, 1975. "But Who Will Take the Wheel – The Driver's Wheel", 1.
[54] NLAC MG31-K7 Volume 7 File 21 Speeches Given by E.G. MacGill to C.F.B.P.W.C., 1958-1964, 1975. "Changing Patterns of Women's Employment", 1.

> scarcity, and spend most of their lives working. So we would expect a society in which everyone enjoys abundance and leisure to be very different from any we know.[55]

However, she was realistic and noted that while the potential for positive change existed it was severely challenged by what John Kenneth Galbraith had coined "conventional wisdom" or, that is, traditional notions which are commonly accepted as true although they have been dismissed many times over. She thus advocated that the members should not subscribe to this "wisdom", or allow it to orient their decisions.[56] In her view, stereotypical and discriminatory views towards women in the workplace, including beliefs that women were not mechanically inclined and lacked mathematical and management abilities, were an impediment to social change:

> You can not [sic] have drastic economic changes [on account of technology] without a considerable degree of social change at the same time. Indeed, the economic change waits on the social change, not vice versa....
>
> What may be more difficult for us as Canadians to see is that social attitudes here must change before all-out industrialization becomes possible, and that actually Canada, too, has a "caste" system of a sort. Before our nation can marshall her full resources of ability and skill, Canadian traditional attitudes towards women must change, the present waste of womanpower must cease, the reservoir of knowledge, skill and ability in the female half of our population must be brought into full usefulness...[57]

MacGill reminded her audience that the Royal Commission on Government Organization (Glasco Commission) had also recognized the importance of eradicating these stereotypes in order to bring reforms in the workplace. In fact, one point the commission addressed was equal pay, a cause the CFBPWC had championed since its

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[55] NLAC MG31-K7 Volume 7 File 21: "Viewing Change as Opportunity", 2.
[56] At the same time she provides the caveat to women noting that while prejudice does exist, it does not necessarily exist in all fields and that they should not use it as an excuse in avoiding ownership for their own mistakes. NLAC MG31-K7 Volume 7 File 21: "Who Will Take the Driver's Wheel?", 3.
[57] NLAC MG31-K7 Volume 7 File 21: "Who Will Take the Driver's Wheel?", 6.

inception in 1930. MacGill also explained that job descriptions often discriminated against women, by including tasks that might be required for men, thus allowing the latter to receive a higher pay regardless of whether they actually performed these tasks or not. MacGill then asked:

> Yet does anyone suppose that the woman who is thus cheated in her pay check, or who is unfairly passed over when promotions or training opportunities are being considered will continue to put forward her best efforts in work, if it is true that today women are behaving more and more as only men were supposed to have not long ago. Perhaps it is the Canadian economy which is the greatest loser.[58]

MacGill then invited her colleagues to work towards the Federation's goals, which were to improve "the economic, employment and social conditions of women,"

> Action taken today by our Clubs can drastically improve the status of women in the immediate future. It is well within the power of our clubs now to alert the women and girls of its own community to the changing pattern of women's employment, and to the fresh opportunities opening now to those who will accept the new knowledge. This is the type of activity that validates the existence of the Club and makes good the Federation's claim to unique service. Our Federation is of a size and character to generate and sustain a successful chain reaction to revolutionize women's employment across Canada.[59]

To that end, club members had to focus their efforts on young girls and women's education, management training opportunities and re-training for women. In regards to girls' education, she argued the need for more flexible systems of higher education that allowed for the combination of marriage and the raising of a family.[60] The CFBPWC was already supporting some management-training opportunities; MacGill emphasized their importance including the TBPWC's Second Annual Conference on the Arts of

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[58] NLAC MG31-K7 Volume 7 File 21: "Spotlight on Women Who Work", 5.
[59] NLAC MG31-K7 Volume 7 File 21: "The Changing Patter of Women's Employment", 4.
[60] NLAC MG31-K7 Volume 7 File 21: "Viewing Change as Opportunity", 4.

Management, where she delivered a speech entitled "But Who Will Take the Wheel – The Driver's Wheel?"[61]

Ultimately, despite the challenges posed by technological change and social expectations, MacGill put her faith in the promise of technology and the potential for social reform to work towards an equitable and prosperous future, "It is only habit, custom and complacency that keep us chained to [outworn] ideas and outmoded institutions. [Once] we recognize the desirability of change we can readily find the way to accomplish it".[62]

MacGill presided over her last Biennial Convention in Ottawa, in July 1964.[63] She had high hopes for the Convention; her optimism was based on the recently compiled index of the Federation's resolutions since 1930. These gave reason for hope as they illustrated, "that set-backs are temporary, that gains come slowly but are cumulative and lasting, [and] that the results which flow from our efforts are seldom exactly as we

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[61] The Conference on the Arts of Management was organized by the Toronto Business and Professional Women's Clubs on an annual basis starting in 1962, to help women progress into management levels. Leona Kirkwood, *With a Sense of Purpose: History of the Toronto Business and Professional Women's Club, 1910-1970,* (Toronto: Toronto Business and Professional Women's Clubs, 1970), 29. In NLAC MG31-K7 Volume 9 File 2: T.B. & P.W.C.: Miscellaneous Memoranda, Annual Reports and Correspondence, 1968-1979.
NLAC MG31-K7 Volume 7 File 21: "But Who Will Take the Wheel? – The Driver's Wheel?" See also: NLAC MG31-K7 Volume 1 File 10: CFBPW'C – Reports 1962-1963. "Report of Chairman of Management Training Committee".

[62] NLAC MG31-K7 Volume 21 File 7: "Viewing Change as Opportunity", 5.
For an in depth study of mechanization and automation in the American context see Amy Sue Bix, *Inventing Ourselves Out of Jobs? America's Debate Over Technological Unemployment 1929-1981,* (Baltimore: The Johns Hopkins University Press, 2000).

[63] In 1963 MacGill also headed a delegation to present eight recommendations to the Royal Commission on Taxation (Carter Commission). The members of the delegation included Miss Charlotte VanDine, the Chair of the Committee on Legislation, and Miss Conmee, a chartered accountant. Forbes, 94. See also: "The 'New Look' Years 1960-67" *The Business and Professional Woman,* Special Centennial Issue, (July-August, 1967), 36-37.

planned them. Yet the responsibility to plan is ours." She thus challenged the members to seize every opportunity the convention had to offer and to "reach out and grow".[64]

The Ottawa Convention included Claire Kirkland-Casgrain and Judy LaMarsh as guest speakers. Both women spoke on the status of women in Canada; Kirkland-Casgrain looked specifically at Quebec in her speech entitled "Emancipation of Women More Particularly in Quebec", while LaMarsh focused on the national context. LaMarsh discussed the recent President's Commission on the Status of Women in the United States and suggested that a similar study would be useful in Canada.[65] As we shall see, the Canadian Government did appoint such a Commission in 1967, with MacGill as one of the Commissioners.

Finally, MacGill's presidency also provided a chance for her and her Canadian colleagues to interact with the United Nations (UN). In April 1964, she headed a Canadian delegation to Canberra, Australia for the International Federation of Business and Professional Women's board meeting.[66] In 1963, the UN General Assembly had adopted the Declaration on the Elimination of Discrimination Against Women (DEDAW) prepared by the UN Commission on the Status of Women.[67] The UN

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[64] Elsie MacGill, "A Challenge to the Soul, Miranda?" *The Business and Professional Woman,* Volume XXVIII, No. 12 (May-June, 1964), 2.

[65] NLAC MG31-K7 Volume 2 File 9: CFBPWC Speech by Claire Kirkland-Casgrain - 1964.
NLAC MG31-K7 Volume 2 File 10: CFBPWC Speech by Judy LaMarsh – 1964.

[66] NLAC MG31-K7 Volume 2 File 4: CFBPWC'C – Circulars 1956-1965: May 15, 1964 – CFBPWC Report on the 24th Meeting of the IFBPW Board of Directors April 1, 20-24, 1964 – Canberra, Australia, Emergency Resolutions submitted by U.N. Committee.

[67] As Devaki Jain, a noted academic, development economist and women's activist notes, "The declaration made the first attempt to define discrimination against women by referring to laws, customs, regulation, practices, and prejudices as being responsible for

General Assembly had asked the various non-governmental organizations to send input regarding the declaration by September 1964. On account of the International Federation's Consultative Status at the UN, the document was discussed in Canberra, and recommendations were then forwarded as requested.[68]

Past President of CFBPWC

From 1964 to 1966 MacGill held the position of Immediate Past President at the national level, and she continued her active work by serving as Chair of the Resolutions, By-laws and Regulations Committee and of the Committee for a CFBPWC Handbook.[69] Moreover, she continued to participate in delegations at the federal level.[70] In January 1965, she and her sister, Dr. Helen MacGill Hughes, spoke at the "Second Seminar of Occupation Perspectives," hosted by the Business and Professional Women's Club of Montreal. Dr. Hughes spoke on the topic of "Women and Authority", while MacGill

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denying and limiting women's equality of rights with men. It viewed discrimination as incompatible with human dignity and the welfare of society."
Devaki Jain, *Women, Development, and the UN: A Sixty-Year Quest for Equality and Justice, United Nations Intellectual History Project Series,* (Bloomington: Indiana University Press, 2005), 32, 46-47.

[68] One of the key recommendations made was that the UN establish annual meetings of the Commission on the Status of Women (CSW) so that important documents such as DEDAW could be properly discussed between women's non-governmental organizations and the UN. This resolution was prompted by the fact that the CSW did not meet in 1964. NLAC MG31-K7 Volume 2 File 4: CFBPWC'C – Circulars 1956-1965: May 15, 1964 – CFBPWC Report on the 24th Meeting of the IFBPW Board of Directors April 1, 20-24, 1964 – Canberra, Australia, Emergency Resolutions submitted by U.N. Committee.

[69] NLAC MG31-K7 Volume 16 File 3: Biographical Notes and Curriculum Vitae 1967-1979.

[70] MacGill accompanied the new president of the CFBPWC, Nazla Dane in a ten-member delegation to present the 1964 Convention resolutions to Prime Minister Pearson and his Cabinet. Forbes, 97.

summed up the proceedings of the event with a discussion on "Woman as Boss".[71] The sisters' shared interest in the women's movement was reflected most strongly when they discussed the promotion of women in society. Hughes noted that

> [I]f women are to rise from low status work, there must be first an attack upon convention. And then there must be the wisest possible sort of guidance for girls from infancy and kindergarten days, to show them what work there is in the world.[72]

Hughes further argued that real change required more than just increasing access to increased opportunities in the public sphere, it also meant reforming society at large through the acceptance of women's abilities in education and the workplace. These changes, in turn, would allow for easier access to whatever education or occupation desired. Both sisters captivated their audience. Mrs. Phyllis Hardy, the Co-ordinating Chairman of the event noted in her summary that MacGill was like a "minister in a pulpit – [as] she was holding forth and no one could gainsay her remarks."[73]

Conclusion

During the 1950s and 1960s, Elsie Gregory MacGill developed a strong profile as a feminist activist. Chronicling her mother's life probably served as a catalyst. By

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[71] NLAC MG31-K7 Volume 2 File 13: CFBPW'C Speech by Dr. Helen Hughes – 1965. NLAC MG31-K7 Volume 2, File 3: CFBPW'C – Correspondence, 1957, 1963-65. Summary of MTL Second Seminar of Occupations.

[72] Hughes' meaning of authority is defined within her speech, "As a sociologist sees authority it is an attribute of position in the community; it belongs with a certain status. Status and authority are universal.... In modern industrial society...we gain our status from the social CLASS to which we belong. Social class is not based simply on occupation, but one's occupation is probably the most decisive element in it." NLAC MG31-K7 Volume 2 File 13: CFBPW'C Speech by Dr. Helen Hughes – 1965, 1-2, 9.

[73] NLAC MG31-K7 Volume 2 File 3: CFBPW'C – Correspondence, 1957, 1963-65 – Summary of MTL Second Seminar of Occupations Perspectives, 3.

subsequently serving in the Canadian Federation of Business and Professional Women's Clubs as president at the provincial and national level, MacGill honed her public relations and speaking skills. Moreover, she developed key leadership abilities through her numerous submissions and publications to government at the provincial, national and international level. MacGill's focus as a feminist activist was to increase women's equal access to education and training to allow them to pursue the career of their choice. She also contended that advances brought about by technology and automation would improve the situation of women and benefit society as a whole since they would put an end to the waste of "womanpower" in Canada. MacGill's main concerns were, most evidently, those shared at the time by white, middle-class professional women who adhered to the basic principles of equal-rights or "liberal" feminism.

Chapter 5: Extending the Parameters of the Engineering Profession: 1960s and 1970s

Introduction

During the 1960s and 1970s, Elsie Gregory MacGill's involvement within the engineering profession grew and evolved, as well her belief in the need for interaction between science and society increased, and she publicly called for a better understanding between the two areas. MacGill's ideas about women in engineering matured during this period. As opposed to the 1930s when she believed that engineering was an inclusive profession, she acknowledged that there were indeed problems for women in the male-dominate area.[1] On account of this realization, she became a leader, role model, and a mentor for women engineers; she advocated change within the profession to increase the numbers and improve the situation of women in engineering. Meanwhile, MacGill maintained a high level of professional service which was acknowledged by her peers through several awards and tributes.

Bridging Science and Society

In the 1960s and 1970s MacGill continued to publicly promote the close connections between science and society.[2] In 1960, MacGill wrote a letter to *The Financial Post,*

[1] For additional context see: Pamela E. Mack, "What Difference Has Feminism Made to Engineering in the Twentieth Century?" in *Feminism in Twentieth-Century Science, Technology, and Medicine,* eds. Angela N.H. Creagor et. al., (Chicago: University of Chicago Press, 2001), 158.

[2] See chapter three, "Engineering Consultant".

regarding C.P. Snow's seminal work *The Two Cultures and the Scientific Revolution.*[3] MacGill's interest in Snow is not surprising as he lamented the divide between scientists and humanists. Such a polarization concerned him deeply, since it represented a great loss to society as a whole.[4]

In MacGill's five-page letter, she outlined her ideas for the bridging between the worlds of science and technology and society at large, in which she argued that scientists and engineers needed to have more impact on society:

> It is interesting to relate Snow's ideas to the Canadian scene. Probably it is fair to say that in Canada the humanist culture dominates education, public affairs and government, and decides policy on the basis of its own lopsided view and with some lack of objectivity and humaneness. (Witness our slow, uncertain steps in penal reform; the lack of Canadian public response to World Refugee Year; the admission of so few (100 to 200) refugee families with a member suffering from TB; the continuing smallness of Canada's contribution to the Columbo Plan [sic]). Probably, too, it is fair to say that in Canada the scientific culture acquiesces in this, and assumes little responsibility for education, public affairs and government (Witness the few scientists and engineers in government an public life). Perhaps a better balance would improve things.[5]

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[3] C.P. (Charles Percy) Snow was an English physicist and novelist who held a wide variety of positions in the government of the United Kingdom.
C.P. Snow, *The Two Cultures: And a Second Look – An Expanded Version,* Reprint 1959, (Cambridge University Press, 1969). NLAC MG31-K7 Volume 21 File 5: Miscellaneous Correspondence 1960-1978. MacGill's letter to the editor of *The Financial Post* – 12 April 1960.

[4] "The non-scientists have a rooted impression that the scientists are shallowly optimistic, unaware of man's condition. On the other hand, the scientists believe that the literary intellectuals are totally lacking in foresight, peculiarly unconcerned with their brother man, in a deep sense anti-intellectual, anxious to restrict both art and thought to the existential moment."
Snow, 5, 11-16.

[5] NLAC MG31-K7 Volume 21 File 5: Miscellaneous Correspondence, 1960-1978. MacGill's letter to the editor of *The Financial Post*, 12 April 1960.
The Colombo Plan was a plan between the Commonwealth foreign ministers which took place in Colombo during January 1950. It was to provide co-operative economic development for the South and Southeast Asia. For more information on the Colombo Plan see: Denis Stairs, "Colombo Plan", *The Canadian Encyclopedia Historica,* http://www.thecanadianencyclopedia.com/index.cfm?PgNm=TCE&Params=A1ARTA0001771

Like Snow, MacGill saw the danger of polarization between science and society.[6] She believed that knowledge of science was imperative in order to understand its impact on society and to achieve a better balance in public policy.

MacGill's participation within the Association of Consulting Engineers of Canada (ACEC) increased throughout the 1960s and 1970s. Convinced of the need for engineers to reach outside of the profession, a sentiment shared by the ACEC at the time, MacGill seized opportunities to build bridges between the world of engineering and the general public through the ACEC. In 1964, for example, she proposed ideas for the organization's contribution to an exhibit on engineering at the International and Universal Exposition of 1967 (EXPO '67). MacGill considered the evolving nature of technology and engineering, while stressing the importance of being relevant. As a result, she suggested the organization promote the effective use of digital computers in engineering work, "[t]o make it interesting to engineers in different fields a variety of problems might be programmed, each at designated hours, to show useful applications of the computer to designs, construction, industry and research".[7] MacGill felt that such a display would not only be "unusual, timely, [and] of intense interest to all engineers, contractors, architects, [and] technicians" but, just as important, it would be an essential

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Accessed 12 December 2007.

[6] NLAC MG31-K7 Volume 21 File 5: Miscellaneous Correspondence, 1960-1978. MacGill's letter to the editor of *The Financial Post*, 12 April 1960.

[7] NLAC MG31-K7 Volume 17 File 13: Association of Consulting Engineers: Reports and Correspondence, 1949, 1964-1975. Letter to Mr. John Brett, ACEC Committee on EXPO '67, 12 December 1964.

means of promoting Canadian engineering to the wide cross-section of society that would visit EXPO '67.[8]

Within the Engineering Institute of Canada (EIC), MacGill became a leader in its new Technology & Society Section. On 19 November 1973, she chaired the first meeting of this section. She observed that it was "being set up as a generalist section to promote among engineers discussions of the policies and philosophies, rather than the technicalities, or subjects of broad general interest", and a new subject would be discussed at each meeting.[9]

It was through her involvement with the Technology & Society Section that MacGill became publicly interested in building codes. She thus later agreed to sit on the provincial Building and Materials Evaluation Committee (BMEC).[10] In December 1975 Ontario Premier, William G. Davis, wrote MacGill to congratulate and thank her for her involvement.[11] MacGill's selection as a member was not surprising. At this point, she

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[8] NLAC MG31-K7 Volume 17 File 13: Association of Consulting Engineers: Reports and Correspondence, 1949, 1964-1975. Letter to Mr. John Brett, ACEC Committee on EXPO '67, 12 December 1964. For more information on EXPO '67 see: *EXPO 67 Information Manual – Universal and International Exhibition of 1967, Montreal, April 28-October 27,* (Montreal: Information Services EXPO 67, 1967); *EXPO 67 Official Guide,* (Toronto: Maclean-Hunter Publishing Company Limited, 1967).

[9] NLAC MG31-K7 Volume 11 File 8: Building Materials Evaluation Commission: Correspondence, Minutes and Background Materials, 1973-1976. Meeting – Science & Technology Section of Toronto Branch of E.I.C., 19 November 1973.

[10] The Building Code Branch Act, 1974, Ontario Reg. 925/75 established the Ontario Building Code and subsequently the Building Code Commission and Building Materials Evaluation Committee. For more information see: NLAC MG31-K7 Volume 11 File 8: Building Material Evaluation Commission: Correspondence, Minutes and Background Materials, 1973-1976.
"1975-2006 Ontario Building Code Amendment History", http://www.obc/mah.gov.on.ca/Page106.aspx Accessed 5 February 2008.

[11] NLAC MG31-K7 Volume 11 File 8: Building Materials Evaluation Commission: Correspondence, Minutes and Background Materials, 1973-1976. Letter to MacGill from Premier William G. Davis – 18 December 1975.

had already sat on various commissions and committees. Her experience and contacts as an engineer would be useful to the BMEC, which needed to connect with organizations such as the National Research Council, the Canadian Underwriters Association, and the Canadian Standards Association, while pursuing research pertaining to the received applications.[12]

In the late 1970s the public demonstrated an increasing desire for more information on building codes. MacGill's participation on the BMEC allowed her to share her expertise with the public and shape policy.[13] Indeed, the importance of her contributions was recognized in this specific area in 1980, when she was appointed the new Chairman of the BMEC.[14]

Support for Women in Engineering

As a woman engineer, Elsie Gregory MacGill stood out in this highly male-dominated profession. In 1967, she argued that more women were needed in science and engineering in *The Business and Professional Woman.* In her article she espoused her belief that increasing the numbers of women would lead to increased balance in the scientific professions, "[w]hat is needed to stabilize the position of women in science

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[12] NLAC MG31-K7 Volume 11 File 8: Building Materials Evaluation Commission: Correspondence, Minutes and Background Materials, 1973-1976. BMEC – First Meeting – Wednesday, 18 February 1976 – Appendix A, 3.

[13] In the second edition of newsletter on building code regulations stated that the first edition's 13,000 copies ran out and a further 1,000 copies were also quickly depleted upon printing. NLAC MG31-K7 Volume 11 File 10: Building Materials Evaluation Commission: Minutes, Reports, Regulations and Rulings, 1976-1980, No. 2 Ministry of Consumer and Commercial Relations Ontario Building Code Newsletter, May 1977.

[14] NLAC MG31-K7 Volume 11 File 12: Building Materials Evaluation Commission: Minutes, Reports, Regulations and Rulings, 1976-1980. BMEC Minutes – Twenty-Seventh Meeting, March 1980.

and engineering in Canada, is numbers—many, many more women to fill up the ranks of scientists and engineers".[15] Later, in 1972, more than forty-five years since her graduation from the University of Toronto in 1927, she took it upon herself to compile a list of women engineers registered with the Association of Professional Engineers of Ontario (APEO). Her efforts revealed that there were 72 women including herself out of 31,000 registered members.[16]

These numbers help account for many of MacGill's actions during this period.[17] She was determined to increase the number of women in engineering and promote their participation in the profession. Through her continued involvement in the EIC, MacGill assumed an advocacy role with respect to women engineers. She thus began the practice of welcoming new women student engineers to the University of Toronto. For example, on 19 January 1967, the Toronto Branch of EIC sent letters to Miss Platt and Miss J.I. Von Mehlem. Both women were invited to the branch's Annual Meeting and Dinner on 2 February 1967. The women were informed that MacGill and other practicing women engineers in Toronto would meet with them and discuss their future prospects. That MacGill was the only woman engineer mentioned by name speaks to her prominence within the organization and as a woman engineer. The students were also informed that the guest speaker would be Dr. Ormond Soldandt, the Chancellor of the University of

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[15] Elsie MacGill, "Opportunities for Women Scientists and Engineers," *The Business and Professional Women, Special Centennial Edition,* Volume XXX, No. 7 (July-August, 1967), 21-22.

[16] NLAC MG31-K7 Volume 23 File 10: Society of Women Engineers: Correspondence and Newsletters, 1952-1978.

[17] In comparison in the United States between 1968 and 1972 there was increasing public discussion on fairness in science and engineering. Moreover, in 1972 the Equal Employment Opportunity Act and Title IX extended the Equal Pay Act to higher education. For more information see: Rossiter, *Women Scientists in America: Before Affirmative Action, 1940-1972,* 361-382; Mack 156-7.

Toronto and Chairman of the Science Council of Canada, which would be the topic of his address.[18] These actions provide evidence of MacGill's appreciation of the importance of mentoring as a strategy to maintain women in engineering.

Within the Canadian Federation of Business and Professional Women's Clubs, MacGill sought to assist aspiring women engineers financially. While she acknowledged that part of the means to rectifying the problem involved the counseling of young women regarding these professions and removing the sex-typing which dictated certain professions more suitable for women or men, she also recognized the financial barriers many faced.[19]

In 1968, she successfully proposed to amend an existing bursary in her name, through the Toronto Business and Professional Women's Clubs (TBPWC), to help women entering at the University of Toronto in engineering and science. MacGill wanted to ensure that the recipient would have the financial resources to pursue her studies and thus proposed that the student be awarded the amount of $750.00 for three academic years.[20]

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[18] NLAC MG31-K7 Volume 15 File 4: Misc. Notes. Letter to Miss Platt, 19 January 1967. NLAC MG31-K7 Volume 15: File 6: Misc. Notes. Letter to Miss Von Mehlem, 19 January 1967.

"Dr. Soldandt discussed Science Policy in Canada. He said science and research were not concerns of politicians and businessmen until the great technological advances of World War II. Now scientific research and developments have become important elements in economic growth and vital tools to solve social problems. To do these things it must be a part of national policy".
NLAC MG31-K7 Volume 18 File 31: Engineering Institute of Canada: Annual Reports and Miscellaneous, 1959-1979, EIC Annual Report – Toronto Branch – 1967.

[19] NLAC MG31-K7 Volume 9 File 1: T.B. + P.W.C.: Miscellaneous Memoranda and Resolutions, 1968-1979. Letter to Esther Luuney, Chairman Bursary Committee from MacGill, Subject: Bursaries of the Club, RE: Elsie Gregory MacGill Bursary.

[20] Ibid.

MacGill struggled as well to dispel prevailing assumptions about women in engineering. In 1970, she took a public stand on behalf of women engineers on account of an article published by University of Toronto professor of engineering, Dr. F.P.J. Rimrott, in the *Canadian Aeronautics and Space Journal.* Rimrott called for the creation of an education program to train women as "engineering aides". He argued that,

> A serious lack of adequately trained women in engineering offices on one hand and a surfeit of gifted young women in search of acceptable professional careers on the other call for the introduction of a degree course for Engineering Aides at universities, a step which would benefit young women, the engineering profession and the national economy in general.

He clung to several stereotypes concerning women's interests and abilities in engineering,

> If women are to participate more actively in the shaping of our future, those areas within the wide spectrum of engineering must be found and singled out which appeal to women and where they stand a good chance of competing successfully with men. Engineering means primarily design and synthesis, areas which are presumably the realm of men. Let us not argue this point here. But there are other aspects of engineering, such as analysis, experimentation, communication and documentation, phases of work where women are known to find [appealing assignments].
>
> Women favour jobs that do not involve certain duties of which some are, unfortunately, characteristic of engineering, such as design, risk projects, travel, field or shop work, physically and mentally demanding tasks, supervisory functions and major responsibilities.[21]

NLAC MG31-K7 Volume 9 File 2: T.B. & P.W.C. Miscellaneous Memoranda and Correspondence, 1968-1979. Leona Kirkwood, *With a Sense of Purpose: History of the Toronto Business and Professional Women's Clubs, 1910-1970.*

[21] Rimrott's paper summary: "Women in Engineering" by F.P.J. Rimrott – University of Toronto, Reprinted in Canada from *Canadian Aeronautics and Space Journal* Vol. 16 No. 6, June 1970.

Upon reading the article, MacGill first thought that it was a spoof.[22] She then realized that she needed to respond by sending a letter to the journal. She clearly condemned the sex-typing of occupations:

> I agree that in the "team" concept of today's activities there is ample room for talents other than the creative ones of the professional engineer – but don't let's single [out] our women as special candidates for the supportive role of engineering aide. To subject a new occupation to traditional sex-typing would, in my mind, be a retrograde step indeed.[23]

Furthermore, she pointed out that the existing stereotypes were products of culture and tradition, not biology:

> We are all aware that differences in the educational motivation of girls and boys are more likely to be rooted in our culture and in their upbringing than in their nature or biological characteristics. In the past our society typed certain occupations as being more appropriate to one sex than the other, and in many fields this tradition lingers on despite economic and technological changes. Consequently, the selection of an occupation today often continues to be more a matter of what the individual has learned to consider appropriate than of what the individual would really prefer to do. This may explain why fewer men than women enter nursing, and why fewer women than men enter engineering.[24]

She thus urged engineers to work to ameliorate the situation, and not contribute to the retention of sex-typed beliefs: "To my mind we in the engineering profession would serve Canada better by bending our energies toward reducing rather than augmenting sex-typing in our field".[25] MacGill's concerns were well founded; female engineering aides had been trained in the United States during the Second World War. These were subordinate and temporary positions which offered women little managerial

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[22] NLAC MG31-K7 Volume 24 File 13: Women Engineers: Miscellaneous Notes and Publications, n.d., 1971-1980. Notes for MacGill's Response, February 1971.
[23] NLAC MG31-K7 Volume 17 File 13: Association of Consulting Engineers: Reports and Correspondence, 1949, 1964-1975. Letter to Mr. Luttman of CASI Journal.
[24] Ibid.
[25] Ibid.

opportunities. In fact, once the war ended, these "aides" were for the most part let go, with the men returning to their former employment.[26]

In his response to MacGill, Luttman, the journal's editor, indicated that he had received other letters and that the journal wanted to publish them all; indeed, the article had provoked a heated controversy, one that had not been addressed in the recent past.[27] As a result, The American Society of Mechanical Engineers decided to stage a public debate on the issue. Ironically, the society held the debate on "Women in Engineering" on 18 March 1971, at its dinner meeting and Ladies Night.[28] Moderated by Richard J. Needham of the *Globe & Mail*, it included both MacGill and Dr. Rimrott. To add balance to the discussion the panel also included Miss Beryl Lake – Head of Guidance for William Lyon Mackenzie Collegiate Institute, and Dr. P.A. Lapp, author of "Ring of Iron", a Report on Engineering Education in Ontario.

In preparation for the debate MacGill wrote detailed notes on the issue. She planned to expose glaring concerns, but noted: "I can not look at this occasion as a confrontation, or a chance to win a black belt for women in engineering." She wrote that the article exposed deeper societal problems: "Traditional attitudes about the kind of work that women should do, or can do, restricts their occupational alternatives. These attitudes affect not only the expectations of girls & hence their training...but also the kind of

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[26] Ruth Oldenziel, "Multiple-Entry Visas: Gender and Engineering in the US, 1870-1945" in *Crossing Boundaries, Building Bridges, Comparing the History of Women Engineers 1870s-1990s*, eds. Annie Canel et. al., (Amsterdam: Harwood Academic Publishers), 25-30. See also: Amy Bix, "From "Engineeresses" to "Girl Engineers" to "Good Engineers": A History of Women's U.S. Engineering Education", *NWSA Journa,*. 16(1) (Spring 2004), 27-49.

[27] NLAC MG31-K7 Volume 17 File 13: Association of Consulting Engineers: Reports and Correspondence, 1949, 1964-1975. Letter from Mr. Luttman to MacGill, 1970

[28] NLAC MG31-K7 Volume 24 File13: Women Engineers: Miscellaneous Notes and Publications, n.d., 1971-1980.

employment that is open to women." Indeed, she reflected that society still "persists in regarding the role of women as secondary & supportive, to that of men..." which in turn, served to discourage women from pursuing the path to professional engineering.[29]

MacGill also tried to understand the source of Rimrott's arguments. She wondered if his academic position was at play: "May be [sic] the difference in Prof Rimrotts [sic] point of view & mine is that he is in academic life and work while I am in practicing engineering, design and construction, theory vs practice." At the same time, MacGill recalled that she did not find academia overtly discriminatory when she was a student. In the end, when the debate was held, MacGill elaborated on her belief that sex-typing was embedded in societal attitudes and beliefs. Ultimately, she argued,

> The traditional attitudes about the kind of work for women not only restricts their occupational choices, but it influences their expectations and hence the [kind] of training they look for. Where a job is sex-typed for men, the girl who is interested in that kind of work, is often discouraged from entering the field by stories told her of the difficulties she will have getting a job, and the kind of ridicule she has to put up with.[30]

MacGill pressed universities and colleges, as well as the Department of Manpower, to target those companies whose job descriptions were sex-typed either for women or men. She also strongly urged the engineering profession to offer support to women colleagues, especially when they needed to spend time away from the profession on account of family responsibilities.[31] MacGill's comments were well received by the audience and by the American Society of Mechanical Engineers. The Chairman of the Ontario Section commended her for her participation:

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[29] NLAC MG31-K7 Volume 24 File 13: Women Engineers: Miscellaneous Notes and Publications, n.d., 1971-1980 – MacGill's February 1971 notes.
[30] Ibid.
[31] Ibid.

> It takes courage to voice comments in public, especially on this subject which now has considerable emotional content. Judging by the response from the floor, I am certain that the panel stimulated those attending to think more deeply about the subject. Hopefully, this increased awareness will benefit both women and engineering.[32]

In 1975, the *Engineering Journal* published a Special Section on "Women in engineering" which highlighted women in the profession. MacGill published an article entitled "Women engineers meet a 'corset of Victorian prejudice'". She fully acknowledged that women engineers faced specific challenges,

> We hear the phrase "Exceptional women who have made it in a man's world". Well, there are no exceptional women and no exceptional men either. The person referred to is a normal woman or man with more degrees of freedom than most normal people have. Boil down all the discussions and I think this is the essence of the matter. It can be taken as the answer not only to "what do women want?", but to "what do women need?" In all aspects of life, they need greater degrees of freedom of choice, and greater degrees of freedom of action.
>
> [Women] ... do meet handicaps in their professional development that male engineers do not. These hinder them in their career, prevent them from making their full contribution to their profession and damage, not only them, but the whole profession by diluting its quality and its worth and value to Canada.[33]

MacGill admitted that she, too, had been the victim of prejudice, which she described as "managerial misconceptions and hang-ups that men don't [have] – a corset of Victorian prejudice into which the women, but not the men, are squeezed."[34]

In MacGill's view, some of the key obstacles women faced in the engineering profession included an assumption that women were unable to handle the extremes, such as temperature, of the various environments engineers worked in, the direct affront of being asked "You're a what?" upon applying for work as an engineer, and the reality of

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[32] NLAC MG31-K7 Volume 24 File 13: Women Engineers: Miscellaneous Notes and Publications, n.d., 1971-1980 – letter to MacGill from J.N Turnbull 20 April 1971.
[33] Elsie MacGill, "Women engineers meet a 'corset of Victorian prejudice'" in *Engineering Journal* (November/December, 1975), 12-13.
[34] Ibid.

women not being promoted vertically, but being shuffled horizontally, and thus barred from advancement. MacGill offered three solutions. First, she called on her colleagues to genuinely believe women could succeed in an engineering career; secondly, she asked them to have faith in women's abilities; and thirdly, she asked for the "elimination of the hiring and promotion practices that block [women's] careers". [35]

Interestingly MacGill took offense to the biographical note that accompanied her article which stated:

> Elsie Gregory MacGill is one of the pioneers of women's entry into the engineering profession. *Though she is now 70 years old and uses a wheel chair* she runs her own consulting practice in Toronto, *and speaks to many groups about women's rights, women engineers' rights in particular....*[36]

MacGill firmly crossed out the contentious sections in her copy of the article. She insisted on being treated just like her male colleagues in any publication, without any mention of her age, disability or involvement in non-engineering associations.[37] Her reaction provides evidence of the tensions within which she was living, as an engineer and a feminist, and her attempts to reconcile the resulting discords.

By the 1970s, some Canadian women engineers decided to form their own organization. On account of the few women practicing engineering in Canada, a national Canadian organization was needed to increase networking and support amongst women professionals and to encourage other women to engage in engineering. Such an organization could also serve as a place for women to seek mentors and role models, such as Elsie MacGill.

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[35] Elsie MacGill, "Women engineers meet a "corset of Victorian prejudice"", 12-13.
[36] Sections MacGill crossed out are in italics. Ibid.
[37] NLAC MG31-K7 Volume 17 File 13: Association of Consulting Engineers: Reports and Correspondence, 1949, 1964-1975. MacGill's letter to Suzanne Hughes, Assistant Editor of The Canadian Consulting Engineer, 22 January1974.

The new organization, known as Women in Science and Engineering (WISE),[38] was originally set up by ten women engineers at Ontario Hydro, who looked to SWE as their model. The president, Claudette Lassonde, wrote to MacGill on 19 February 1979 and outlined the goals and needs of the organization:

> We believe that such an organization can encourage young women to go into these fields and also increase our self-confidence in trying to achieve both at the educational level and in the industry. We also hope that we will be able to raise the awareness of the Canadian private industry to the presence of very qualified engineers who happen to be women. But we are a very small group, having only approximately 45 members. We need a lot of moral support and some role models to look up to.[39]

Lassonde reminded MacGill that she was "the Number One Canadian woman engineer to look up to," and hoped that she would consider coming to speak with them about her experiences and also offer advice to the group. MacGill responded positively, and arranged to speak to the group for about an hour and a half on 23 April 1979.[40] The need for WISE was proven through its expansion, including local chapters in Ottawa, Sarnia, Kingston, Newfoundland and New Brunswick. It also attracted some members internationally. In addition to chapters reserved for professional women, others were set up at universities, specifically for women pursing studies in science and engineering.[41]

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[38] The organization's goals were "to encourage women to seek higher education and achievements in science and engineering and to assist women entering science and engineering professions." "Spotlight On Women in Science and Engineering (WISE)" Reprinted from *The Link*, February/March 1999, 2. Permission PEO, http://wise_professional.homestead.com/files/Wise_in_spotlight.txt Accessed 26 August 2007.

[39] NLAC MG31-K7 Volume 24 File 16: Women in Science and Engineering (WISE): Newsletters, 1978-1980. Letter to MacGill from Claudette Lassonde, President of WISE – 19 February 1979.

[40] Ibid.

[41] "Spotlight on Women in Science and Engineering (WISE)"

Recognition for Public Service

During the 1970s, Elsie Gregory MacGill received several awards and acknowledgements for her dedication to her profession. In 1973, she was honoured by her *alma mater*, the University of Toronto, with an honorary Doctor of Law degree. The award was conferred during the centenary year of the Faculty of Applied Science and Engineering.[42] MacGill wrote immediately to her family after receiving the good news. She referred to the page in *My Mother the Judge*, regarding Helen G. MacGill's letter announcing her own selection for a Doctor of Laws, honoris causa in 1938. Elsie MacGill then went on to announce her own pending degree, noting, "[a]fter long (one minute) serious consideration, I have decided to accept".[43] Professor, Margaret G. Bassett, of the Department of Electrical Engineering, prepared and read the citation. MacGill wrote to Bassett: "I was very pleased and proud to be presented by a female member of the Faculty, and one in the Department in which I first graduated, although aeronautical engineering has always been my field of practice".[44] Later, MacGill was awarded three more honorary doctorates, including one from the University of Windsor in 1976, and two more from Queen's University and York University in 1977. In 1980,

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[42] NLAC MG31-K7 Volume 19 File 22: Honorary Degrees: University of Toronto, 1973. Letter from President John Evans University of Toronto to MacGill 15 February 1973.

[43] My Own Dear Children

All hold your breaths!' You are going to have another Doctor in the family! Not just one of those old Ph.D's! Far from it! but a genuine honest-to goodness LL.d. On Friday [18 February 1938] I received a letter....

NLAC MG31-K7 Volume 19 File 22: Honorary Degrees: University of Toronto, 1973. 19 February 1973 – MacGill's letter to family.

[44] NLAC MG31-K7 Volume 19 File 22: Honorary Degrees: University of Toronto, 1973. Letter to Dr. M.G. Bassett from MacGill 30 June 1973.

MacGill received her final honour at the University of Toronto when she was inducted into the Hall of Distinction.[45]

MacGill was also honoured by her peers in professional organizations. In 1972, she was elected Fellow of the EIC.[46] In 1973, the EIC further honoured her with the Julian C. Smith Award "for achievement and development of Canada".[47] In this tribute W.L. Hutchinson of the EIC paid special attention to her work at EIC:

> During her career, she has been active in many organizations, both professional and social, not only in Canada but abroad as well. And being active to Dr. MacGill means contributing to the utmost as those of you who have worked with her in the E.I.C. will know where her efforts on the Branch, Regional and National levels have reacted greatly to the benefit of this Institute and the Profession in Canada.[48]

In 1976, MacGill was unanimously elected as Honourary Member of the Board of Directors of the Association of Consulting Engineers of Canada (ACEC). The presentation took place during the International Congress & Annual Meeting of the International Federation of Consulting Engineers (FIDIC), and of the Association of

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[45] NLAC MG31-K7 Volume 19 File 22: Honorary Degrees: University of Toronto, 1973. Program listing MacGill's induction.

[46] A letter from the General Manager Byron T. Kerr stated that,

"By electing you to the grade of Fellow, the Institute wishes to give due recognition to your excellence in engineering and your contribution to society in general". NLAC MG31-K7 Volume 18 File 31: Engineering Institute of Canada: Annual Reports and Miscellaneous 1959-1979. Letter from General Manager Byron T. Kerr of the EIC 10 August 1972.

[47] NLAC MG31-K7 Volume 15 File 8: Awards and Honours: Press Clippings and Correspondence, 1970-1979. Letter to MacGill announcing her award of the Julian C. Smith Medal, 27 August 1973.

[48] NLAC MG31-K7 Volume 15 File 8: Awards and Honours: Press Clippings and Correspondence, 1970-1979. Elsie Gregory MacGill – Citation, Julian C. Smith Medal, The Engineering Institute of Canada, Montreal, 3 October 1973, Presented by W.L. Hutchinson.

Consulting Engineers of Canada.[49] Finally, in1979 MacGill was awarded the Association of Professional Engineers of Ontario's (APEO) highest honour, the APEO Gold Medal, on account of her extensive service to professional societies, other committees and her service to her country in peace and war.[50] The General Secretary of the APEO, L. Patrick Ryan, underlined her achievements as an aeronautical engineer and her pioneering role as a woman engineer:

> [MacGill had] gained a distinguished international reputation as an aeronautical engineer and, as the first female professional engineer to be registered in Ontario, [had] earned an honoured place in the history of engineering in this province.[51]

In her acceptance speech, entitled "Cracks in Aircraft", MacGill noted that the honour

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[49] James W. MacLaren, P.Eng. Consulting Engineer of Toronto and the Immediate Past President of the ACEC read the citation for MacGill. MacGill was the sixth person to be named an honorary member of the Board of Directors, an honour that was ascribed to "any person who has become eminent in engineering or kindred sciences and has been elected as an Honourary Member by unanimous vote of the Directors..." Thus, the award stands as evidence to the esteem in which MacGill was held by her colleagues in addition to her prominence in the field of aeronautical engineering.
NLAC MG31-K7 Volume 15 File 8: Awards and Honours: Press Clippings etc.
NLAC MG31- K7 Volume 17 File 12: Association of Consulting Engineers: Correspondence and Memoranda, 1976-1978. Citation for Elsie MacGill, Ottawa, Wednesday, 14 July1976. NLAC MG31-K7 Volume 17 File 12: Association of Consulting Engineers: Correspondence and Memoranda, 1976-1978, Press Release, "Dr. E.G. MacGill elected Honorary Member of ACEC", 14 July 1976.

[50] As noted in the program for the Annual Awards Presentation Dinner of the APEO on Saturday 27 October 1979,
"The Professional Engineers Gold Medal is awarded to a member of the Association who has spent some years working in the profession and has subsequently given outstanding public service to the country; who is recognized by a section of the public as a dedicated and successful servant who is making or has made large sacrifices of time and effort for the public weal."
NLAC MG31-K7 Volume 12 File 11: Cracks in Aircraft: Address by E.G. MacGill, 1979.

[51] NLAC MG31-K7 Volume 17 File 14: Association of Professional Engineers of Ontario. Gold Medal Award: Correspondence and Notes, 1977-1979. Program for Award Ceremony.

sent her "soaring into the wild blue yonder, especially when I consider the long line of twenty distinguished engineers who have preceded me in this honour," including the first recipient the Honourable C.D. Howe. While she was aware of the solemn nature of the award, which she accepted very humbly, MacGill also displayed her well-known sense of humour:

> It is ironic that though my service is much less than Mr Howe's, the intrinsic value of my medal is about eleven times greater than his – for in those days the price of gold was fixed at $35 an ounce with fluctuations either way limited to 20 cents.
>
> Perhaps Bill [Soulsby] and I should ask for a police escort going home tonight.[52]

The remaining content of her speech dealt with "cracks in aircraft". She speculated on aviation's future potential for society and she predicted that flight would overtake all other modes of transport.[53]

Conclusion

Ultimately, MacGill was recognized for her immense contribution as a professional engineer. Her service included her work to bridge the worlds of science and society, active participation within engineering organizations at the provincial and national levels, and an increasing commitment to the prevention of discrimination against women in engineering. As the next chapter will show, participation in the Royal Commission on the Status of Women (RCSW) represented a milestone in MacGill's evolving activism

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[52] NLAC MG31-K7 Volume 12 File 11: Cracks in Aircraft: Address by E.G. MacGill, 1979.
[53] Ibid.

on behalf of all women. Her involvement also provides evidence of how her engineering experience could positively impact a public commission.

Chapter 6: The Royal Commission on the Status of Women[1]

Introduction

In 1967, Elsie Gregory MacGill was appointed as a Commissioner on the Royal Commission on the Status of Women (RCSW). Her reputation as a feminist and as a prominent woman engineer was largely responsible for her selection. MacGill had prior experience and familiarity with commissions of inquiry. Her participation in the RCSW, which will be discussed in this chapter, sheds light on her views as a feminist and on her impact on the production of the final report in 1970.

Appointment as Member of the Royal Commission on the Status of Women

The Royal Commission on the Status of Women was a commission of public inquiry created by an Act of Parliament on 16 February 1967, under the Liberal administration of Lester B. Pearson. Several factors were conducive to its establishment. The 1960s were, overall, a decade of prosperity in Canada; as a result, the federal government was more inclined to expand its health, welfare and community programs.[2] This was also a period of increased social protest. In the United States, the Civil Rights Movement, the anti-war movement and the student movement mobilized a large segment of the population, including a large number of women. The latter then began to openly question their own situation and to denounce the status quo. By 1963 the President's

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[1] Part of this chapter has been published in *Scientia Canadensis* see: Crystal Sissons, "Engineer and Feminist: Elsie Gregory MacGill and the Royal Commission on the Status of women, 1967-1970", *Scientia Canadensis,* Volume 29, No. 3, (2006), 74-97.

[2] Cerise Morris, "Determination and Thoroughness" The Movement for a Royal Commission on the Status of Women in Canada", *Atlantis,* Volume 5., No. 2, (Spring 1980), 5.

Report on the Status of Women in the United States officially reported women's concerns.[3] Canadian women followed suit and publicly demanded a national inquiry on their own status. The interaction between the older and newer branches of Canadian feminism added strength, diversity and scope to this movement.[4] In the 1960s, two high-profile women in Canadian Parliament, Secretary of State Judy LaMarsh, and National Democratic Party (NDP) MP Grace MacInnis, called for the creation of a Royal Commission on the Status of Women.[5] LaMarsh argued forcefully: "In a state that prides itself on being free of organized discrimination, to turn away from the recommendations which represent half the people, could cause this half to feel very strongly that there *is* discrimination... This is a luxury that can't be afforded".[6] The wide support of women's organizations, and strong lobbying performed by groups such as the Committee of Equality of Women in Canada (CEW), generated an increased pressure for change which forced the hand of the federal government.[7]

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[3] Morris "Determination and Thoroughness," 19.
See also the United Nations report on Status of Women Commissions which notes that in 1968 there had been 24 different commissions on the status of women established in various forms. NLAC MG31-K7 Volume 24 File 3: United Nations: Publications and Resolutions, 1958-1970. United Nations Economic and Social Council, Commission on the Status of Women [30 January 1968] Twenty-first Session, Item 6 (a) of the provisional agenda – National Commissions on the Status of Women – Report of the Secretary General.

[4] Jill Vickers, "The Intellectual Origins of the Women's Movements in Canada," in *Challenging Times,* eds. Constance Backhouse and David H. Flaherty eds (Montreal: McGill-Queen's University Press, 1992), 40, 52-54.

[5] For more information on these women see: Judy LaMarsh, *Judy LaMarsh: Memoirs of a Bird in a Gilded Cage* (Toronto: Pocket Books, 1970). S.P. Lewis, *Grace: The Life of Grace MacInnis,* (Madeira Park, B.C.: Harbour Publishing, 1993).

[6] LaMarsh, 128-131.

[7] The CEW was created in 1966, during a meeting called by Laura Sabia, who was chosen to lead the CEW. Fifty women attended representing more than thirty-two organizations. Nancy Adamson et al., *Feminist Organizing for Change: The*

The RCSW was established with the official mandate "to report upon the status of women in Canada, and to recommend what steps might be taken by the Federal Government to ensure equal opportunities with men in all aspects of Canadian society".[8] Florence Bird, (also known as Anne Francis) a well-known media personality, was appointed chairperson by the federal government. According to Judy LaMarsh, Bird was chosen because she was perceived as the conservative alternative to the more "radical" Laura Sabia, the leader of the Committee of Equality of Women in Canada.[9] It then fell to the government to select the commissioners, a task which Prime Minister Pearson performed with the assistance of LaMarsh. The individuals ultimately chosen were Lola Lange, a resident of Alberta and a farm union representative, Jeanne Lapointe from

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Contemporary Women's Movement in Canada, (Toronot: Oxford University Press, 1988), 51.

[8] *The Report of the Royal Commission on the Status of Women in Canada*: (Ottawa, Crown Copyrights, 1970), vii.

[9] Laura Sabia created quite a controversy when she declared to a reporter of *The Globe & Mail* that:

"Two million Canadian women may be asked to march on Ottawa if the federal government fails to announce by the end of the month a Royal Commission on Women's Rights... We're tired of being nice about trying to get an official inquiry into women's rights in Canada. If we don't get a royal commission by the end of this month, we'll use every tactic we can. And if we have to use violence, damn it, we will."

Her remarks were featured on the front page of the paper 5 January 1967. This statement has been considered instrumental in bringing the commission into existence. Cerise Morris, "Determination and Thoroughness," 14-15.

Moreover, while Bird was not the leader the CEW had envisioned they accepted her so as not to jeopardize the commission. Personal communication with Laura Sabia, in Cerise Morris, "No More Than Simple Justice," (March 1977), 139. See also: Judy LaMarsh, *Judy LaMarsh: Memoirs of a Bird in a Gilded Cage,* (Toronto: Pocket Books, 1970), 133.

For additional information on the RCSW see: Jane Arscott, "Twenty-Five Years and Sixty-Five Minutes After the Royal Commission on the Status of Women", *International Journal of Canadian Studies,* (Spring 1995), 33-58. Barbara M. Freeman, "Framing Feminine/Feminist: English-language Press Coverage of the Hearings of the Royal Commission on the Status of Women in Canada, 1968", *International Journal of Canadian Studies,* (Spring 1995), 11-32.

Quebec, a professor of French Literature at Laval University and a former member on the Parent Commission,[10] Doris Ogilvie from New Brunswick, a lawyer and a judge, Jacques Henripin from Quebec, chair of the Department of Demography at the University de Montréal, Elsie Gregory MacGill from Ontario, an engineer and private consultant, and Donald Gordon, also from Ontario, a broadcaster and professor of political science. Gordon was later replaced by John Humphrey originally from New Brunswick but residing in Quebec, a professor of law and former secretary-general of the Human Rights Commission of the United Nations.[11]

As Cerise Morris notes in her lengthy study of the RCSW, this selection can be perceived as a deviation from the norm, but also as a reflection of old practices. While the choice of a female chair, and the number of women commissioners were without precedent, all commissioners had social and professional backgrounds typically associated with such bodies:

> [I]ts commissioners were drawn from the upper levels of society, were mainly of English Canadian origin, and resided mainly in central Canada. The majority of the commissioners had acquired impressive social honours through their occupational accomplishments.[12]

Why was Elsie MacGill selected? Judy LaMarsh invokes above all her dual legacy as a pioneer woman engineer and as an experienced third generation feminist.[13] Naomi Black argues that "regional significance" was important as she was a former resident of

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[10] The Parent Commission was a provincial Royal Commission on Education in the province of Québec. It operated from 1965-1966 when it completed its report. Government du Québec, *Rapport Parent: Rapport de la Commission royale d'enquête sur l'enseignement dans la province de Québec,* (Ronalds-Federated Limited, 1966).
[11] LaMarsh, 316-17. For additional background on the Commissioners see: Florence Bird, *Anne Francis: An Autobiography by Florence Bird,* (Toronto: Clarke: Irwin & Company Limited, 1974), 265.
[12] Morris, "No More Than Simple Justice," 150.
[13] LaMarsh, 316.

British Columbia, in addition to the fact that MacGill also represented women in business and in science. Black also refers to her critical role as the fundamental educator of the Commissioners with respect to the history, theories and practices of Canadian feminism.[14]

MacGill's Views on the importance of the Royal Commission on the Status of Women

Through the submission of briefs to the Royal Commission on Canada's Economic Prospects and the Royal Commission on Taxation, as indicated, MacGill had gained experience in the preparation and submission of the material to commissions of public inquiry.[15] In 1968, in a speaking engagement, at the University of Toronto, she used this knowledge to contextualize and firmly justify the establishment of the RCSW.

> Review of earlier federal Royal Commissions confirms that implicit in the appointing of a Royal Commission is the idea of change. Go back to the Royal Commission on the Penal System in Canada which reported in 1938, -to that on Arts, Letters and Sciences which reported in 1951, -to that on Health Services reporting in 1964, -to that on Taxation which reported in 1967, and to that on Bilingualism and Biculturalism which also reported in 1967. All these Commissions considered and recommended changes and innovations. Quite properly then, the Royal Commission on the Status of Women is considering changes in the status of women – where status simply means the state or condition of a person in the eyes of the law and of other people.[16]

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[14] Black, "The Canadian Women's Movement: The Second Wave", 160.
[15] NLAC MG31-K7 Volume 14 File 4: Some Results of Anticipated Increases in the Speed of Commercial Air Transport on Canadian Transportation Systems & Industry of the Next Quarter-Century: Report + Correspondence, 1956.
On 8 May 1963 MacGill led the CFBPWC delegation in presentation of brief to Royal Commission on Taxation (Carter Commission). NLAC MG31-K7 Volume 16 File 3: Biographical Notes and Curriculum Vitae 1967-1979.
[16] NLAC MG31-K7 Volume 21 File 10: Miscellaneous Speeches by E.G. MacGill, 1936-1977. "What do you have to say about the status of women in Canada?" Speech to the Twelfth Annual Seminar of the Toronto Charter Branch of The Association of Administrative Assistants, at Hart House, the University of Toronto, 2 March 1968, 3.

Thus, by tracing the history of other commissions MacGill was able to illustrate that the RCSW was not unusual, and clarify its purpose. Faithful to the views she had expressed, as national president of the Canadian Federation of Business and Professional Women (CFBPWC), MacGill continued to be concerned with the impact of technology on both women and men. She had high expectations for the Commission in this regard:

> It is possible that the effects of this Commission will reach further than people think. When considering the status of women, it is important to realize that for both men and women technology is rapidly changing the existing Canadian patterns of employment, full-time and part-time work – and leisure, too – and the social and economic values upon which status is based. Insight gained [there] could drastically change Canada's social philosophy.[17]

Not too long after her appointment as a Commissioner she addressed the CFBPWC in Victoria, asking: "Why a Canadian Royal Commission on the Status of Women?" MacGill had no doubt that,

> this is more than just an inquiry into the rights of women (i.e. the law and practice), or the equality of women with men (i.e. justice). It implies an inquiry into the prevailing social attitudes that are to the disadvantage of women, - an inquiry search[ing] for ways to chang[e] or [remedy] these.[18]

However, to change women's status in Canada would require more than the commission itself; it called for the hard work of dedicated women and, as importantly, for the support of men:

> To effect any major change in the status of women in Canada, whether it be in the personal sphere of individual relationships, or at the level of social organization in government, business and the like, requires not only vigorous spokesmen and pacesetters among women, but also the firm support of men. Improvements in the status of women [are] simply a further extension of democracy and like all extensions of democracy, it requires the support of men.

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[17] NLAC MG31-K7 Volume 5 File 25: Appointment to Royal Commission: Correspondence and Memorandum. Untitled Personal Note, March 1967.
[18] NLAC MG31-K7 Volume 21 File 10: Miscellaneous Speeches by E.G. MacGill, 1936, 1977. Address to the CFBPWC in Victoria, BC Monday, 4 December 1967: "Why a Canadian Royal Commission on the Status of Women?", 2.

> Will men help? Are they willing to share equally with women their prerogatives of major decision-making in international matters, in government and community affairs, in business and in industry, in family life? I hope they will be fair minded and generous in this.[19]

Indeed, as MacGill reminded her audience, technology had an impact on men's lives as well as women's:

> For both men and women, technology is rapidly changing the existing patterns of employment, full-time and part-time work, education, training, leisure, government, business, industry, family life and the social and economic values upon which status is based. Men's status is not static either.[20]

Collaboration between men and women for social change was a major element of MacGill's proposed agenda. MacGill's hopes regarding the impact of the Commission were shared by her brother-in-law, Everett Hughes, and her sister, Helen MacGill Hughes. Everett, who defined himself as her "neo-feminist bro-in-law" acknowledged the importance of MacGill's role as a Commissioner,

> The idea is, this job takes a new brand of research – for it is the place of women in an entirely new kind [of] labor force you have to discover – and project into the future.
>
> More power to you – you'll have to put the innovating ideas and vigor into this... But you, dear sister, will have to make this the outstanding thing, the example to the rest of the world as well as to Canada, that it ought to be.[21]

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[19] In taking time to note that technology affected women's and men's lives MacGill furthered her point on the importance of not considering men and women separately. Moreover, as has been seen previously MacGill was carrying forward her arguments about the impact of technology on the workplace which could alter occupations and domestic responsibilities. NLAC MG31-K7 Volume 21 File 10: Miscellaneous Speeches by E.G. MacGill, 1936, 1977. Address to the CFBPWC in Victoria, BC Monday, "Why a Canadian Royal Commission on the Status of Women?", 4 December 1967, 4.

[20] Ibid.

[21] NLAC MG31-K7 Volume 5 File 25: Appointment to Royal Commission: Correspondence & Memorandum, 1967. Letter to MacGill from Everett and Helen Hughes.

Everett sent MacGill a long list of recommendations he wished her to transmit to the Commission.[22] He pointed out the importance of social reform which would foster the advancement of each individual according to merit. More importantly, he insisted that professional barriers must be eliminated to avoid discrimination between colleagues based on sex, race, religion, age, marital status and health. He concluded each individual's special conditions must be taken into account when relevant. These views were based on his previous experience, since he had assisted with the research on the U.S. President's Commission on the Status of Women in 1963. For her part, Helen heartedly congratulated Elsie on her appointment, finding her sister ideal for the position.[23] The Hughes' endorsement of Elsie's new challenge is yet one more indication of the strong support network that linked the family members.

Engineering a Feminist Report

From the very beginning, MacGill took a leading role in the organization and orientation of the RCSW. As an engineer, she knew the value of precision and focus to accurately assess given situations, and to reach carefully defined goals. As a Commissioner, she applied similar attention to details and expected outcomes. MacGill's later insights on the RCSW illustrate just how important it was to be organized in order to deal with the magnitude of the task at hand. As MacGill put it,

> To provide background material for the report and to base its findings on Canadian facts and figures – which were sadly lacking – the Commission set up

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[22] NLAC MG31-K7 Volume 5 File 25: Appointment to Royal Commission: Correspondence & Memorandum, 1967. Letter to MacGill from Everett and Helen Hughes.
[23] Ibid.

> its own programme of research. A dozen in-house investigations and forty special studies by independent experts were undertaken. Some of the studies were published separately from the Report.[24]

MacGill, herself, was directly involved with the selection of researchers and the assessment of their work, and she retained an active interest in all the information acquired. As early as 11 March 1967, she sent a letter to her colleagues concerning the inquiry overall, its terms of reference, and a plan of operation. She outlined direct plans of action with a corresponding clear follow-through toward the defined goals as she saw them. She advocated fresh approaches, flexibility, focused work at a brisk pace, with periodic meaningful publications, and the completion of the final report by 1968. MacGill wanted the Commission to operate objectively in order to produce reliable evidence that could be presented in a clear and concise manner in the written report. The research questions had to be well-defined in order to lead to firm recommendations. She feared that visible disagreement amongst the Commissioners would severely hamper the overall impact of the report. She further argued that presenting larger reform ideas in a step-by-step approach would generate greater acceptance by the government, as opposed to a request for immediate changes.[25]

It can be argued that MacGill's training as an engineer informed her detailed action schemes for the Commission. One innovative idea she introduced was a schematic plan that provided a means for comparing the current situation of women to the projected improvements desired by the RCSW, with respect to women's presence in various

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[24] NLAC MG31-K7 Volume 21 File 38: Miscellaneous Speeches and Notes n.d., 1960-1970. "Legalist Feminism", 5.

[25] NLAC MG31-K7 Volume 6 File No. 3: Memoranda and Reports Concerning Various Chapters 1967-1969. Letter: Subject: Comments on the Inquiry, the Commission's Terms of Reference (Feb. 16, 1967) and the Operation of the Commission, 11 March 1967.

sectors of public life. For example, MacGill used the issue of women's under-representation in the Canadian Senate. With the use of her plan, the RCSW could work through four key steps to achieve reform. First, it could examine the present trends, in which women held 12 seats of the 102 available, then chart the projected trend, given the current situation and the 'natural' increase of women in the Senate, which would only see an increase to 30 seats for women by 2030. The Commissioners could then generate the desired minimum numbers, in this case 50 seats, and measure the resulting 'discontinuity' between the two projections.[26] This data would allow them to recommend concrete procedures to overcome what MacGill called the 'discontinuity step', that is, the gap between the observed "natural" growth and the RCSW's projected growth of women in the public sphere.[27]

MacGill strongly believed that the improvement of women's position in the public sphere required their equal representation in society. As we shall see, she would use this argument again in relation to women in the labour force. The acceptance of this idea, however, was not unanimous. As Jane Arscott points out, MacGill did encounter

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[26] See MacGill's Chart illustrating her point.
NLAC MG31-K7 Volume 5 File 21: 62nd Meeting of Commission: Minutes July 29-31, 1970.

[27] "As Commissioner MacGill explained, such an analysis could show that, in certain cases, the natural trend does correspond to the goals set by the Commission, thus requiring no "discontinuity step". She added that whether the Commissioners agree on the discontinuity step needed or not, the analysis was still of value."
NLAC MG31-K7 Volume 4 File 16: 27th Meeting of Commission: Minutes Aug. 11-14, 1969, 1-2.
The Commission did accept this idea in part, is it was stated in their fourth principle of the Commission,
"11. The fourth principle is that in certain areas women will for an interim period require special treatment to overcome the adverse effects of discriminatory practices. We consider such measures to be justified in a limited range of circumstances...."
Report of the Royal Commission on the Status of Women in Canada, xii.

resistance from some Commissioners most notably John Humphrey.[28] Ultimately, while full parity between men and women was not recommended in the Senate, the Commission did support increasing women's representation, a fact Arscott largely contributes to MacGill's insistence on the issue, "Had it not been for the strong and consistent line she [MacGill] took to have the Commission adopt an affirmative action policy, the recommendations on politics would certainly have been even milder than they were".[29]

With respect to process, MacGill argued that all sections of Canadian society deserved a voice; she was thus instrumental in convincing the commissioners to operate within the broadest terms of reference possible. She reminded them that they were bound by a variety of limitations due to their backgrounds and corresponding positions in society. Furthermore, she challenged them to reflect upon those personal prejudices that might affect their objectivity when formulating and defending the final recommendations. To assist her colleagues with this task, she distributed a detailed list for contemplation. In fact, this list consisted of a full-fledged feminist program that raised some very controversial issues.

First, MacGill asked them to assess their willingness to accept the idea that women should have a power of decision-making free from male influence, and be able to

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[28] Jane Arscott, "'More Women': The RCSW and Political Representation, 1970" in *Women and Political Representation in Canada,* eds. Manon Tremblay and Caroline Andrew. (Ottawa: University of Ottawa Press, 1998), 152-156.
Humphrey also addressed this issue in his "Minority Report" see: *The Report of the Royal Commission on the Status of Women,* 448-449.

Rec. 138 We recommend that two qualified women from each province be summoned to the Senate as seats become vacant, and that women continue to be summoned until a more equitable membership is achieved.

The Report of the Royal Commission on the Status of Women, 414. See also: Arscott, 153.

exercise this power in all aspects of life. Second, she questioned their support for equal opportunities for women to partake in existing hierarchies, be it government or the family. Third, she asked if they would be willing to fully support women's access and entry into "so-called masculine pursuits – professions, trades, [and] avocations". Fourth, she questioned their acceptance of shared responsibility of domestic duties and care of children by both parents. Her last set of questions, which dealt with the more controversial issues of sexual conduct and sexual orientation, exposed her feminist radical bent. Indeed, she asked the commissioners if they would have "[e]qual tolerance for women in matters of sexual morality including "free love", lesbianism, [and] homosexuality."[30]

On 9 November 1967, MacGill proposed a 'scientific' method she designed to assess the situation of Canadian women. Detailed in a memo entitled, "Developing the Commission's task using a certain scientific process," the plan entailed the creation of hypotheses and the collection of facts which would prove or disprove a number of initial ideas. From that point, the hypotheses could be re-written and the process could be repeated as many times as deemed necessary. She submitted three initial hypotheses which in this case, were based on fundamental liberal feminist principles:

> HYPOTHESIS I – THAT in Canada the status of women is not equal to that of men....
> HYPOTHESIS II – THAT in Canada Women's deprivation of opportunities results from
> a) cultural attitudes
> b) the physical environments in which women find themselves placed...

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[30] NLAC MG31-K7 Volume 6 File 3: Miscellaneous Notes Memoranda & Reports Concerning Various Chapters, 1957-1969. See also: Separate Statement Commissioner Elsie Gregory MacGill – *The Report of the Royal Commission on the Status of Women.*

> HYPOTHESIS III - THAT in Canada, women's deprivation of opportunities in education, employment, government, and in major decision making, can be overcome and women be given equal opportunities with men by
> a) adjustment to the environments in which women find themselves placed,
> b) by adoption of egalitarian cultural attitudes.[31]

MacGill then outlined the lack of opportunities for women caused by cultural practices such as dominant gender stereotypes, courtship and marriage expectations, and the many social and psychological barriers women faced in the workplace.[32]

Finally, MacGill argued that if the RCSW wished to produce a report representative of the views of Canadian women as a whole, it was necessary to reach as many sections of society as possible. Individuals and groups should not be dissuaded from presenting their arguments at hearings simply because their briefs lacked a certain degree of coherence and clarity.[33] MacGill also felt strongly that the Commission needed to assess the role of the provinces with regard to women's status; otherwise, a notable gap in the final report would result.[34] Technically, the Commission's mandate was to consider those changes that could be accomplished at the federal level only. However, MacGill's insistence on considering the multiple layers of Canadian federalism generated support for the broadest interpretation of the Commission's terms of reference; this in turn allowed for the study of "such other matters in relation to the status of women in Canada

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[31] NLAC MG31-K7 Volume 3 File 6: Fifth Meeting of Commission Minutes, Reports and Submissions (Part I) – Nov. 1-3, 1967.
[32] Ibid., 1-4.
Liberal feminism argues for the equality of opportunity between the sexes. The tools to achieve this goal are increased educational opportunities and the removal of discriminating legislation. Nancy Adamson et. al. *Feminist Organizing for Change: The Contemporary Women's Movement in Canada*, (Toronto: Oxford University Press, 1988).
[33] NLAC MG31-K7 Volume 4 File 2: Thirteenth Meeting of the Commission – Includes Minutes from the 8th to 12th Meetings September 26-27, 1968.
[34] NLAC MG31-K7 Volume 3 File 3: Third Meeting of Commission Minutes, Reports and Submissions – May 24-26, 1967.

as may appear to the Commissioners to be relevant."[35] The Terms of Reference thus effectively condoned an examination of the situation of women in the provinces and territories, and it led to a significant number of recommendations that touched all levels of government.

MacGill's recommendations corresponded to the four principles the Commissioners had adopted from the outset. These included women's rights to choose whether or not to work outside the home, the responsibility of society to accord women special treatment during pregnancy, the care of subsequent children by both parents and society, and the acknowledgement that women would need a degree of special treatment in order to account for the effects of long-term discriminatory practices. Moreover, her ideas also supported the basic goals underlying the Terms of Reference identified by the Commissioners, which were, "the full use of human resources in the national interest," and "equality of opportunity to share the responsibilities to society as well as its privileges and prerogatives."[36]

MacGill's training as an engineer helped account for her focus on the production of a clear and concise report in a timely fashion.[37] She acted as a guide and, when necessary, as a referee to keep the other Commissioners on track. Moreover, MacGill believed that the Commission would be the most effective if its members refrained from the temptation to enact change themselves, by working on their own, insisting that they

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[35] *The Report of the Royal Commission on the Status of Women in Canada,* vii-viii.
[36] Foreword *RCSW Report,* xi-xii.
NLAC MG31-K7 Volume 21 File 9: Miscellaneous Speeches by E.G. MacGill, 1954-1975. Speech at the Special Conference on Women's Rights sponsored by the B.C. Federation of Labour and held at Georgia Hotel November 13th and 14th, 1971, 3-9.
[37] As Ruth Oldenziel notes during training and afterwards women engineers learned the value of hard work maintained by unrelenting focus for the goals to be achieved. Oldenziel, "Multiple Entry Visas," 14.

adhere to their mandate and remain focused.[38] While her initial goal to have the report completed by 1968 proved unrealistic, she was able to maintain a brisk work pace, suggesting, as early as 5 June 1968, that the Commission hold summer meetings to discuss the final report in detail. Not surprisingly, she took an active role in the editing of draft chapters, making sure that the work of the Commissioners was not ignored or overlooked by the final editors.[39] At the same time, she suggested that tentative dates be set for the completion of each chapter.[40]

MacGill was eager to be well-informed on every aspect of the Commission's work. To perform her duties at the highest level, she asked to have her name included in the mailing list for the Commission's Critical Path and Network (which was the internal administration model employed by the Commission); this kept her abreast of all its internal workings, including those at the most basic levels, such as scheduling and communication.[41] At the same time, MacGill produced an immense collection of internal memos. She, by far, used them to the greatest extent. Their quality was such

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[38] NLAC MG31-K7 Volume 4 File 2: Thirteenth Meeting of the Commission – Includes Minutes From the 8th – 12th Meetings September 26-27, 1968.
[39] NLAC MG31-K7 Volume 4 File 8: Nineteenth Meeting of Commission: Minutes – April 2-3, 1969.
[40] NLAC MG31-K7 Volume 4 File 12: 23rd Meeting of Commission: Minutes – June 9-13, 1969.
[41] The Critical Path and Network Section was instrumental in ensuring efficient communication between the various groups and sections within the Commission as a whole. More importantly, it was becoming a popular organization model used by engineers. NLAC MG31-K7 Volume 3 File 5: Fourth Meeting of Commission: Miscellaneous Reports and Memoranda 1967-1968. NLAC MG31-K7 Volume 5 File 30: Critical Path Network for the Commission.

that they were repeatedly referred to at the Commission's meetings as points of reference and as sources for new perspectives.[42]

Throughout this period of intense activity, MacGill did not hesitate to assume additional tasks, as needed. For instance, she filled the position of acting secretary whenever one was required. This was most often the case during private meetings of the Commissioners; her level of experience with the rules of meetings and her ability to manage a large volume of information made her a natural choice. Her strength as a public speaker was also capitalized upon; she took on a variety of speaking engagements to publicize the Commission's work and promote its goals.[43] For example, in an address to the annual International Women's Day Luncheon, in 1968, organized by the Pioneer Women's Organization of Montreal, she argued that social change was needed in order to enable women to become full and equal individuals in Canadian society. Democracy would not diminish one group [i.e. men] by raising another group [women] to the same level. She also argued that change could be brought rapidly. Once again, MacGill invoked the rapid progress which could be observed in science and engineering:

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[42] For example, the minutes of the July 29-31st meeting in 1969 record that at this meeting alone four of her submitted memos were addressed, ranging from her concerns on women's detention facilities to politics and senate reform. NLAC MG31-K7 Volume 4 File 14: 25th Meeting of Commission: Minutes – July 29-31, 1969.
It is important to remember the division of work within the Commission, as while the Commissioners worked at one level, they were supported by the exceptional hard work of a research management team that Florence Bird noted was paramount to their success including: Monique Bégin, Dorothy Cadwell, Monique Coupal, Dr. Grace Maynard, Jean Fenton, Helen Wilson and Doris Shakleton. Bird, 265-267.

[43] NLAC MG31-K7 Volume 3 File 10: Seventh Meeting of Commission, Reports and Submissions – Feb. 15-16, 1968.

> Let us not fall into easy thinking that social improvements can only be introduced gradually. There is no rule about this. The pattern of the past need not be repeated. Speed of implementation depends probably on the degree of effort expended... Something more than time is required. A unique start must be made. The space engineers did not put satellites into orbit by repeating their flight failures so many hundred times. Improving the status of women in Canada need not be a long-drawn out operation but could be done quickly if Canadians decided they wanted it that way.[44]

As we have seen, Elsie MacGill was also very interested in crime and penal reform.[45] Because of her previous work in this area, she had developed a sharp understanding of the *Criminal Code* and of the intricacies of the Canadian legal system. As a result, she provided important background information to the other Commissioners. At meetings and through her comprehensive memos, she clarified and ably interpreted various laws, rules and regulations, such as those pertaining to the position of women within the *Criminal Code*.[46]

On another front, MacGill assumed the initial planning and production of an information brochure for the RCSW.[47] She had produced printed literature as a member of the Penal Reform for Women's Joint Committee.[48] Her experience in industrial engineering, especially as a private consultant, also led her to appreciate the importance of marketing ideas, and of generating interest in the public realm. Entitled "What Do

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[44] NLAC MG31-K7 Volume 6 File 14: Speeches Given by MacGill Concerning the RCSW 1963-1975 – "Changing the Status of Women in Canada" an address to the annual International Women's Day Luncheon of the Pioneer Women's Organization of Montreal – Wednesday, March 6, 1968, 2-3.

[45] See Chapter 4.

[46] One of many examples is the memo "February 1970 Proposed Amendment to the Criminal Code Regarding Abortion – Chapter VIII" where she actually goes to the trouble of typing out whole sections of the Criminal Code in order to clarify her position. NLAC MG31-K7 Volume 5 File 1: 42nd Meeting of Commission: Minutes – Feb. 11-13, 1970.

[47] NLAC MG31-K7 Volume 3 File 8: Fifth Meeting of Commission: Miscellaneous 1967

[48] See Chapter 4 "Feminist Activist".

You Have To Say About the Status of Women?", the RCSW brochure was part of a well-planned promotion campaign, which informed Canadians about the Commission and requested their input in the form of briefs. A 'how to' list for creating and submitting briefs was included in the brochure. This project was a total success: more than 275,000 brochures were distributed in cooperation with major supermarket chains, including Steinberg's, Dominion, Loblaws and IGA. In fact, a second printing of 190,000 brochures was necessary due to their instant popularity with the public.[49] More importantly, the success of this strategy was reflected in the sheer volume of input from the public: more than 468 briefs and 1000 letters of opinion were submitted to the RCSW, in addition to the public's active participation in its hearings.[50]

Finally, MacGill advocated the use of technology by the Commission. For instance, she suggested the production of a public education video.[51] She noted how the *Society of Women Engineers Newsletter* promoted the use of films in the career guidance of youth.[52] Due to budget constraints, the video was never produced; however, the idea was seriously considered by the RCSW, yet another indication of MacGill's influence within its ranks.[53] Furthermore, she, along with Commissioner Lange, assumed the management of the pilot project to provide a telephone hotline one hour before the hearings in Victoria and Vancouver. This service was an attempt to reach Canadians

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[49] NLAC MG31-K7 Volume 3 File 10: Seventh Meeting of Commission, Reports and Submissions – Feb. 15-16, 1968.
[50] *The Report of the Royal Commission on the Status of Women in Canada,* xi.
[51] NLAC MG31-K7 Volume 3 File 9: Sixth Meeting of Commission Minutes, Reports and Submissions – Dec. 13-14, 1967.
[52] NLAC MG31-K7 Volume 3 File 10: Seventh Meeting of Commission, Reports and Submissions – Feb. 15-16, 1968. *SWE Newsletter,* October 1967, "Using Career Guidance Films," by James H. Anderson, 2.
[53] NLAC MG31-K7 Volume 3 File 10.

who were unable to go to the hearings themselves due to problems with travel, or domestic and work responsibilities. While this endeavour demonstrated her goal to reach the largest section of the population possible, it however proved to be short-lived, ending after the initial two hearings. None of the Commissioners had anticipated the heavy workload comprised by the hearings, due to the intense public participation.[54]

Indeed, as Florence Bird readily acknowledged, MacGill had clearly been her indispensable 'right hand,' throughout the work of the RCSW.[55] Both her engineering training and her feminist activism led her to create a bridge between the two spheres, thus bringing new views to the table, and helping to produce a seminal feminist report. Furthermore, her intense discipline, work style, and commitment, were indispensable to the success of the Commission. In fact, Bird would ultimately label MacGill as "the moving force behind the RCSW".[56]

MacGill's Feminist Agenda

From the very outset of the RCSW, the Commissioners openly considered MacGill as the leading feminist in the group. Monique Bégin, the Executive Secretary of the RCSW, recalled that MacGill was the only true feminist Commissioner at the time. Bégin also claimed that MacGill was instrumental in rallying the other female members to feminism. She points out as well that the Commissioners who identified with feminism were "liberal and pragmatic feminists," hence their focus on the so-called

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[54] NLAC MG31-K7 Volume 3 File 10.
[55] Bird, 265.
[56] Judith Cummings, "The Report of the Royal Commission on the Status of Women: A Liberal Feminist Analysis", Masters Thesis. (Ottawa: Carleton University, 1991), 55.

public/private dichotomy inherent within Canadian society.[57] For her part, MacGill agreed that women's work within the private sphere was valuable; however, she argued that all individuals should have the opportunity to be active and equal members of the public sphere.[58] According to MacGill, the Commission was a precious investment in the campaign for equality of opportunity for women. However, as suggested by the detailed list of questions submitted to the other Commissioners, MacGill took a bolder stance on certain issues. As a result, she did not hesitate to produce a minority report to defend her views on those matters she felt especially passionate about, such as abortion and taxation. In fact, MacGill would later label the *RCSW Report* as a "conservative" document:

> The Report has been called a radical document, ... but only I think by people who have never looked at it. Not only is the Report far from radical, but its Recommendations are very conservative. They had to be kept within the Commission's mandate...
>
> This is why I say that the Recommendations ask for very little. This is why they are only a first step. Asking for "equal opportunities" is only asking that,

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[57] Monique Bégin, "The Royal Commission on the Status of Women: Twenty Years Later", in *Challenging Times: The Women's Movement in Canada and the United States,* eds. Constance Backhouse and David H. Flaherty. (Montreal: McGill-Queen's University Press, 1992), 28-29.
Regarding liberal feminism Speers argues, "At a broad level, liberal feminism argues that substantial and meaningful change can occur within the existing political, economic, and social systems. There is no need for revolutionary change; indeed, as liberal feminists, they must hold true to the belief that existing democratic structures constitute the essential condition for reform".
Kimberly Speers, "The Royal Commission on the Status of Women in Canada, 1967-1970: Liberal Feminism and Its Radical Implications", in *Framing Our Past: Canadian Women's History in the Twentieth Century,* eds. Sharon Cook et. al. (Montreal: McGill-Queen's Press, 2001), 253.
The public/private divide refers to the assumed division between men and women with men being most active in public affairs and women being left to manage those affairs of the private realm or home.
[58] Cummings, 46.

> that which most people believe should be available to everyone, be made available to women. In simple justice, this should be delayed no longer.[59]

MacGill's feminist agenda was wide ranging; as a result, it is difficult to link her views within one of the various branches of "second-wave feminism" such as maternal, liberal and radical feminism. Hers, rather, is a "blend" of feminisms that included elements from maternal feminism, (a belief in the private sphere's impact on the public sphere), liberal feminism (which promotes that change through the adoption of laws and the support of the state, equal access to education and employment, and the fight against sexism), and radical feminism (women's control over their bodies). Finally, as Dormer Ellis, a fellow woman engineer and TBPWC member reflected, MacGill strongly believed in the emancipatory power of science and mathematics studies:

> [O]ne of her goals, was to make it not be any disadvantage to be a woman. In other words she was against any form of discrimination against them. But she also felt that women ought to take it upon themselves to improve their own status, not just wait for someone else to do it for them, so she had the idea that women should be self-supporting and independent, and that type of thing, rather than be dependent on others all the time. I think she thought the study of math and science was a means to this end, cause it opened so many occupations that would otherwise be closed to them, so that she thought if she could get girls not to drop the hard subjects that they would have a better chance in life later on.[60]

MacGill's feminist views can be captured more fully through the stance she took on those four issues which concerned her more particularly: access to abortion, education and work, taxation, and science and technology.

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[59] NLAC MG31-K7 Volume 21 File 9: "Equal Opportunities for Women" 17 October 1972.

[60] Interview with Dormer Ellis, 15 July 2006.

The Right to Abortion

From the earliest discussions at the Commission, MacGill argued that abortion should be a private matter between the patient and the doctor. In this respect, MacGill advocated the belief that women deserved full control over their bodies. In fact, due to the lack of this right during the 1960s many women sought illegal abortions, often with deadly results.[61] Compared to her colleagues, however, MacGill's stance was seen as radical and did not receive the support she sought. She was challenged the most on this matter by Doris Ogilvie, who argued that a mother and child represented two separate lives and that one cannot be left to the conscience of the other to decide life and death.[62]

The abortion issue was hotly debated at the time within Canadian society. The federal government's revision of the *Criminal Code* in 1969 had finally legalized birth control, contraceptive devices and information, but it only allowed abortion in hospitals following the approval of a Therapeutic Abortion Committee (TAC).[63] Ultimately, when the *RCSW Report* finally recommended to keep abortion under the *Criminal Code*, MacGill produced a minority report stating that "[a]lthough I support our recommendations on abortion as far as they go, I do not think that they go far enough."[64]

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[61] Adamson, 45-46.

[62] Separate Statement Commissioner Doris Ogilvie – in *The Report of the Royal Commission on the Status of Women in Canada.* Ottawa: Crown Publishers, 1970. For reference to the actual debate during the commission itself see: NLAC MG31-K7 Volume 4 File 12: 23rd Meeting of Commission, Minutes – June 9-13, 1969.

[63] Adamson, 46.

[64] The recommendations 126 and 127 state the following:

126. We recommend that the Criminal Code be amended to permit abortion by a qualified medical practitioner on the sole request of any woman who has been pregnant for 12 weeks or less.

127. We recommend that the Criminal Code be amended to permit abortion by a qualified practitioner at the request of a woman pregnant for more than 12

MacGill was not alone in defending this position. In 1970, the Canadian Federation of Business and Professional Women's Clubs also supported the removal of abortion from the *Criminal Code*.[65] Later, in 1972, the National Action Committee on the Status of Women (NAC) would also take up the pro-choice campaign, a decision that would be strongly influenced by MacGill.[66] It was thus not surprising that in 1980, she was appointed an Honourary Director of the Canadian Association for the Repeal of the Abortion Law (CARAL).[67]

Education and Work

Having been fortunate enough to be raised in a family that was strongly supportive of women's higher education, MacGill insisted upon the right of all women to have similar opportunities. However, she noted that girls were not made aware of the vast opportunities available to them due to the sex-stereotyping of girls and women in

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> weeks if the doctor is convinced that the continuation of the pregnancy would endanger the physical or mental health of the woman, or if there is a substantial risk that if the child were born, it would be greatly handicapped, either mentally or physically.

The Report of the Royal Commission on the Status of Women, 412.

For Elsie MacGill's Separate Statement see: Separate Statement Commissioner Elsie Gregory MacGill -*The Report of the Royal Commission*.

MacGill maintained her stance on abortion throughout the rest of her life. Moreover, she kept herself informed on the subject, through news, government and non-governmental organization reports. She kept abreast of the struggles of Dr. Morgentaler to perform abortions in the 1970s, and the report of the Committee on the Operation of the Abortion Law (Badgley Report) and CARAL mailings. NLAC MG31-K7 Volume 17 File 7: Abortion: Newsletters, Reports etc. 1969-1980.

[65] Forbes, 106.

[66] Kay Macpherson, *When in Doubt Do Both: The Times of My Life*, (Toronto: University of Toronto Press, 1994), 155.

[67] NLAC MG31-K7 Volume 17 File 7: Abortion: Newsletters, Reports etc. 1969-1980.

elementary school textbooks, which pictured women primarily in domestic roles. These manuals psychologically closed doors to young girls:

> [h]igher education and advanced training appear "unfeminine", and to be shunned. Although economic conditions have changed the traditional domestic pattern of life for most women, such a girl may still anticipate a lifetime of domesticity, may cut short her education, acquire no lively interests of her own, no marketable skill, no professional competence. The idea of what is ahead for her—her "time horizon—scarcely extends beyond her twenty-fifth year, or the year she marries.

This situation greatly preoccupied MacGill. She was convinced that the Report's Recommendation 69, which called for textbook reform, and Recommendation 73, which proposed better guidance programs in schools, would ensure change: "We can do better than this for our girls. Our homes and our schools can furnish [them] with the [nutrients] that develop recognition or opportunities, aspirations to accomplishments, [and] a long-term view of life".[68]

MacGill also called for measures that would open up the labour market to women, thus providing a further incentive for women's higher education. Above all, she advocated 'preferential treatment'. This implied a period of hiring focused solely on increasing the number of women in the labour force; this, in turn, would create opportunities for their advancement within the various labour hierarchies. In her view, the ultimate goal was to achieve "equal opportunity" and to "stabilize the position of working women, and women generally, not only in labour and management circles, but

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[68] NLAC MG31-K7 Volume 6 File 14: Speeches Given by MacGill Concerning the RCSW, 1963-1975. "Equal Opportunities for Women" 1971, Keynote address at the 1971 Provincial Convention of the Manitoba Women's Institutes on Tuesday, June 8, 1971 at Tache Hall Auditorium of the University of Manitoba, Winnipeg, MB.

in all aspects of Canadian society."[69] MacGill's call for 'preferential treatment' reflected the seriousness of the problem, and the level of change that she considered necessary, along with the means to achieve it:

> In Canada women, to a greater or less degree, are at a disadvantage educationally, socially, economically, legally, politically and psychologically compared to men. This all-pervasive inequality is generally condoned by society, and various devices operate to make it difficult for women to overcome these disadvantages... Indeed it is rational to recommend preferential treatment for women...for at least a period of time, to enable them to overcome their present disadvantages... Moreover it is simple justice to require society to promote this preferential treatment, even at some financial and other cost, in compensation for its earlier failure.[70]

As Jane Arscott points out, MacGill's support of what we now refer to as 'affirmative action' was most likely generated by her own personal experience as a professional engineer. Her pioneering presence in this male-dominated field made her acutely aware that while women were fully capable of accomplishing the same work as men, they would not be given the credit they deserved for this work until their numbers were significant enough to demonstrate their merit.[71]

Women and Taxation

Another major issue raised by MacGill was women and taxation. Her key concern was directed at Income Tax Legislation, which, she contended, reduced women to searching for a male "husband-provider" versus having economic independence of their

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[69] NLAC MG31-K7 Volume 4 File 11: 22nd Meeting of Commission: Minutes – May 28-29, 1969, EGM/R175, "Some Reasons for Recommending Preferential Treatment for Women in Order to Ensure for Them Equal Opportunities with Men in All Aspects of Canadian Society", 21 May 1969.
[70] Ibid.
[71] Arscott, "'More Women': The RCSW and Political Representation, 1970", 152-153.

own.[72] Her stance led her to call for women's equal treatment as individual citizens. She therefore opposed the adoption of Recommendation 132 of *The Report*, which proposed that a married couple be taxed as a unit unless otherwise specified.[73] While she acknowledged that married women were discriminated against within the federal tax system, she noted in her minority report that

> The current "individual" basis of taxation accords more nearly with this view [of rectifying women's position under the current taxation regulations] than does the "marriage unit" basis. It is a facet of the independence of the individual, and also of tax equity between individuals. For these reasons, I am against the introduction of the "marriage unit" basis...there are ways other than that of eliminating taxation policies that discriminate against married women.[74]

Here again, while MacGill stood alone on this issue within the Commission, her views were endorsed by her colleagues in the Canadian Federation of Business and Professional Women.[75]

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[72] MacGill worked on the section of the *RCSW Report* dealing with taxation, and in the final report reference to Income Tax notes: "Income Tax Legislation can encourage or discourage the financial dependency of one group of individuals on another.... In Canada a great many wives are financially dependent on their husbands and this appears to be a factor in the lower wage rates paid to women as compared to those paid to men. Our findings indicate that anticipation of this dependency often saps the initiative of young girls to take advantage of educational opportunities, and focuses their attention on acquiring a husband-provider." *RCSW Report*, 429.

[73] Recommendation 132:

> We recommend that the federal Income Tax Act be amended in order that husband and wife form a taxation unit and be permitted to aggregate their incomes, under a special tax rate schedule, in a joint return signed by both spouses with the option to file separately if they so desire.

The Report of the Royal Commission on the Status of Women, 413.

[74] Separate Statement: Commissioner Elsie Gregory MacGill – *The Report of the Royal Commission on the Status of Women.*

[75] Cummings, 48-52.
As previously noted, Elsie had been a part of a CFBPWC delegation to the Royal Commission on Taxation (The Carter Commission). See Chapter 4. Moreover, resolutions submitted by both the branches of the Toronto and the Montreal Business and Professional Women's Club to the June 1963 Board of Director's meeting advanced

Science and Technology

As a Commissioner, Elsie MacGill pressed her colleagues to pay attention to the views of engineers and scientists. She noted that "[p]erhaps the basic question is: In a technological society, how do technological changes affect human thought, behaviour and society?"[76] She insisted that representatives from these fields be consulted on social issues, as they did assume major social responsibilities, and as their very work had a significant impact on the development of society. As early as the third meeting of the Commission, MacGill suggested the use of an expert with "knowledge of computer implications for social changes".[77] To this effect, she openly challenged one of the experts hired by the RCSW, Charles W. Hobart, a sociologist, who contended that engineers are "rarely looked to for pronouncements on social issues;" in Hobart's opinion, they should not be consulted on social issues or be included in his research area.[78] Of course, MacGill's presence and role on the RCSW contradicted his claim that engineers were not active on social issues.

While into the 1970s, MacGill urged women in the fields of science and engineering to get socially involved as she had done herself. Speaking to the graduates of the St.

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similar arguments. See Resolutions 1/63 and 1/62 in NLAC MG31-K7 Volume 1 File 10: CFBPW'C – Reports 1962-1963.

[76] Furthermore, she argued in an address to the BPWC of Victoria, BC on 4 December 1967 that it was imperative to consider technology in addressing the changing Canadian society. NLAC MG31-K7 Volume 3 File 5: Fourth Meeting of Commission: Miscellaneous Reports and Memoranda 1967-1968. "Change, Communication, the Future and most important of all the status of women to succeed us", 28 July 1967.

[77] NLAC MG31-K7 File 3: The Third Meeting of the Commission Minutes Reports and Submissions – May 24-26, 1967, 7.

[78] NLAC MG31-K7 Volume 3 File 6: Fifth Meeting of Commission, Reports and Submissions (Part I) – Nov. 1-3, 1967 Appendix V *Courtship and Marriage Patterns in* Canadian Youth a Study of Activities and Expectations A Research Proposal Submitted by Charles W. Hobart, 11.

Lawrence College of Arts and Applied Science, in Kingston, Ontario on 31 May 1975, MacGill challenged the next generation to continue this important work:

> I take for granted that you will advance your particular discipline, and I hope that you see it as more than something that gains you a livelihood. I think that with your training you are well placed to promote social goals, to open opportunities for everyone and to free people from the stultifying attitudes and practices that hamper their development.
>
> All of us, be we nine years old or fifty-five have a stake in the future because we live in it. You who are young have the greatest stake for you have the longest time there *how will you use your extra time?*

Overall, MacGill emphasized the positive impact of science and technology on society:

> Our concept of the future influences the direction and development of that future. I believe the future of the human race depends to a great extent upon the expansion of scientific knowledge and further, that the wise use of technology that proceeds from that knowledge is our best hope of improving the lot of people around the world.[79]

More particularly, MacGill continued to promote a positive view of the relationship between women and technology. She argued that technology could free them from the double burden they lived under. Automation in the home, in her view, would effectively liberate women from the time consuming duties which kept them otherwise constrained in the private sphere. At the same time, automation in the workplace would allow for women's increased participation, as work would rely to a much greater degree on mental capability rather than on brute strength.[80] But MacGill also warned that since technologies produced rapid social change, constant vigilance was key with respect to the protection of women's rights. She delivered the message to the University of Manitoba Student's Union, on 17 October 1972:

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[79] NLAC MG31-K7 Volume 21 File10: "Technology: Women's Lib: Our Challenging Future", 3-4, 10-11.
[80] Cummings, 45-47.

> But is the need for change generally accepted? Well, it had better be – for rapid change is all about us. Atomic energy, antibiotics, electronic controls, television, computers, jet flight, moon landings, space explorations, satellite communications have all become commonplace within the last thirty years. These new technologies bring new solutions to problems, and bring new problems, and these can produce further social changes. Because of this the Commission stressed the point that its Report and its Recommendations were only a beginning, from which a start could be made.[81]

Her views were clearly echoed in the *RCSW Report*, which argued that "Action that is appropriate today may become obsolete; new approaches may be needed. Moreover there is a need to keep a continuing watch in order that women's rights and freedoms are respected".[82]

MacGill's overall faith in technology and the potential it held for women's role and place in society was shared by other women engineers, during this period, including the American Nora S. Blatch, who believed that technological changes in the United States were inextricably and inevitably linked with politically progressive ideas.[83] Like MacGill, Blatch was a third-generation feminist and engineer who felt that technology fostered women's political and social advancement. This positive view of science and technology would eventually be contested both in Canada and the United States, with the emergence of a feminist critique of science in the 1970s.[84]

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[81] NLAC MG31-K7 Volume 5 File 14: "Equal Opportunities for Women" University of Manitoba Students' Union, 17 October 1972, 11.
[82] *The Report of the Royal Commission on the Status of Women*, 387.
[83] Ruth Oldenziel "Multiple Entry Visas," 12, 17-18.
[84] Heap, 53. See also: Sandra Harding, *The Science Question in Feminism*, (London: Cornell University Press, 1986), Evelyn Fox Keller, *Reflections on Gender and Science*, 10th Anniversary Edition, Reprint 1985, (New Haven: Yale University Press, 1995).

Conclusion

Clearly, MacGill was a key member of the RCSW. As an engineer, she helped ensure clear organization and planning to reach the outlined goals of the commission. As an acknowledged feminist she acted as a guide, mentor and advocate within the Commission. Her most significant impact on the *RCSW Report* was her strong belief in equality for all women which led her to call for preferential treatment of women on a variety of levels including within politics and the labour force. Moreover, as her stance on abortion and taxation illustrates, she would publicly stand alone, when her beliefs could not be compromised within the conservative nature of the Commission. The formidable challenge ahead was to work towards implementation of *The Report of the Royal Commission on the Status of Women.*

Chapter 7: Moving Forward

Introduction

The Report of the Royal Commission on the Status of Women (*RCSW Report*) was submitted to the federal government on 28 September 1970. The *RCSW Report* was a watershed in Canada; as it provided Canadian women a strong framework for further activism. This was certainly the case for MacGill who played a key role in the implementation of *RCSW Report*'s recommendations, acting on her own or within various women's organizations. Her dedication did not waver until her death in 1980. To examine MacGill's actions after 1970 provides new insights into the development of the Canadian women's movement in the decade following the tabling of the *RCSW Report*. Moreover, as we shall see she took an active role in the UN-declared International Women's Year in 1975 and maintained a strong presence within the Canadian Federation of Business and Professional Women Clubs (CFBPWC).

Promotion of *The Report of the Royal Commission on The Status of Women*

The Commissioners helped to ensure the widest possible distribution of the *RCSW Report* by widely distributing complimentary copies at home and abroad.[1] Some of the Commissioners continued to communicate with each other after their mandate ended.[2]

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[1] NLAC MG31-K7 Volume 5 File 32: Distribution List for Copies of Report, n.d., 1970-

[2] Exchanges continued between Doris Ogilvie, Lola Lange and Elsie MacGill, as well as between Florence Bird, Monique Bégin, and Jeanne Lapointe and Elsie MacGill. See: NLAC MG31-K7 Volume 21 File 18: Ogilvie, Doris: Correspondence: 1967-1978. NLAC MG31-K7 Volume 20 File 10: Lola Lange Correspondence. NLAC MG31-K7 Volume 20 File 11: Jeanne Lapointe Correspondence.

This was a means to cope with the sudden vacuum created once they returned home. Lola Lange expressed this feeling of estrangement to Elsie MacGill, "Actually, now when we need advice, and moral support, from the other commissioners, we are left out on a limb."[3] Additional correspondence from Doris Ogilvie provides evidence of MacGill acting both as a friend and a source of support and expertise. Both Lange and Ogilvie noted their discomfort with public speaking to promote the *RCSW Report* and sought MacGill's suggestions and support.[4] As Lange noted in 1971, obtaining access to the *RCSW Report* in Alberta and in the western provinces was extremely difficult:

> I thought I'd let you know that as of Friday no copies of the Report were available in Alberta, and that no govt. outlet is going to handle them. It's to be handled thru Information Canada offices – of which Alta and Sask [Alberta and Saskatchewan] do not have any. How's that for being in the boondocks! I personally went to 2 independent bookstores in Calgary – one had ordered a supply 2 weeks ago, and didn't have them yet – the other promised to order some. In Edmonton I turned the problem over to the Women's Bureau.[5]

Jeanne Lapointe also expressed her frustrations to MacGill:

> Two month[s] ago – Feb 1st – the printing bureau decided to make a reprint of 5000 copies. The contract, signed last week, went to a private firm. Jessie Armstrong was told just now that the reprints will not be available until April 20th. It makes me spit. I sent three copies to the Liberal Party Task force since they had none & could not find any. How can people study a report which is not available?
>
> Lola tells me her library at Calgary has one copy – in French. Isn't that a fine example of government efficiency?[6]

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[3] NLAC MG31-K7 Volume 20 File 10: Lange, Lola: Correspondence. Letter to Elsie, 27 December 1970.
[4] NLAC MG31-K7 Volume 21 File 18: Ogilvie, Doris: Correspondence: 1967-1978. Ogilvie's letter to MacGill, received by MacGill 2 May 1971.
[5] NLAC MG31-K7 Volume 20 File 10: Lange, Lola: Correspondence. Letter to Elsie, 13 December 1970.
[6] Letter to MacGill from J – assumed to be Jeanne Lapointe from the context of the letter 29 March 1971.

MacGill, herself, took on a heavy load in carrying on the Commission's work in the public arena. In numerous addresses to various organizations, she explained the *RCSW Report*, its contents, and the means that could be used to implement it. On more than one occasion, she carried on Florence Bird's responsibilities by accepting speaking engagements when Bird was unable to.[7] Her speaking engagements helped her connect with other prominent Canadian women who were also working to improve the status of women in Canada. For example, on 27 March 1971, she spoke at the Ontario Federation of Labour's Human Rights Conference on Sex Discrimination along with Grace MacInnis, Member of Parliament, Maryon Kantaroff, of the New Feminists, Lita-Rose Betcherman, Director of the Ontario Women's Bureau, and Sylva Gelber, Director of Women's Bureau Canada.[8]

In her public addresses, MacGill promoted the *RCSW Report* as an instrument for change. She wished to mobilize major groups in Canadian society, such as unions. In her address to the Special Conference on Women's Rights sponsored by the B.C. Federation of Labour on 13 November 1971, she challenged them to lead the way:

> The local unions, the provincial Federations of Labour the Congress of Labour each have a part to play in creating a more equitable climate for women in Canada to work in. When we look back at the 1970's, will we see that it was the

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situation very frustrating. NLAC MG31-K7 Volume 20 File 10: Lange, Lola: Correspondence. Letter to Lola Lange from Elsie MacGill, 6 April 1971.

[7] An example of Bird passing speaking engagement off to MacGill includes the Ontario Federation of Labour's Human Rights Conference on Sex Discrimination on 27 March 1971. NLAC MG31-K7 Volume 20 File 8: Labour Committee for Human Rights: Correspondence, 1971. Letter from Bird replying to Patricia Proctor of the Human Rights Committee, 12 February 1971.

[8] NLAC MG31-K7 Volume 20 File 8: Labour Committee for Human Rights: Correspondence, 1971.

> labour unions that led in the establishing of equal opportunities for women in Canada?[9]

In October 1972, MacGill spoke during the three-day long "Teach-in on Women" organized by the University of Manitoba's Students' Union. MacGill deplored the lack of progress in regards to the implementation of the RCSW recommendations. She argued that the recommendations were not "either-or" propositions which the government could choose whether or not to implement:

> Implementation of the Recommendations is compatible with progress on other public issues, and can be accomplished simultaneous [sic] with them. It can be linked indirectly to some of them. Yet it is sufficiently independent of them that it need wait on none of them.[10]

Implementing the recommendations would not be a costly venture especially in view of other expensive government projects:

> Governments that THINK BIG about developing our physical natural resources – two billion for a gaspipe line from the Arctic; more billions for an oil line and road along the Mackenzie River [they] THINK CHEAP when it comes to developing our human resources.[11]

MacGill used her links within the Canadian Federation of Business and Professional Women's Clubs (CFBPWC) to further promote the *RCSW Report*. Her key concern was that women would not take the time to fully appreciate its content and its impact. This concern led her to ask the Federation to boycott the National Council of Women's study

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[9] NLAC MG31-K7 Volume 21 File 9: Miscellaneous Speeches by E.G. MacGill, 1954-1975. Speech at the Special Conference on Women's Rights sponsored by the B.C. Federation of Labour and held at Georgia Hotel November 13th and 14th, 1971.
[10] MG31-K7 Volume 21 File 11: Miscellaneous Speeches by E.G. MacGill, n.d., 1960-1970. "Equal Opportunities for Women" by Elsie Gregory MacGill, Opening Talk presented on October 17, 1972 at the Three-Day Teach-In on Women, October 17, 18, 19th held by the University of Manitoba Students' Union at Winnipeg, Manitoba.
[11] Ibid.

guide, "What's In It?" in favour of promoting the report as a whole; which was accepted.[12]

Since she resided in Toronto, MacGill was able to remain active within the Toronto Business and Professional Women's Club. The club offered a venue for her continuing advocacy of the *RCSW Report*'s Recommendations,

> Of course the important thing, I think, is to keep moving forward. I have got the Toronto BPW Club to pass resolutions for the Ontario government on Succession duties, Devolution of Estate Act, etc to bring to these the concept of Equal partnership in marriage (or at least at its dissolution by death).[13]

One such resolution, which was advanced to the national level by the TBPWC, was Resolution No. 5/78 on equality, which moved for action by the Canadian Human Rights Commission on equal work legislation; but MacGill also insisted that pressure be put on the government. When a friendly amendment suggested that the words "as soon as possible" should be inserted, MacGill strongly advised against it: "[I]f we say "as soon as possible" we are letting them off the hook. The [federal Human Rights] Act actually came into being in 1977 and why should we let them off the hook. It is due now. It is July and they are late."[14] These efforts were rewarded; the Commission adopted the

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[12] NLAC MG31-K7 Volume 21 File 13: National Council of Women: Correspondence, 1970-1971. Letter to MacGill from Charlotte VanDine, President of CFPBWC, 15 February 1971. Letter to Mrs. Gladys Worthington, Chairman, Public Affairs from Charlotte VanDine 11 April 1971 and Letter to Sophie Steadman from Charlotte VanDine 11 April 1971.

[13] NLAC MG31-K7 Volume 21 File 18: Ogilvie, Doris: Correspondence, 1967-1978. MacGill's Letter to Doris Ogilvie 3 February 1973.

[14] THEREFOR BE IT RESOLVED THAT The [CFBPWC] urge the Canadian Human Rights Commission: a) to issue just and equitable guidelines indicating the extent to which, and the manner in which differences in remuneration between male and female employees shall be permitted,
b) to include these provision in Regulation to the act within six months of the Act coming into force.
NLAC MG31-K7 Volume 7 File 22: 26th Convention: Minutes, 1978.

principle of equal pay for work of equal value in 1978.[15] This was a significant victory for the CFBPWC which had been calling for equal pay legislation since 1930.

Organizing for Action

National Action Committee on the Status of Women (NAC)

Under the chairmanship of Laura Sabia, the Committee of Equality of Women in Canada (CEW), had played a critical role in the creation of the RCSW. On 6 January 1971, Sabia wrote to various women's organizations urging them to renew the CEW's work, this time, towards the implementation of the *RCSW Report*. She argued that "Only in joint action can we make sure that the Report will not gather dust on some Parliamentary shelf."[16]

Elsie Gregory MacGill strongly supported this united action. Key feminist groups, such as the Voice of Women (VOW) and the Women's Teachers' Federation came together during 1971, to form with the CEW the National Ad Hoc Action Committee on

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For further information on this resolution see: "Canadian Human Rights Act – 1975 Bill C-72, First Reading July 21, 1975 1976-16", 113."Canadian Human Rights Act – 1975 – Bill C-72 1976-17", 114. *The Business and Professional Woman*, Volume XXV No. 3 (January-February 1977). "CFBPWC Delegation Meets Federal Cabinet Minister of Human Rights Bill C-25", *The Business and Professional Woman.* Volume XXXV, No. 4 (March-April 1977), 2-4.

[15] Jacquella Newman and Lina A. White, *Women, Politics, and Public Policy: The Political Struggles of Canadian Women*, (Toronto: Oxford University Press, 2006), 229-230. See also: Morris, "No More Than Simple Justice", 370, 372-374.

[16] NLAC MG31-K7 Volume 22 File 24: Sabia, Laura: Correspondence, 1971. Generic letter to women's organization presidents, 6 January 1971.

the Status of Women.[17] In April 1972 these women organized a conference entitled "Strategy for Change". The objective of the event was "to join together [the] individual strengths and powers to bring about changes in the quality of life of the women of this country", through workshops, meetings, and plenary sessions. [18] Ultimately, it culminated in the removal of "ad hoc" from the organization and the full realization of the new National Action Committee on the Status of Women (NAC).[19]

MacGill had two significant roles during the conference. First, she served as a guide during the plenary sessions both on the RCSW Recommendations, and on the subsequent resolutions produced at the conference.[20] Kay Macpherson, a prominent member of VOW and future NAC president, related, "Elsie MacGill, who later designed and organized the system by which NAC's annual resolutions can be consolidated and catalogued, worked solidly on addressing the resolutions. She had been one of the strongest feminist powers in the Commission, and she knew what was important", including such topics as of day care, family planning, and equal pay.[21]

Secondly, MacGill also served as a public speaker at the conference alongside Florence Bird, where she challenged the delegates to remain committed towards the implementation of RCSW Recommendations:

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[17] Jill Vickers, Pauline Rankin and Christine Appelle, *Politics as if Women Mattered: A Political Analysis of the National Action Committee on the Status of Women,* (Toronto: University of Toronto Press, 1993.), 4, 73.
[18] *Report of "Strategy for Change" Convention of Women in Canada,"* Toronto, Ontario "Plan" 7-9 April 1972, 1-2, 24-25.
[19] Vickers, 73.
[20] Kay Macpherson, *When in Doubt, Do Both: The Times of My Life,* (Toronto: University of Toronto Press, 1994), 154-5.
[21] Ibid.

> Since publication of the Report only about 25 of the 104 recommendations directed to the Federal Government, and only one or two of the 40 directed to provinces or municipalities have been acted upon. Change is strictly "slow motion". [22]

MacGill suggested that members in the government resisted change since it could affect their established position in society. But, she also asked her audience if it was willing to fight for the *RCSW Report,*

> But how deeply converted are we at this Conference? How profound is our conviction that implementation is of tremendous importance? Will we go out into our communities and enlist the support of local groups? Will we set up a roster of knowledgeable speakers to provide wide coverage on the subject – engage in dialogue on the recommendations with the heads of our public institutions, managers of our local banks, business and industries employing many women – explain the recommendations to professionals in the media – enlist support among the law enforcement officials – work for political effectiveness as candidates and voters? [23]

MacGill strongly believed that implementing these recommendations would lead to full democracy in Canada. As a result, she advocated full commitment to the RCSW Recommendations, which in her view, promised a new and better future for the whole of Canadian society,

> The occasional hostility and fear met by the Commission during its cross-country hearings is giving way to a more generous understanding of how the changes will help "my daughter when she grows up". Today the subject of status of women is recognized for what It really is – not a battle of the sexes – but a part of the democratization of our society. It is an issue of national importance that warrants total commitment.[24]

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[22] NLAC MG31-K7 Volume 10 File 19: Briefs: Report of "Strategy for Change" Convention of Women in Canada, 1972. For Bird's Speech see: *Report of "Strategy for Change" Convention of Women in Canada*, Toronto, Ontario. April 7-9, 1972, Appendix: Florence Bird's Speech, 7April 1972.
[23] *Report of "Strategy for Change" Convention of Women in Canada,"* Toronto, Ontario April 7-9, 1972, " Appendix: MacGill's Speech, 8 April 1972.
[24] Ibid.

Beyond serving as a founding member and speaker at the conference, MacGill remained an active member of NAC. In addition, she also authored NAC's first constitution and its subsequent Index of Policy Recommendations between 1972 and 1978.[25] According to NAC member Brigid O'Reilly, MacGill valued the importance of order and structure, and ensured an information flow between committees and the whole organization. Moreover, she noted that MacGill introduced "archival thinking" to NAC, to help build its legacy for future efforts.[26] Macpherson confirms these ideas, as she credited MacGill as the "continuing architect of NAC's organization".[27]

MacGill also provided fundamental guidance to the leadership of NAC. Dr. Lorna Marsden, who led NAC between 1975 and 1977, considers MacGill as an indispensable guide on account of her knowledge.[28] She recalled that MacGill had the ability to "hone in like a mosquito" on the key issues that needed to be addressed in an organized manner. Kay Macpherson, who succeeded Marsden as president, confirmed the importance of MacGill's role, recalling how both she and Marsden were recipients of MacGill's daily phone calls pertaining to the work at hand.[29] Finally, as with the CFBPWC, MacGill also became involved with presentations of briefs and resolutions.[30] She additionally served on a variety of committees, including the Constitution Committee, Chair of the Nomination Committee, and the Person's Year Committee in

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[25] Vickers, 185, 211, 243.
[26] Phone Interview with Brigid O'Reilly September 2006.
[27] Macpherson, 151.
[28] Vickers, 184-186.
[29] In fact, Marsden maintained that the telephone was a key factor in the success of the women's movement. Macpherson, 157.
[30] In a letter to Doris Ogilvie in 1978, MacGill recalled a presentation to the federal government she had participated in addressing the need to follow up on the RCSW recommendations. NLAC MG31-K7 Volume 21 File 18: Ogilvie, Doris: Correspondence, 1967-1978. MacGill's letter to Doris, 30 March 1978.

1979.[31] Indeed, MacGill's key contribution, Marsden recalled, was to provide advice and support on how to best achieve projected goals.[32]

Ontario Committee on the Status of Women (OCSW)

After 1970, Elsie MacGill was also actively involved in the Ontario Committee on the Status of Women (OCSW). The OCSW was the first provincial organization founded to implement the recommendations of RCSW.[33] While NAC was pushing for the implementation of the RCSW recommendations at the national level through various lobbying efforts, the OCSW operated in similar ways at the provincial level.

The OCSW allowed MacGill to be more fully involved in matters of great importance to her, including, equal pay, human rights, and pensions.[34] MacGill contributed directly to the preparation of the OCSW's brief submitted to the provincial government which expressed its views on the proposed review of the Human Rights Code. MacGill's imprint clearly appears in the opening two pages of the brief:

> First, we deplore most heartily the low priority given to "sex", "age", and "marital status" as a basis for discrimination in comparison with "race, creed, colour, nationality"... Second, we believe that the enforcement function of the

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[31] NLAC MG31-K7 Volume 10 File 14: NACSW – Minutes of Executive – 1978-1980. NLAC MG31-K7 Volume 10 File 15: NAC Nominations 1975.
[32] Interview with Dr. Lorna Marsden, 8 August 2006.
[33] Vickers, 12-13.
Between 1971 and 1981 the OCSW was extremely active, producing 33 briefs, 31 leaflets, and 27 newsletters to keep members informed and active. Macpherson, 152.
[34] NLAC MG31-K7 Volume 19 File 1: Equal Pay for Equal Work: Reports, Speeches and Briefs, 1968-1979. NLAC MG31-K7 Volume 22 File 14: Pensions: Reports, Briefs and Correspondence, 1973-1978. "Towards Equity in the Pension System" A Brief Presented to the Royal Commission on the State of Pensions in Ontario by the Ontario Committee on the Status of Women, December 1977, 1.

> Commission must be utilized more frequently than its conciliatory one. Third, we regard as an absolute necessity the enhancement of the Commission's educational function...[35]

MacGill's role within the OCSW is best summed up by Wendy Lawrence, who worked with her at the time, and recalled that, during meetings she "was attentive, but not attention-seeking. She would speak usually if prompted by others seeking her expertise. She was also witty and cheerful, though could also be ironical and satirical". Moreover she recalled, "[w]hen I met her [MacGill], she was "retired"... and less formally active. She had already achieved much, but was in the OCSW as a supporter of action on issues she cared about..." She was a " "role model" [an] achieving woman of the previous generation, but also a feminist and activist and link to earlier feminism." Ultimately, Lawrence identified MacGill as a key link bridging the two generations of feminists and an important role model and mentor.[36]

1975 – International Women's Year

In 1974, the United Nations declared the year 1975 International Women's Year (IWY).[37] This decision led to the UN World Conference on Women in Mexico City, and

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[35] NLAC MG31-K7 Volume 22 File 1: Ontario Human Rights Commission: Briefs and Recommendations, n.d., 1972-1976. A Brief for the Human Rights Commission of the Province on Ontario, "Recommended Changes in the Ontario Human Rights Code" Submitted by The Ontario Committee on the Status of Women, Submitted May 19, 1976, pages 1-2.

[36] Interview with Wendy Lawrence, 19 April 2007.

[37] Devaki Jain, *Women, Development, and the UN: A Sixty-Year Quest for Equality and Justice,* (Bloomington: Indiana University Press, 2005), 66-67.

to the UN Decade for Women from 1976 to 1985.[38] These international events led to a wide range of activities within the individual member states of the UN.

MacGill, not surprisingly, got involved in many ways. She believed that regardless of the negative views held by some, the year's activities were not a waste of money; rather, they offered an opportunity to focus on women's situation. In her view, IWY should act as a catalyst in setting specific goals, with the intent of achieving them by the year's end. Early on in 1975, MacGill was asked to be part of a special federal speaker's bureau for IWY that was being set up by the Privy Council Office, in Ottawa, a request which provides evidence of her reputation as a leader in the Canadian women's movement.

Through her participation in the speaker's bureau she was able to take part in a wide variety of events. It also provided further opportunity to link engineering and women's issues. For example, she spoke in a panel entitled, "How Some Women Have Broken Out of the Stereotype" at the Action '75+ International Women's Year Conference in Ottawa, Ontario on 15 October 1975.[39] In this panel she spoke on the topic of women engineers, and discussed the remaining challenges that women faced in relation to their professional aspirations in the field. She reiterated her belief that if work is too dangerous for a woman that the same is also true for men.[40]

MacGill gave additional addresses to the Tuesday Luncheon Club, St. Lawrence College, and The Nursing Administration. She was also involved in the Federation of

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[38] For more information see: Hilkka Pietilä, *The Unfinished Story of Women and the United Nations* (New York: UN Non-Governmental Liaison Service, 2007), 38-39, 42-43.

[39] NLAC MG31-K7 Volume 20 File 1: International Women's Year Conference: Reports and Panel Discussions, 1975. MacGill's address as part of Panel II "How some women have broken out of the stereotype".

[40] Ibid., 4

Women Teachers Association of Ontario's IWY Film "Visible Women", and the IWY Celebration at the Canadian National Exhibition in Toronto, where she sat at the head table and participated as a panelist.[41]

The Canadian Federation of Business and Professional Women's Clubs

While she was closely involved in the creation of new feminist organizations, MacGill maintained her ties with the Canadian Federation of Business and Professional Women's Clubs (CFBPWC).[42] Here also, MacGill focused her energies on those issues that concerned her the most. These included projects centered on the elimination of violence against women, and the Ontario Women's Resource Centre (OWRC). The celebration of IWY acted as a strong incentive to engage the clubs in a reform agenda.

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[41] NLAC MG31-K7 Volume 7 File 21: Speeches Given by E.G. MacGill to CFBPWC Conference 1958-1964, 1975, NLAC MG31-K7 Miscellaneous Correspondence 1960-1978. NLAC MG31-K7 Volume 15 File 8: Awards and Honours: Press Clippings etc. NLAC MG31-K7 Volume 15 File 9: Miscellaneous Correspondence (1948-1980). NLAC MG31-K7 Volume 21 File 10: Miscellaneous Speeches by E.G. MacGill, 1963-1972, MacGill did not actually appear in the film, but she did participate in its making, providing information, and attending its filming on 18 April 1975, along with other key women including Miss Marion Royce, Ms. Maryon Kantroff, Ms. Laura Sabia, Mrs. Sandra Birenmeryer, Ms. Madeleine Parent, and Ms. Becky Kane. NLAC MG31-K7 Volume 19 File 9: Federation of Women's Teachers' Association of Ontario: Correspondence 1975. Letters dated April 1975 to September 1975 from Jean Cochrane, the project's Executive Assistant. NLAC MG31-K7 Volume 20 File 2: International Women's Year: Notes, Reports, and Correspondence, 1975. MacGill's rough notes on IWY 1975. Panel – Where do we go from here – CNEA – IWY Luncheon/IWY Day, 15 August 1975.

[42] The extensive nature of MacGill's continued involvement in the Canadian Federation of Business and Professional Women's Clubs is impossible to document in full detail within the scope of the present work. Further information regarding her varied roles includes work on Bill C-25 on the federal Human Rights Legislation to the moderation of special panels within her home club of Toronto. See: "CFBPWC Delegation Meets Federal Cabinet Ministers on Human Rights Bill C-25, *The Business and Professional Woman*, Volume XXXV, No. 4 (March-April 1977), 2-4.
"All-Male Panel at Toronto BPW, Women-The Task is Yours", *The Business and Professional Woman*, Volume XXXV, No. 8 (January-February 1978), 10.

Indeed, MacGill wanted the CFBPWC to be proud of its achievements during that special year:

> My push for IWY is aimed at trying to get each Club, organization association, group etc. focusing its attention on some one (or more) aspects toward accomplishing some specific object – of which it can be said in years to come – "THIS WE OBTAINED IN 1975, I.W. YEAR".[43]

Violence Against Women

MacGill was keenly interested in the problem of violence against women. Her niece, Elizabeth Hughes Schneewind, notes that MacGill was instrumental in getting the CFBPWC to address this topic, as it was not automatically taken up.[44] This is not surprising, since the RCSW itself had underplayed the issue with recommendations solely directed to legislative change under the *Criminal Code*.[45] As illustrated in the "Final Report of Ad Hoc Committee Dealing with Rape" in November 1975, violence against women was the focus of the TBPWC's IWY project. MacGill served as co-

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[43] NLAC MG31-K7 Volume 8 File 4: Miscellaneous Reports, Resolutions and Correspondence, 1963-1980. Letter from MacGill to Helen Verdin, 1st Vice President, International Affairs, CFBPWC, 4 April 1975.

[44] Phone Interview with Elizabeth Hughes Schneewind – July 2006.

[45] 152. We recommend that the words "of previously chaste character" be deleted from all the sections of the Criminal Code.

153. We recommend that the Criminal Code be amended to extend protection from sexual abuse to all young people, male and female, and protection to everyone from sexual exploitation either by false representation, use of force, threat, or the abuse of authority.

For additional information see the explanation within the report's main body. *Report of the Royal Commission on the Status of Women*, 373, 416. See also: Monique Bégin, "The Royal Commission on the Status of Women in Canada: Twenty Years Later", in *Challenging Times: The Women's Movement in Canada and the United States*, eds. Constance Backhouse and David H. Flaherty, (Montreal: McGill-Queen's Press, 1992), 31.

convenor of the committee.[46] The committee had two key goals: First to offer support to the Toronto Rape Crisis Centre; and second, "to [encourage the] reexamination of the current laws and the official handling of the criminal aspects of rape." To meet the first objective, a donation of one hundred dollars was given to the center in February 1975. Members were then encouraged to meet with MacGill to work on the latter objective.[47]

The ad hoc committee researched the problem and studied various reports and materials related to rape. In fact, in 1975, the topic of violence against women was beginning to be publicly addressed in the larger arena of Canadian society. As witnessed by the documents procured by the committee, including the Advisory Council on the Status of Women (ACSW)'s report entitled, "When Myths Masquerade as Reality: A Study of Rape" the need for public education and discussion was recognized. While the ACSW report provided further insight to the changes occurring in government legislation, and monitored the implementation of the RCSW Recommendations, it also took a more holistic look at rape in relation to the law, taking into consideration "the social, psychological and legal implications of rape laws".[48]

In this context the committee decided to organize a public workshop, with a panel of experts, with the express purpose of raising

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[46] NLAC MG31-K7 Volume 9 File 2: T.B. & P.W.C.: Miscellaneous Memoranda, Annual Reports and Correspondence, 1968-1979. TBPW Nov. 11, 1975 "Final Report of the Ad Hoc Committee Dealing with Rape. – IWY Project"

[47] Ibid.

[48] NLAC MG31-K7 Volume 22 File 18: Rape: Reports, Articles and Press Clippings, 1974-1980. Marcia H. Rioux "When Myths Masquerade as Reality: A Study of Rape" for the ACSW April 1975. For more information on the ACSW see: Sandra Burt, "The Advisory Council on the Status of Women: Possibilities and Limitations", in *Women and Political Representation in Canada, Women's Studies Series No. 2* eds. Manon Tremblay and Caroline Andrew, 115-144. (Ottawa: University of Ottawa Press, 1998); Morris "No More Than Simple Justice", 350-369.

> the general public's awareness regarding the serious psychological, physical and cultural implications of the widespread crime against women, Rape – the only crime in which the victim is doubly violated, first by the attacker and then by society. [49]

The committee hoped the panel would provide a better public understanding of rape and the laws pertaining to it, while at the same time publicizing the services offered by the Toronto Rape Crisis Centre. Fundamental to this objective were questions including: "What is the purpose of the Toronto Rape Crisis Centre? Why is it needed? How does it operate? How can women defend themselves against rape attacks? What evidence is needed to convict a rapist? What is the psychological damage to rape victims?"[50]

The workshop was held on 1 October 1975 at Toronto's St. Lawrence Centre. It opened with a short film entitled, "Rape Prevention Inquiry" followed by a panel that included the Honourable Judy LaMarsh as the moderator, and four panelists.[51] The event was a great success; more than 500 people attended, with an overflow of about one hundred people in the lobby. The final report submitted by the ad hoc committee described the event as a worthwhile endeavour by the TBPWC. It provided a public forum to those interested in this serious matter, and it demonstrated the club's active interest in current issues.[52]

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[49] NLAC MG31-K7 Volume 9 File 2: T.B. & P.W.C.: Miscellaneous Memoranda, Annual Reports and Correspondence, 1968-1979. G. Markvoork, "St. Lawrence Centre Public Meeting "Rape Workshop", 13 March 1975.

[50] Ibid.

[51] The panelists included Dr. Ruth Bray, a psychologist with the Forensic Service, Clarke Institute of Psychiatry; Dr. Lorenne M.G. Clark, associate professor, Department of Philosophy and Centre of Criminology, University of Toronto; Dr. Alex Gigerof, criminologist; and, Stephen G. Leggett Q.C., deputy crown attorney, judicial district of York. "Packed Meeting for Panel on Rape," *The Business and Professional Woman*, Volume XXIV No. 6, (January 1976), 16.

[52] NLAC MG31-K7 Volume 9 File 2: T.B. & P.W.C.: Miscellaneous Memoranda, Annual Reports and Correspondence, 1968-1979. TBPW Nov. 11, 1975 "Final Report

MacGill's dedication and leadership skills were readily acknowledged by the other club members; they remembered her as a determined feminist and someone who strongly advocated her thoughts and values. Liz Neville, president of TBPWC in 1979, benefited from MacGill's support and insights during her mandate, "She made me work really hard, but she was there beside me all the time, and brought herself to bear, ... when we [made] presentations... I just wouldn't have had the insight and the nerve...if I hadn't known that there were people like Elsie..."[53] Dormer Ellis, another club member recalled that MacGill did not regard obstacles as reasons to stop advancing: "What I noticed particularly about her, was that she always thought that you should find a way around obstacles. You can't just say well I can't do that, she'd say of course you can, you just find another way around it. And that was very useful in many aspects of life".[54]

The Ontario Women's Resource Centre (OWRC)

Elsie MacGill's key project as a club member was the creation of an Ontario Women's Resource Centre (OWRC). This was the largest project that the Ontario Clubs had ever undertaken, and MacGill worked very hard to see the project become reality. Elsie's mother, Helen Gregory MacGill, had provided a model for such a project through her successful work in 1910, which brought the Vancouver Women's Building into existence, with Helen as its first president.[55]

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of the Ad Hoc Committee Dealing with Rape. – IWY Project" See also: "Packed Meeting for Panel on Rape," *The Business and Professional Woman*, Volume XXIV No. 6, (January 1976), 16.

[53] Interview with Liz Neville, 15 July 2006.

[54] Interview with Dormer Ellis, 15 July 2006.

[55] NLAC MG31-K7 Volume 9 File 3: Correspondence Concerning Government and Private Support for Ont. Women's Resource Centre 1977.

The Ontario BPWC became formally involved with the idea through a resolution passed at the Annual Conference held in May 1974 regarding the province of Ontario's involvement with International Women's Year. The resolution had two specific goals, first "to collect, cross-reference and house archival material on women of Ontario and their activities in the Province," and second, "to provide space and facilities for individuals and groups to organize exhibits and view films related to [women's] activities."[56] The campaign to establish the OWRC was pursued from 1974 until 1979.[57] It included vigorous lobbying at the Toronto municipal level and at the Legislative Assembly of Ontario. Early on some members of provincial parliament, including Margaret Campbell, pushed the initiative forward.[58]

A large part of MacGill's activism was devoted to correspondence and public education. In lobbying the Honourable A.K. Meen, Q.C. the then Minister of Revenue, she argued that in using the Toronto Metropolitan Central Library for this project, the government would be restoring the building to its original function, "that is, a cultural centre, supported by public funds – but now on a grander scale...operated for the benefit of the women of Ontario." She argued that "[i]t would be a very positive action that

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NLAC MG31-K7 Volume 9 File 9: Miscellaneous Correspondence, Reports, Etc., 1975-1979. See also: MacGill, *My Mother the Judge*, 129-130.

[56] NLAC MG31-K7 Volume 9 File 9: Miscellaneous Correspondence, Reports, Etc., 1975-1979. Letter to The Honourable William S. Davis, Premier of Ontario, from Miss Margaret Jackson, Provincial President of OBPWC, 28 June 1974.

[57] Additional coverage of this effort is documented in *The Business and Professional Woman.* See: *The Business and Professional Woman,* Volume XXXIV No. 8. (June 1976), 17; "All-Out Effort to Acquire Ontario Women's Centre" *The Business and Professional Woman,* Volume XXXV, No. 1, (September – October 1976), 13.

[58] NLAC MG31-K7 Volume 9 File 3: Correspondence Concerning Government and Private Support for Ont. Women's Resource Centre 1977. Letter to The Honourable William G. Davis from Margaret Campbell, Q.C., M.P.P. St. George, 12 October 1976.

would emphasize the fact that the Government of Ontario has a real interest in and desire to improve the status of women throughout the province".[59]

MacGill worked in close partnership with two Ontario BPWC presidents who supported her initiative during 1975 and 1977. Margaret Jackson first approached the Women's Program Division of the Ministry of Labour and The Ontario Heritage Foundation in 1975; she also submitted the provincial proposal to Mr. Robert Welch, Q.C., Minister of Culture and Recreation on 23 March 1976.[60] Anne Frith, Jackson's successor, also backed MacGill's venture. In her September 1976 President's Message to the Ontario Clubs, Frith called on the members to participate actively, ""TAKE ACTION NOW" our theme for this biennium is a very appropriate one for our campaign for THE ONTARIO WOMEN'S RESOURCE CENTRE.... Elsie MacGill has been a real busy beaver working on this project". She reminded the clubs that "This is the biggest project that the B&P Clubs of Ontario have attempted and we must not fail.[61]

Clearly aware of the need to build a strong foundation within the Ontario Clubs for this project, MacGill prepared an outline explaining how women outside of Toronto

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[59] NLAC MG31-K7 Volume 9 File 3: Correspondence Concerning Government and Private Support for Ont. Women's Resource Centre 1977. Letter to Honourable A.K. Meen, Q.C., Minister of Revenue from E.G. MacGill, 18 December 1976.

[60] The first response Women's Program Division indicated that plans had not yet been finalized, while the latter noted that the Ontario Heritage Foundation simply did not have the resources to support the venture. NLAC MG31-K7 Volume 9 File 9: Miscellaneous Correspondence, Reports, Etc., 1975-1979. Letter from Ethel McLellan, Office of the Executive Coordinator, Women's Program Division, Ministry of Labour, 28 January 1975, Letter from Larry T. Ryan, Executive Director, Ontario Heritage Foundation, 21 March 1975. NLAC MG31-K7 Volume 9 File 9: Miscellaneous Correspondence, Reports, Etc., 1975-1979. Margaret Jackson's letter to Mr. Robert Welch, Q.C., Minister of Culture and Recreation, 23 March 1976.

[61] NLAC MG31-K7 Volume 9 File 7: Miscellaneous Correspondence, Reports, Etc., 1975-1979. President's Message – Anne Frith, September, 1976.

would benefit from the centre.[62] She was confident that the campaign would help revive the Ontario Clubs membership, and that the CFBPWC would support the venture. At the same time, she realized the potential damage which failure could cause to the clubs overall. In 1976, she wrote to, fellow club member, Helen Verdin, "After all, Helen, this Ont Womens Resource Centre was taken on as a project by the BPWC of Ontario at the Urging of CFBPWC 1972 Convention. We are in so deep as a result of this that we must proceed or BPWC reputation will suffer badly".[63] An early indication of the difficulties that lay ahead was CFBPWC's refusal to provide financial support through the Centenary Year Fund. The CFBPWC argued that the project did not fit the mandate of the Centenary Year Foundation, which was established "to assist in education seminars contributing to the development of women, and in the promotion of equal pay projects".[64]

Another problem MacGill faced had to do with competition for the vacated library building; in fact, her own alma matter, the Faculty of Applied Sciences and Engineering at the University of Toronto, was also interested in using it to set up a library. MacGill wrote to the Vice-President Planning to suggest a co-existence between the engineering

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[62] NLAC MG31-K7 Volume 9 File 7: Miscellaneous Correspondence, Reports, Etc., 1975-1979. Typed outline to BPW Ontario, 14 September 1976.
[63] NLAC MG31-K7 Volume 9 File 5: Correspondence and Mailing Lists, 1976-1977. MacGill's Letter to Helen Verdin, 21 September 1976.
[64] NLAC MG31-K7 Volume 9 File 5: Correspondence and Mailing Lists, 1976-1977. MacGill's letter to Helen Verdin, 21 September 1976, and Letter to Anne Frith from Edna de Sanctis, CFBPWC, 9 October 1976. MacGill had requested that the interest from the Centenary fund of $2,846.88 be applied to the project, noting that it was urged by EM4/74 Resolution. NLAC MG31-K7 Volume 8 File 3: Miscellaneous Report, Resolutions and Correspondence, 1963-1980, Letter from MacGill to "ELF" E.F. Forbes, 8 July 1976.

library and the proposed OWRC.[65] Unfortunately, the university was determined to occupy the entire space if it was granted.[66]

Finally, MacGill had to contend with a rival campaign which sought to obtain funding for the Women's Cultural Centre in Toronto.[67] This was a significant challenge as the Women's Cultural Centre was incorporated in July 1975, began private fund-raising and grant applications immediately, and acquired the Old Morgue building in Toronto in September 1976.[68] The OWRC campaign in contrast, was to have the province establish the centre in a style similar to a provincial museum such as the Royal Ontario Museum (ROM). MacGill tried to establish the differences between the two projects in a letter to Premier William G. Davis.[69] Moreover, she clarified the purpose of the OWRC, which was to ensure the legacy of Canadian women's contributions to society.[70] Despite decreasing support, MacGill continued to carry the cause, however, by 1979 there was little hope that the project would see the day. In fact, MacGill found

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[65] NLAC MG31-K7 Volume 9 File 3: Correspondence Concerning Government and Private Support for Ont. Women's Resource Centre 1977. Letter to Mr. K.S. Gregory, Vice President Planning, The University of Toronto from Elsie Gregory MacGill, 25 April 1977 RE: The Ontario Women's Resource Centre.

[66] NLAC MG31-K7 Volume 9 File 3: Correspondence Concerning Government and Private Support for Ont. Women's Resource Centre 1977. Letter to MacGill from K.S. Gregory, 27 June 1977.

[67] The centre was incorporated in July 1975. "New Women's Cultural Centre: There's Life in the Old Morgue Yet" *The Toronto Sun*, Friday 30 June 1978, 64.

[68] Ibid.

[69] She noted that the cultural centre did not have the provincial-wide focus of the OWRC, and as such was less complex. As a result of the OWRC's complexity, would allow it much greater interaction amongst women in Ontario, but it would also require government funds as its full funding was beyond what a volunteer organization could achieve. In fact, she equated the value of the OWRC to the Royal Ontario Museum, The Public Archives of Ontario and The Ontario Science Centre.
NLAC MG31-K7 Volume 9 File 3: Correspondence Concerning Government and Private Support for Ont. Women's Resource Centre 1977. Letter to Premier Davis, 16 July 1977 RE: Women's Resource Centre from MacGill.

[70] Ibid.

herself having to defend it even within the ranks of the Ontario BPWC.[71] Moreover, the Women's Cultural Centre, renamed the Pauline McGibbon Cultural Centre, was successfully established by 1979, and received the support of prominent women including Maryon Kantaroff, prominent artist and feminist, Judy LaMarsh, and celebrated author Margaret Atwood in addition to support from the Municipality of Metropolitan Toronto.[72]

Conclusion

After 1970, Elsie Gregory MacGill was a vital force in ensuring that the *Report of the Royal Commission on the Status of Women* was not forgotten. During the last years of her life she worked tirelessly with other women who shared her belief that the RCSW had established a solid framework to ensure change. Through the founding of organizations such as the National Action Committee on the Status of Women and the Ontario Committee on the Status of Women, Elsie and other feminists rapidly built an infrastructure to spearhead the implementation of the *RCSW Report.*

MacGill also continued her advocacy work within the ranks of the CFBPWC. The issues she was concerned with and the projects she was involved with shed additional light on her brand of feminism, which in turn promoted feminist institution building, the

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[71] NLAC MG31-K7 Volume 9 File 4: Correspondence and Reports, 1975-1979. Letter to Jeannine E. Mascotte, Director District #7 of the BPWC of Ontario from Elsie Gregory MacGill, Co-Chairman of the Women's Resource Centre, 10 May 1979.
[72] NLAC MG31-K7 Volume 9 File 4: Correspondence and Reports, 1975-1979. Helen Worthington, "Metro's women in arts to call old morgue home" *The Toronto Star* Friday September, 1976. NLAC MG31-K7 Volume 9 File 4: Correspondence and Reports, 1975-1979. "The Pauline McGibbon Cultural Centre – What It's All About..." Brochure. "The Ontario Women's Resource Centre Committee," *The Ontario Messenger,* Volume 27, No. 3, (May 1980).

protection of women's bodies, and women's historical legacy. Ultimately, Elsie Gregory MacGill's committed feminism which had been integral to the RCSW continued to move the issues of women's equality and rights forward within Canadian society long after the tabling of the *RCSW Report*.

Conclusion

Elsie Gregory MacGill died at age 75, on 4 November 1980 in Cambridge, Massachusetts while visiting her sister, Helen MacGill Hughes, and brother-in-law, Everett Hughes.[1] She was remembered most appropriately by the creation of the Elsie Gregory MacGill Memorial Foundation in 1984, set-up jointly by her engineering and feminist colleagues – a testimony to the strong connections she had established with the two groups.[2] The award of five thousand dollars was to be given "to a person of exceptional achievement, who may direct it toward improving the physical environment and/or equality of opportunity for women, men and disabled persons in legal, educational, social or economic spheres."[3] The award could be directed to a Canadian university for further research in the disciplines of engineering and applied science, women's studies, educational methods within these areas, or to further the education of

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[1] MacGill had been suffering from a cough and had resisted going to a doctor. During her visit she was hospitalized, during which time she passed away.
Interview with Ann Soulsby, 7 August 2006.

[2] The list of Honourary Patrons and Trustees included in the brochure announcing the award provides further evidence of the connections MacGill had achieved in her lifetime such as: The Honourable Monique Bégin, The Honourable Florence Bird, The Honourable Muriel McQueen Fergusson, James C. Floyd, P.Eng, Ian A. Gray, P.Eng., James M. Ham, O.C., Dr. Helen MacGill Hughes; Margaret Hyndman, O.C., Harold L. Macklin, F.E.I.C.; James W. MacLaren, P.Eng., Kay MacPherson, C.M.; The Honourable Pauline McGibbon, Laura L. Sabia, O.C.; Kenneth F. Tupper, and, The Right Honourable John Turner C.C.
The trustees included: Paul B. Dilworth, P.Eng.; C.Alexander Geddes, P.Eng.; Lorna R. Marsden, Lucy I.M. Milne, Elizabeth M. Neville, [Chairperson]; Ross C. Norgrove, P.Eng.; Ann Soulsby, Charlotte I. VanDine.
Senator Lorna Marsden's Fonds at the National Archives of Canada (Gatineau, Québec), R/E 2007-0703 Volume 1. File: Trustees: Honorary Selection. "The Elsie Gregory MacGill Foundation" information brochure about foundation and award.

[3] Ibid.

the recipient at the post-graduate level.[4] A sculpture by Canadian artist Maryon Kantaroff was presented along with the monetary award. The sculpture itself symbolized MacGill's life, with one section representing the "flowing creativity and logical structured thought and action" and the other "representing the ancient female relationship of wise grandmother, mother and daughter". Parallel ridges linked the two sections to one another.[5]

This thesis has examined the public life of Elsie Gregory MacGill as an engineer, social reformer and feminist. MacGill received her education and pursued a career as an aeronautical engineer at a time when women's access to this male-dominated profession was extremely limited. In this respect this thesis confirms the importance of supportive family to a woman's educational and professional success. MacGill's professional commitment to engineering remained strong throughout her career. However, she became increasingly aware of the challenges and obstacles faced by women in her field,

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[4] The brochure summarized: "Elsie Gregory MacGill was recognized as an outstanding Canadian woman. Neither gender nor disability prevented her using her talent to serve her community and country. The ongoing tribute to her life and accomplishments, embodied in the award bearing her name, enables those who wish to honour her memory to support further research and study in the subjects most vital to her."
The first recipients of the award were: Professor Jeanne Lapointe, Laval University (1986), Professor Ursula Franklin, University of Toronto (1987), and Professor Dormer Ellis, Ontario Institute for Studies in Education (1988). Senator Lorna Marsden's Fonds at the National Archives of Canada (Gatineau, Québec), R/E 2007-0703 Volume 1. File: Trustees: Honorary Selection. "The Elsie Gregory MacGill Foundation" information brochure about foundation and award.

[5] The award continues to preserve MacGill's memory and advance her work. In 1995, it was transferred to the University of Toronto's Faculty of Arts and Science to oversee and administer. Senator Lorna Marsden's Fonds at the National Archives of Canada (Gatineau, Québec), R/E 2007-0703 Volume 1. File: EGMMF: 1986 Selection CMTEE. Letter December 5, 1995, to Darlene Frampton, Director of Public Relations, Faculty of Arts and Science, University of Toronto from Margaret Jackson, Treasurer, Elsie Gregory MacGill Memorial Foundation. "The Elsie Gregory MacGill Memorial Award" Information Sheet.

and responded by acting as a role model and mentor. Moreover, she urged engineers to reach out beyond their field so they could have an impact on Canadian society.

MacGill's professional trajectory indicates she did use the strategies of superperformance and innovation identified by Glazer and Slater.[6] However, she did not fall victim to subordination or isolation. Rather, she was able to assume a leadership role within engineering and the women's movement. Her successful wartime experience supports Rossiter's contention that women previously qualified as engineers were readily employed with the outbreak of war.[7] In contrast to the "engineeresses" studied by Amy Bix, MacGill worked during the war as a full-fledged engineer who even assumed managerial duties. Not surprisingly, MacGill formally opposed the creation of programs for women engineering aides in Canada during the postwar period.

MacGill's growing involvement in the Canadian women's movement was shaped by her family's legacy of feminism and by her identity as a professional engineer. She served as an important link between the two "waves" of the Canadian women's movement. For example MacGill and her colleagues within the Canadian Federation of Business and Professional Women (CFBPWC) continuously pressed for social reform and were instrumental in securing the Royal Commission on the Status of Women (RCSW).

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[6] Penina Migdal Glazer and Miriam Slater, *Unequal Colleagues: The Entrance of Women in the Professions, 1890-1940,* (New Brunswick: Rutgers University Press, 1987), 14, 210-211.

[7] Margaret Rossiter, *Women Scientists in America: Before Affirmative Action 1940-1972,* Volume 2, (Baltimore: The Johns Hopkins University Press, 1995), 14.

As we have seen, MacGill played a strong leadership role within RCSW and in the subsequent creation of the National Action Committee on the Status of Women (NAC). Her feminism was complex and multi-dimensional, thus making it difficult to classify. Her training as an engineer certainly shaped her activism. Ursula Franklin, herself a pioneering woman engineer and feminist, probably explains this the best:

> [Y]ou see in her life those two streams, one is a sense of justice that must have come from her mother's work, and the other is her real ability in design to focus on the task and those two things came together when after the RCSW...it became apparent that substantial action from the women themselves was required to make the recommendations...into genuine change...when NAC was created it was a good deal of Elsie's experience that went into NAC's constitution and into how it functioned, and that sense of functionality that the engineer brought and the task to be accomplished these are the results, how we best get this done, that together with her considerable mental capacity. And the RCSW had given her an enormous exposure to what women in the world, ... were facing ... [and] gave her an understanding of what was available to her as a design engineer to design and organize or help to design an organization that would translate the recommendations into some kind of reality.[8]

Significantly, Elsie MacGill's other views on engineering are still relevant today. Calls for increased numbers of women in engineering and for their better treatment within the profession have multiplied. As well, the need to broaden the scope of engineering and to increase its social relevance is being acknowledged at both the educational and professional levels.[9]

Clearly, there is a need for further research on Canadian women engineers. Additional studies may serve to answer such questions as: Are there other examples of

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[8] Interview with Dr. Ursula Franklin, 13 July 2006.

[9] For more information see: Sharon Aschaiek, Nicole Axworthy and Michael Mastromatteo, "Engineering in the Next 10", *Engineering Dimensions,* (July/August 2007), 54-64.
Gordon, Slemon, *The First Fifteen Years: A Brief History (1987-2002) of the Canadian Academy of Engineering,* (Ottawa: Canadian Academy of Engineering), 2004.
Gordon, Slemon, *Engineering Education in Canadian Universities: A Report from the Canadian Academy of Engineers,* Ottawa: Canadian Academy of Engineers, 1993.

women engineers endorsing feminism? If so, did they use similar coping strategies to those employed by MacGill and at what point and why did their feminism develop? What other fields of engineering did Canadian women engineers pursue? And finally, did their choice of field influence their individual experiences? In the meantime, this thesis cautions us against generalizations when assessing experiences of pioneering women in engineering. Although there were very few of them in Canada, they did not all subscribe to "universal constants", as Lilli Hornig reminds us in the case of women scientists and engineers in the United States.[10]

[10] Lilli Hornig, "Foreword," in Susan A. Ambrose, eds., *Journeys of Women in Science and Engineering: No Universal Constants?* (Philadelphia: Temple University Press, 1997), xii.

APPENDICES

Questionnaire Methodology

This thesis is mainly based on the written primary and secondary source materials. However, as noted, interviews with Elsie MacGill's family, friends and colleagues were used in order to add depth to the analysis. In March 2006 I was informed by the Protocol Officer for Ethics in Research at the University of Ottawa that I could proceed without a formal ethics review as:

> "Research for a critical biography about someone deceased should not require REB review because the term "research subjects" refers to living individuals. Article 1.1 (c) indicates that research about a living individual, particularly one in public life, or criticism of a living artist based exclusively on published or publicly available works, performances, archival materials, **or information derived from third-party interviews, is also usually not required to undergo ethics review, because such research involves no interaction with the person who is the subject of the public records.** Where the research involves interaction with an individual in public life or an artists as research subject by way of a request for an interview or for access to private papers, the ethics review should focus only on whether these requests will be made in accordance with appropriate ethical and professional standards. Similarly, REBs should ensure that interviews with third parties are conducted according to a professional interview protocol and to Article 2.1 of this Policy, and that the potential interviewees be fully informed about publication of the interview and their identity. REBs should not require such third-party interviews to be controlled in any way by the primary focus of the research."

I was advised however to ensure that I provide all interviewees with a consent form, which was done. Interviewees were also advised that they could request confidentially if they desired.

In setting up the interviews, I contacted the interviewees and if possible sent the relevant questionnaire and interview schedule to them before the interview date. This allowed time for each person to review the questions and be ready to participate in the interview. The interviews were conducted in person, over the phone, and in some cases where interviews were note possible completed questionnaires or statements were either mailed or sent to the research by email.

Three questionnaire and interview outlines were created:

A) This questionnaire was prepared for interviewees who knew MacGill through the women's movement.
B) This questionnaire was prepared for interviewees who knew MacGill as an engineer.
C) This questionnaire was prepared for interviewees who knew MacGill as an engineer and through the women's movement.

The interviews provided excellent insights and my thanks are due to all who agreed to assist my study in this way.

Crystal Sissons
Université d'Ottawa / University of Ottawa
Doctorat/Ph.D. Candidate, B.Ed.
Women in Engineering

Advertisement for Interviews:

Friends, Relatives, Co-workers and Colleagues of Elsie Gregory MacGill (1905-1980) sought...

Elsie Gregory MacGill was a true Canadian pioneer. She was the first Canadian woman to earn a degree in engineering from The University of Toronto in 1927, and went on to become the first woman in North America to earn a masters degree in aeronautical engineering at The University of Michigan in 1929 and later also studying at The Michigan Institute of Technology. Upon relocating to Canada she held the position of Chief Aeronautical Engineer at Canadian Car and Foundry in Fort William, Ontario (presently Bombardier Inc., in Thunder Bay, Ontario) (1938-1943), and then went on to set up her own private consultation firm in aeronautics in Toronto. Elsie MacGill was also a full-fledge social reformer. While making a name for herself in engineering, she also was a key member of important organizations and committees including membership in the Canadian Federation of Business & Professional Women's Clubs; as a Commissioner on the Royal Commission on the Status of Women in Canada (1967-1970); and an inaugural member of the National Action Committee on the Status of Women in Canada (NAC).

Despite her impressive record, there is still no full-fledged scholarly biography dedicated to Elsie Gregory MacGill. Crystal Sissons, Ph.D. Candidate, at the University of Ottawa's Department of History is researching MacGill's life, career and activist activities in order to produce this kind of study. She is seeking the assistance of all those who have knowledge of and knew MacGill either personally or professionally, as their input will constitute a significant part of the material used for this biography. Individuals interested in assisting with this study will be asked to fill out a questionnaire and to sit for interviews.

She asks that those interested in providing assistance to contact her at , or via email

Crystal Sissons
Université d'Ottawa / University of Ottawa
Doctorat/Ph.D. Candidate, B.Ed.
Women in Engineering

To:_____

RE: Doctoral Study of Elsie Gregory MacGill

Hello, my name is Crystal Sissons, and I am a doctoral candidate at The University of Ottawa's Department of History. Under the guidance of my supervisor Dr. Ruby Heap, I am conducting a SSHRC funded biographical analysis of Elsie Gregory MacGill entitled:

Elsie Gregory MacGill: Engineering the Future and Building Bridges for Canadian Women, 1918-1970

In order to enhance my analysis of primary and secondary material I am conducting interviews with family, colleagues and associates of Elsie MacGill. It is my sincere hope that you would be willing to assist with my analysis with your insights into her life, career and/or activist activities.

If you would be willing to provide assistance to my analysis please contact me by phone (or email I will then send you the interview guide, and arrange a mutually approved meeting time for an interview. I would also be more than happy to discuss any questions or concerns you may have at that time. Enclosed you will find the advertisement for my study in order to provide you with additional context.

Thank you for taking the time to consider my request. I look forward to meeting you in the near future.

Sincerely

Crystal Sissons
Ph.D. Candidate
University of Ottawa
Department of History

Consent Form

Title of the study: **Elsie Gregory MacGill: Engineering the Future and Building Bridges for Canadian Women, 1918-1980**

Researcher: Crystal Sissons
Ph.D. Candidate

Supervisor: Dr. Ruby Heap
Associate Dean of the Faculty
of Graduate and Postdoctoral Studies
University of Ottawa

Invitation to Participate: I am invited to participate in the abovementioned research conducted by Crystal Sissons, who is preparing her doctoral thesis under the supervision of Professor Ruby Heap.

Purpose of the Study: The Ph.D. Thesis will consist of a biographical study of Elsie Gregory MacGill. MacGill was Canada's first woman engineer, graduating from the University of Toronto in 1927, and went on to become the first woman aeronautical engineer in North America, after earning her M.Sc. at the University of Michigan. In addition, MacGill was a social reformer and feminist activist. Through this study light will be shed on the key roles played by professional women engineers in Canada and professional women in general.

The history of women in science and engineering is still largely in its infancy in Canada. Groundbreaking research needs to be conducted in order to fill in the wide gaps in the historical record pertaining to these women and their contributions to Canadian society. In addition a case study of MacGill promises to shed some key insights into important themes of women's history: 1) The higher education of women in the 1920's and 1930's; 2) The entry of women into the "male" professions and the role of professional women in Canadian society; 3) The impact of war on the status of women, especially professional women; and 4) The configuration and impact of the women's movement between the two "waves".

Participation: My participation will consist essentially of an interview(s), (to a maximum of 2 sessions) of approximately an hour and a half to two hours in duration. The initial interview has been scheduled for:

Place:_____
Date:_____
Time:_____

Risks: My participation in this study will entail that I describe my connection to Elsie MacGill, my experiences with or in connection to her, and my views relating to her contribution to Canadian society as an engineer, a professional, a social reformer, and/or a feminist. In order to meet with the interviewer, I will have to set aside personal time, which will require an alteration in my schedule. There is also a minimal possibility that something I say during the interview I will want to change, rephrase or omit due to personal concerns. I have received assurance from the researcher that every effort will be made to minimize these risks. The researcher has promised to meet at my convenience and will provide me with a written transcript of the interview(s) at my request, if I express the wish to consult it (them).

Benefits: My participation in this study will allow the researcher to produce the first extensive scholarly study dedicated to Elsie Gregory MacGill which will enhance women's history in Canada, while ensuring an accessible legacy for present and future Canadian women, and specifically women engineers.

Confidentiality and anonymity: I understand that the contents of the interview(s) will be used only for documentation in the researcher's doctoral thesis and subsequent scholarly publications (articles, book chapters, the publication of dissertation in book format), and related oral presentations. My confidentiality will be protected should I request it by referring to my interview as an assigned number and not disclosing my name.

Conservation of data: The data collected by digital recorder, tape recording, written notes and written transcripts resulting there from will be kept in a secure manner such that only the researcher and her supervisor will have access to it. The materials will be conserved until the completion of the dissertation and resulting publications, after which time it will be deposited at the National Archives of Canada or similar archival holding.

Voluntary Participation: I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If I choose to withdraw, all data gathered until the time of withdrawal will be destroyed.

Acceptance: I,[Participant's Name] _____
agree to participate in the above research conducted by Crystal Sissons of the History Department, of the Faculty of Arts at the University of Ottawa, under the supervision of Dr. Ruby Heap, her thesis supervisor.

If I have any questions about the study, I may contact the researcher or her supervisor.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall,

There are two copies of the consent form, one of which is mine to keep.

Participant's signature: _____ Date:_____

Researcher's signature: _____ Date:_____

Questionnaire & Interview Outline A

Title of the study: Elsie Gregory MacGill: Engineering the Future and Building Bridges for Canadian Women, 1918-1980

PART A: Personal and Background Information: Please fill out the following information in BLOCK letters. Please feel free to continue your answers on the back of the page and/or attach additional pages.

Name:	
Address:	
Phone Number (and best time of day to call):	
Fax Number:	
Email:	
Age:	
Sex:	
Country of Birth:	
Profession:	
Educational Background: (institutions attended and degree(s) obtained)	
Religion	

1. Briefly, what is your background in relation to:
   a. Educational and professional involvement?
   b. Activism, advocacy and/or community involvement (at local/national/international levels)?

c. Engineering or related aspects of science & technology (i.e. science, manufacturing, committees)?
d. The Women's Movement?

2. a. How do you define the role of science and technology in society today?
b. Have science and technology change over time? If yes, how?
c. In your view, has science and technology been helpful to Canadians? What about women more specifically?
d. How would you define the role of the engineer in society?
e. In your view, what is the status of the engineering profession? Has it changed over time? If yes, how?

3. Do you think MacGill had a more difficult time being a woman engineer?

PART B: General information regarding your relationship with Elsie Gregory MacGill. Please fill out the following information in BLOCK letters, and be a specific as possible. Please feel free to continue your answers on the back of the page and/or attach additional pages.

1. In what capacity did you know Elsie Gregory MacGill?

2. When you think about MacGill, what are the first impressions, thoughts and/or memories that come to mind?

3. Through your association with her was apparent that she had personal aims and/or goals she wanted to achieve? If yes, did she have a specific vision of the future, and how did she envision working towards it? Explain.

4. What impact, if any, did Elsie Gregory MacGill have on your life? On the lives of others?

PART C: Elsie Gregory MacGill's Background, Education, Personality. Sections C, D, E and F will be discussed in detail during the interview. Please feel free to make notes prior to the interview.

1. Did MacGill ever discuss:

a. Her family background

b. Her educational background (Canadian: University of Toronto, American: University of Michigan and Michigan Institute of Technology)?

c. Her goals and ambitions?

d. Her views on women?

e. Her views on science and technology?

2. Did you have any exposure to her family (mother, sister, husband, children)? If yes, what can you relate about this and the family dynamics?

3. MacGill suffered from the after effects of polio. Did it hinder her in any way? If yes, how?

PART D: Elsie Gregory MacGill as a Feminist and Social Activist. Sections C, D, E and F will be discussed in detail during the interview. Please feel free to make notes prior to the interview.

1. Elsie MacGill has been described by many as a feminist. In your view is this a correct description? Explain.

2. Do you know how MacGill defined the role of women in society?

3. How did she interact with other a) women, b) men?

4. Were you aware of her contributions to women's organizations/committees at the provincial (Ontario), national and/or international levels? (i.e. Canadian Business and Professional Women's Club) If so, can you elaborate on her role, her view of the organization(s), and activism in relation to them?

5. Elsie Gregory MacGill was a Commissioner on the Royal Commission on the Status of Women (1967-1970). Were you aware of her activities in relation to this work? If so, can you elaborate on her role, her view of the organization, and activism in relation to it?

6. Elsie Gregory MacGill was a founding member of the National Action Committee on the Status of Women (NAC). Were you aware of her activities in relation to this work? If so, can you elaborate on her role, her view of the organization, and activism in relation to it?

7. In your opinion, did MacGill make any important contributions to the women's movement? Explain.

PART E: Elsie Gregory MacGill's Impact on Canadian Society. Sections C, D, E and F will be discussed in detail during the interview. Please feel free to make notes prior to the interview.

1. If you could sum up Elsie Gregory MacGill's life in one sentence, what would it be?

2. In your opinion did she make any major contributions to Canadian society in general? Explain.

PART F:

2. Are you be willing to participate in a follow-up interview if the need arises? YES NO

3. Do you know of anyone else who may have additional insights into her life, career, and public activism? Do you think they would be willing to be interviewed? If yes, do you have contact information for them?

4. Given the above questions can you think of any addition memories/thoughts/ideas related to Elsie Gregory MacGill's life, career and/or public activism that would be of use to the research?

Thank you very much for taking the time to assist in this important research!
Should you have any questions or concerns feel free to contact the researcher, Crystal Sissons, at:

Questionnaire & Interview Outline B

Title of the study: Elsie Gregory MacGill: Engineering the Future and Building Bridges for Canadian Women, 1918-1980

PART A: Personal and Background Information: Please fill out the following information in BLOCK letters. Please feel free to continue your answers on the back of the page and/or attach additional pages.

Name:	
Address:	
Phone Number (and best time of day to call):	( )
Fax Number:	( )
Email:	
Age:	
Sex:	
Country of Birth:	
Profession:	
Educational Background: (institutions attended and degree(s) obtained)	
Religion	

1. Briefly, what is your background in relation to:

    a. Engineering, science and technology (i.e. education, career, and/or relevant committees)

b. Engineering education and/or professional involvement in engineering? (i.e. involvement in education, activism, professional societies)?

2. a. How do you define the role of science and technology in society today?

b. Have science and technology changed over time? If yes, how?

c. In your view, has science & technology been helpful to Canadians? What about women more specifically?

d. How would you define the role of the engineer in society?

e. In your view, what is the status of the engineering profession? Has it changed in time? If yes, how?

3. Do you think MacGill had a more difficult time being a woman engineer?

4. What about women engineers today? Has the situation improved? Are there still problems?

PART B: General information regarding your relationship with Elsie Gregory MacGill. Please fill out the following information in BLOCK letters, and be a specific as possible. Please feel free to continue your answers on the back of the page and/or attach additional pages.

1. In what capacity did you know Elsie Gregory MacGill?

2. When you think about MacGill, what are the first impressions, thoughts and/or memories that come to mind?

3. Through your association with her were you able to depict what were her main goals? How did she see engineers & engineering as a part of these goals?

4. What impact, if any, did Elsie Gregory MacGill have on your professional/personal life?

5. In your view what impact did she have on the engineering profession as a whole?

PART C: Elsie Gregory MacGill's Background, Education, Personality. Sections C, D, E and F will be discussed in detail during the interview. Please feel free to make notes prior to the interview.

1. Did MacGill ever discuss:

c. Her family background

d. Her educational background (Canadian: University of Toronto, American: University of Michigan and Michigan Institute of Technology)?

e. Her goals and ambitions?

f. Her views on women?

g. Her views on science and technology?

2. Did you have any exposure to her family (mother, sister, husband, children)? If yes, what can you relate about this and the family dynamics?

3. MacGill suffered from the after effects of polio. Did it hinder her in any way? If yes, how?

PART D: Elsie Gregory MacGill as an Engineer. Sections C, D, E and F will be discussed in detail during the interview. Please feel free to make notes prior to the interview.

1. Did MacGill ever mention why she chose to study and practice in engineering?

2. What kind of Engineer was MacGill (i.e. work ethic, planning, leadership etc.,)

3. In your opinion did MacGill practice engineering differently than her male colleagues? If so how?

4. What kind of colleague was she?

5. What kind of leader was she?

6. How did she interact with other

   a) women,

   b) men?

7. How did she respond to the pressure at work? To set-backs?

8. Were you aware of any barriers that she had to face as a woman engineer? (i.e. discrimination based on her sex)

9. How did she respond to the celebrity generated by her role at CanCar during the war? Did this affect her colleagues? How?

10. Beyond MacGill's celebrated work at CanCar (Bombardier) in Fort William, ON (Thunder Bay, ON) were you aware of any other engineering projects she was involved in? Explain.

11. Were you aware of MacGill's views on the Second World War and on armed conflict in general? If so, what were they?

12. What role(s) did MacGill confer to women during and after the war?

13. In your opinion, was MacGill aware that she was a pioneer (as a woman) in the field? If she was aware of this, how did she react?

14. In your opinion, did MacGill make any important contributions to engineering? Explain.

PART E: Elsie Gregory MacGill's Impact on Canadian Society. Sections C, D, E and F will be discussed in detail during the interview. Please feel free to make notes prior to the interview.

1. If you could sum up Elsie Gregory MacGill's life in one sentence, what would it be?

2. In your opinion did she make any major contributions to Canadian society in general? Explain.

PART F:

1. Are you be willing to participate in a follow-up interview if the need arises? YES NO

2. Do you know of anyone else who may have additional insights into her life, career, and public activism? Do you think they would be willing to be interviewed? If yes, do you have contact information for them?

3. Given the above questions can you think of any addition memories/thoughts/ideas related to Elsie Gregory MacGill's life, career and/or public activism that would be of use to the research?

Thank you very much for taking the time to assist in this important research!
Should you have any questions or concerns feel free to contact the researcher, Crystal Sissons, at:

Questionnaire & Interview Outline C

Title of the study: Elsie Gregory MacGill: Engineering the Future and Building Bridges for Canadian Women, 1918-1980

PART A: Personal and Background Information: Please fill out the following information in BLOCK letters. Please feel free to continue your answers on the back of the page and/or attach additional pages.

Name:	
Address:	
Phone Number (and best time of day to call):	
Fax Number:	
Email:	
Age:	
Sex:	
Country of Birth:	
Profession:	
Educational Background: (institutions attended and degree(s) obtained)	
Religion	

1. Briefly, what is your background in relation to:

   a. Educational and professional involvement?
   b. Activism, advocacy and/or community involvement (at local/national/international levels)?

c. Engineering or related aspects of science & technology (i.e. science, manufacturing, committees)?
d. The Women's Movement?

e. Engineering, science and technology (i.e. education, career, and/or relevant committees)
f. Engineering education and/or professional involvement in engineering? (i.e. involvement in education, activism, professional societies)?

2. a. How do you define the role of science and technology in society today?
b. Have science and technology change over time? If yes, how?
c. In your view, has science and technology been helpful to Canadians? What about women more specifically?
d. How would you define the role of the engineer in society?
e. In your view, what is the status of the engineering profession? Has it changed over time? If yes, how?

3. Do you think MacGill had a more difficult time being a woman engineer?

PART B: General information regarding your relationship with Elsie Gregory MacGill. Please fill out the following information in BLOCK letters, and be a specific as possible. Please feel free to continue your answers on the back of the page and/or attach additional pages.

1. In what capacity did you know Elsie Gregory MacGill?

2. When you think about MacGill, what are the first impressions, thoughts and/or memories that come to mind?

3. Through your association with her was apparent that she had personal aims and/or goals she wanted to achieve? If yes, did she have a specific vision of the future, and how did she envision working towards it? Explain.

4. What impact, if any, did Elsie Gregory MacGill have on your life? On the lives of others?

PART C: Elsie Gregory MacGill's Background, Education, Personality. Sections C, D, E and F will be discussed in detail during the interview. Please feel free to make notes prior to the interview.

1. Did MacGill ever discuss:

a. Her family background

b. Her educational background (Canadian: University of Toronto, American: University of Michigan and Michigan Institute of Technology)?

c. Her goals and ambitions?

d. Her views on women?

e. Her views on science and technology?

2. Did you have any exposure to her family (mother, sister, husband, children)? If yes, what can you relate about this and the family dynamics?

3. MacGill suffered from the after effects of polio. Did it hinder her in any way? If yes, how?

PART D: Elsie Gregory MacGill as a Feminist and Social Activist. Sections C, D, E and F will be discussed in detail during the interview. Please feel free to make notes prior to the interview.

1. Elsie MacGill has been described by many as a feminist. In your view is this a correct description? Explain.

2. Do you know how MacGill defined the role of women in society?

3. How did she interact with other a) women, b) men?

4. Were you aware of her contributions to women's organizations/committees at the provincial (Ontario), national and/or international levels? (i.e. Canadian Business and Professional Women's Club) If so, can you elaborate on her role, her view of the organization(s), and activism in relation to them?

5. Elsie Gregory MacGill was a Commissioner on the Royal Commission on the Status of Women (1967-1970). Were you aware of her activities in relation to this work? If so, can you elaborate on her role, her view of the organization, and activism in relation to it?

6. Elsie Gregory MacGill was a founding member of the National Action Committee on the Status of Women (NAC). Were you aware of her activities in relation to this work? If so, can you elaborate on her role, her view of the organization, and activism in relation to it?

7. In your opinion, did MacGill make any important contributions to the women's movement? Explain.

PART E: Elsie Gregory MacGill as an Engineer. Sections C, D, E and F will be discussed in detail during the interview. Please feel free to make notes prior to the interview.

1. Did MacGill ever mention why she chose to study and practice in engineering?

2. What kind of Engineer was MacGill (i.e. work ethic, planning, leadership etc.,)

3. In your opinion did MacGill practice engineering differently than her male colleagues? If so how?

4. What kind of colleague was she?

5. What kind of leader was she?

6. How did she interact with other

    a) women,

    b) men?

7. How did she respond to the pressure at work? To set-backs?

8. Were you aware of any barriers that she had to face as a woman engineer? (i.e. discrimination based on her sex)

9. How did she respond to the celebrity generated by her role at CanCar during the war? Did this affect her colleagues? How?

10. Beyond MacGill's celebrated work at CanCar (Bombardier) in Fort William, ON (Thunder Bay, ON) were you aware of any other engineering projects she was involved in? Explain.

11. Were you aware of MacGill's views on the Second World War and on armed conflict in general? If so, what were they?

12. What role(s) did MacGill confer to women during and after the war?

13. In your opinion, was MacGill aware that she was a pioneer (as a woman) in the field? If she was aware of this, how did she react?

14. In your opinion, did MacGill make any important contributions to engineering? Explain.

PART G: Elsie Gregory MacGill's Impact on Canadian Society. Sections C, D, E and F will be discussed in detail during the interview. Please feel free to make notes prior to the interview.

1. If you could sum up Elsie Gregory MacGill's life in one sentence, what would it be?

2. In your opinion did she make any major contributions to Canadian society in general? Explain.

PART H:

1. Are you be willing to participate in a follow-up interview if the need arises? YES NO

2. Do you know of anyone else who may have additional insights into her life, career, and public activism? Do you think they would be willing to be interviewed? If yes, do you have contact information for them?

3. Given the above questions can you think of any addition memories/thoughts/ideas related to Elsie Gregory MacGill's life, career and/or public activism that would be of use to the research?

Thank you very much for taking the time to assist in this important research!
Should you have any questions or concerns feel free to contact the researcher, Crystal Sissons, at:

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