

vol. V 1992

Fontanus

from
the collections of
McGill University



LAWREN HARRIS, 1885-1970

Chesnut Tree, House, Barrie, 1916-1917

oil on canvas, 113 × 101.6 cm

signed lower right: LAWREN/HARRIS

purchased Dominion Gallery, Montreal 1964

66.008 (Dawes Collection)

This painting was exhibited in the Lawren Harris Retrospective Exhibition at the National Gallery of Canada in 1963.

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Preface

With the issue of this fifth volume of *Fontanus: from the collections of McGill University* it becomes quite evident that the journal fills a void as it was indeed intended to do when created in 1988. The goal then and now is to have a vehicle for the publication of articles that describe and interpret the large and very rich collections at this university. Although these collections are in constant use, many parts of them are yet relatively unknown, and the potential for wider use and the discovery of new and interesting items is enormous. This volume of *Fontanus* features a number of such new and unique pieces, which have long been in McGill's possession but which have only recently been discovered and properly described. The very existence of the journal invites research and study. Volume five also illustrates the fact that contributions come not only from the libraries but also from its museums and archives. The contributors include scholars from inside McGill as well as from several other Canadian universities.

The lead article describes a newly discovered manuscript containing a description of Verrazzano's voyage to the East Coast of North America in 1524, while the second article discusses some fascinating diaries in the McGill University Archives. The earliest Canadian Music Program (1786), until now totally unknown, is described in a brief article throwing light on musical life in Montreal at the end of the 18th century and during Mozart's lifetime. An unusual Samaritan manuscript containing the Five Books of Moses is the subject of yet another article, while a computerized version of Søren Kierkegaard's works is described and analyzed in the final article.

A special feature of this 1992 *Fontanus* volume is an article on Sidney Dawes and the collection of sixty-four Canadian paintings he donated to McGill in the 1960s. An album of colour reproductions of all the paintings forms the centre-piece of volume five. This article and album is one of the University's contributions to the Montreal 350th anniversary celebrations.

I find it encouraging to see how *Fontanus* has established itself as a scholarly journal during these five years and how it seems to attract more and more articles from different scholarly disciplines and from different scholars at McGill and other universities. The ever increasing number of contributions bodes well for the future of this unique library journal.

Dr. Hans Möller
Editor

The Voyage of Giovanni da Verrazzano A Newly Discovered Manuscript

by Dionysios Hatzopoulos and Richard Virr

The expedition of Giovanni da Verrazzano in 1524 under the auspices of Francis I of France was one of the important early voyages of discovery. The text of Verrazzano's report has been known to twentieth-century historians in five versions: four manuscripts and a printed text. However, nineteenth-century researchers knew of the existence of another manuscript text bound into the Verrazzano family copy of Ramusio's Delle navigatione et viaggi raccolta. This manuscript was recently identified in the holdings of the Department of Rare Books and Special Collections, McGill University Libraries, and is here described and printed for the first time.

L'expédition de Giovanni da Verrazzano en 1524 sous les auspices de François I^{er} de France fut l'un des premiers grands voyages d'exploration. Le récit de Verrazzano est connu des historiens du XX^e siècle en cinq versions: quatre manuscrits et un texte imprimé. Toutefois, les chercheurs du XIX^e siècle étaient au courant de l'existence d'un autre manuscrit incorporé à l'exemplaire de l'ouvrage de Ramusio Delle navigatione et viaggi raccolta appartenant à la famille Verrazzano. Ce manuscrit a récemment été découvert dans le fonds du département des livres rares et des collections spéciales des bibliothèques de l'Université McGill et il est décrit et reproduit ici pour la première fois.

On 17 January 1524, the French caravel *Dauphine* sailed west from an island in the Madeira group in the Atlantic Ocean off the coast of Portugal in search of the long sought western passage to the shores of Cathay. It was a small ship of one hundred tons with a crew of fifty men.¹ Commissioned by Francis I, King of France, the *Dauphine* was destined to explore the coast of North America. While Antoine de Conflans, an able navigator, was captain of the vessel, the Florentine Giovanni da Verrazzano was the leader of the expedition and the person responsible for carrying out the royal commission. After fifty days crossing the Atlantic, landfall was made in a place which has not been identified with precision. However, it has been suggested that the expedition may have reached the area close to where the North and South Carolina boundary reaches the ocean.²

Having reached land, the *Dauphine* sailed north along the Atlantic coast until it reached the Cape Breton-Newfoundland area. The

coast and its inhabitants were observed and described by Verrazzano and his account was the first to do so, containing important ethnological information.³ Sailing near Newfoundland, known to Verrazzano as "Bacalaia," a name given by the Portuguese who fished in the area annually, the ship turned eastward and set sail for Normandy.

Arrived in Dieppe, Verrazzano wrote a letter-report to Francis I summarizing the information collected during the voyage. This letter dated 8 July 1524 was probably written in Italian, Verrazzano's mother tongue, and was then to be translated into French. The Italian version of the letter was addressed to either Leonardo Tedaldi or to Thomaso Sartini, merchants in Lyons. The explorer asked them to forward the letter to Bonacorso Ruscellay, a banker in Rome. All three men were members of prominent Florentine families and backers of Verrazzano.⁴

While the final report in French, if there ever was one, has never been found, a number

TERZO VOLUME
DELLE NAVIGAZIONI ET VIAGGI

RACCOLTO GIA DA M. GIO. BATTISTA RAMUSIO

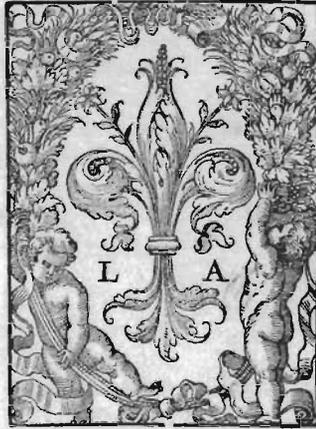
NEL QUALE SI CONTENGONO

Le Navigazioni al Mondo Nuouo, à gli Antichi incognito, fatte da Don Christoforo Colombo Genouefe, che fu il Primo à scoprirlo à i RE CATHOLICI, detto hora l'Indie occidentali, con gl' acquisti fatti da lui, & accresciuti poi da Fernando Cortefe, da Francesco Pizarro, & altri valorosi Capitani, in diuerse parti delle dette Indie, in nome di CARLO V. IMP. Con lo scoprire la gran Città di Temistitan nel Mexico, doue hora è detto la NVOVA SPAGNA, & la gran Prouincia del Perù, il grandissimo fiume Maragnon, Et altre Città, Regni, & Prouincie.

Le Navigazioni fatte dipoi alle dette Indie, poste nella parte verso Maestro Tramontana, dette hora la NVOVA FRANCIA, scoperte al RE CHRISTIANISS. La prima volta da Bertoni *(e)* Normandi, Et dipoi da Giouanni da Verrazzano Fiorentino, & dal Capitano Jacques Carthier.

Si come si legge nelle diuerse Relationi, tradotte dal Ramusio di Lingua Spagnuola & Francese nella nostra, & raccolte in questo volume.

Con Tavole di Geographia, che dimostrano il sito di diuerse Isole, Città, & Paesi.
Et Figure diuerse di Pianta, & altre cose à noi incognite.
Et con L'Indice copiosissimo di tutte le cose piu notabili in esso contenute.



IN VENETIA NELLA STAMPERIA DE' GIUNTI.
L'ANNO M D LXV.



Figure 1. Title page of the McGill copy of Ramusio with the Verrazzano arms at the bottom of the page.

The Voyage of Giovanni da Verrazzano

of versions of the Italian original survive. The known extant versions which carry the designations given to them by Alessandro Bacchiani are as follows:

R, the Cèllere version, now Morgan Ms. MA. 776, a manuscript of the sixteenth century, a complete text published first by Alessandro Bacchiani and in a modern edition with an English translation by Lawrence Wroth.⁵

F, the Magliabechian version in the National Library of Florence, again a complete text presumably a manuscript of the sixteenth century, published by Giuseppe Arcangeli in 1853 and Guglielmo Berchet in 1892.⁶

Rm, the Ramusio version in volume three of *Delle navigazioni et viaggi raccolta*, Venice, 1565, leaves 420-422, this contains only the first part of the letter and omits the cosmographical section.⁷

C, the Cimento fragment, in the Accademia del Cimento, bears the stamp of Ramusio and contains only the latter part of the cosmographical section. It was published by Alessandro Bacchiani.⁸

V, the Vatican version MS. Ottoboniano 2202, again probably a sixteenth century manuscript, described by Alessandro Bacchiani.⁹

Of the five versions, only R, F and V provide a complete text of the account of the voyage. Ramusio published only the first part of the text, i.e. the ethnographical portion, and the Cimento fragment (C) contains only the last two paragraphs of the cosmographical part.

In addition to these versions of the text available for study today, nineteenth century researchers of Verrazzano's life were aware of the existence of another manuscript of the report to Francis I, bound into the Verrazzano family's copy of Ramusio's work. The first to mention the existence of this manuscript was G.W. Greene in an article in the October 1837

issue of the *North American Review*.¹⁰ Shortly after the death of the last member of the Verrazzano family, Greene visited the family library, looking for information on the explorer. There he was informed by the person who had examined the volumes contained in the library previous to their being sold that "all...that was found in it relative to Giovanni [da Verrazzano] was a manuscript bound up in the family copy of Ramusio, and a few loose papers." Subsequently, Greene stated that he presumed that the document "was nothing more than a copy of the ... cosmographical description, or perhaps of the whole letter, from the Magliabechian manuscript."¹¹

Ramusio's three volume work had been sold sometime before 1837 to a Captain Napier, R.N. This was very probably Captain Henry Edward Napier (1789-1853), a well known collector.¹² Greene expressed in his article the wish that Napier would describe the manuscript, but nothing came of this. The manuscript was mentioned again in 1853 by Giuseppe Arcangeli, when he published the Magliabechian version (F).¹³ When in 1871, J.C. Brevoort mentioned Greene's visit to the Verrazzano library as well as his hypothesis about the manuscript's contents and value, it had again changed hands.¹⁴ Alessandro Bacchiani mentioned the manuscript again in 1909. He said that it had been acquired by Napier before 1846 (Greene had placed this acquisition before 1837); but, in any case by 1909, the manuscript was considered lost and its value still unknown.¹⁵

In fact, sometime following Napier's death in 1853, Ramusio's work was acquired by the Canadian industrialist Peter Redpath (1821-1894), a governor of McGill College, Montreal and a benefactor of the Library. In 1877, Redpath gave the Ramusio to the McGill College Library.¹⁶ The set is composed of three volumes: the first dates from 1563, the second from 1583 and the third from 1565. Each volume has the star-shaped coat of arms of the Verrazzano family pasted in the centre of the lower margin of the title page (Figure 1). In the third volume, the manuscript is bound in between ff. 422 and 423, that is, following the section in which Ramusio printed the first part of the Verrazzano text.

The manuscript, from now on called "McGill" for purposes of brevity, is composed of eight water-marked leaves, having text on both sides except for the verso of the fourth leaf and the eighth leaf which are blank. The water-mark has not been identified; it consists of the Medici arms surmounted by a royal crown.¹⁷ The text is written in black ink with a wide pen in the clear round hand of the mid-seventeenth century that was used in most of Italy at that time. The text is divided into two parts, each one beginning with an elaborate calligraphic initial – "R" for the first section and "G" for the second. The ink, profusely used in the initials, has now acquired the familiar rusty brown colour and its acids have begun to eat away the paper.

The first section contains the "parte cosmographia" omitted by Ramusio. The McGill text is closer to that of the Magliabechian (F) version than it is to the Cèllere (R) version, without, however, any indication that it was based on the former. In fact, all extant versions seem to descend from different copies of the original. "McGill" contains words which are missing or spelled differently in the other extant versions. In one case, R omits a long phrase which F and McGill contain: "...propinqui all equatore più all' occidente partecipando più al settentrione giusta la detta linea meridionale continovando il lido per fino in gradi 21 non trovando termine..." (lines 63-66).¹⁸

On the other hand, "McGill" contains a number of errors found in F and noted by Bacchiani which probably indicate that the two texts are closely related. Thus, the incomprehensible "...se lo equestre di detta terra in parte corrisponde..." of F is repeated verbatim in "McGill;" in R this appears as "...se il sito terrestre di detta terra in parte corrisponde..." Also, the McGill scribe was unable to read "Rossia" and wrote "orsia." But then while F has "...promontorio di capo di Buona Speranza...", "McGill" has the erroneous "...promontorio dicano di Buona Speranza..." Furthermore, while R has the comprehensible "...tutta questa terra...non giugnendo a la Asia ne a la Africa...", "McGill" and F have "...tutta questa nova terra...congiungendo all'Asia et Africa..." "Cimbri" in R becomes "Cimbi" in McGill. "A li antiqui noto" in R becomes the

incomprehensible "all' antiquinozio" in «McGill.» But then "McGill" says "...in latitudine gradi 32 dall' equatore..." while R says incorrectly "...in altitudine gradi xxxii da l'equatore..." All the extant versions contain numerous spelling and grammatical mistakes, and they all contain many variations in the equations for longitude and latitude.

The second part of the manuscript, written by the same hand, has for a title "Capitolo tratto dal Libro in lingua Fiamminga intitolato Mondo Nuovo, o vero, Descrizione Dell Indie Occidentali Raccolta di Molte Scritture e Note di diverse Nazioni da Gio. De Laet. Stampato in Leiden da Isaac Eltevier, l'Anno 1625. Con privilegio di 12. Anni dalli SSri. Stati Generali. Descrizione dell' indie Occidentali, Libro III. Virginia, Capitolo I. Foglio 74 – Il Viaggio di Gio. da Verrazzano." This is an Italian translation of Joannes de Laet's original Dutch version of *Nieuwe Wereldt ofte Beschrijvinghe van West-Indien...* published in 1625. A second edition, much revised, appeared in 1630. A Latin translation of this second Dutch edition was published by the Elzevirs in 1633: *Novus Orbis seu Descriptionis Indiae Occidentalis*, and a French translation, *L'histoire du Nouveau Monde...*, followed in 1642.¹⁹ This extract from De Laet, translated, as it is, from the Dutch first edition, suggests that the McGill manuscript should be dated to the period between 1625 when the text was first published and 1633 when the Latin translation appeared. It would seem probable that if the Latin version or the French (1642) had been available, the translation into Italian would have been made from one of them rather than from the Dutch. Furthermore, the McGill text follows neither the Latin nor the French translation, both made from the second edition of De Laet's text. All of this suggests very strongly that the McGill text should be dated in the first half of the seventeenth century.

The McGill text of Verrazzano's letter adds significantly to the available versions. Its provenance – commissioned by a member of the Verrazzano family to complete Ramusio's text – gives it additional importance. Of the extant versions, only the Vatican text (V) has not been published. Furthermore, the McGill text contains an important phrase as does F (lines

Supplementary with
belonging to the book.



Estami

Gia da narrare

a V. M. l'Ordine di detta Navigazione circa
La Cosmografia, come di sopra dissi, parton-
do dalli prefatti Scopuli, che sono situati nel
fines dell' Occidente all' estraguinduo, e nel Meri-
diano descritto ¶ Le Isole fortunate in Latitu-
dine gradi 32 dall' Equatore del Nostro Emis-
fero navigando all' Occidente ¶ fino alla 1^{ma}
Terra trovammo Leghe 1200, dico 1200, che con-
tengono Miglia 4000 computando Miglia 4 ¶

Lega secondo l'uso Massimo delli Cavalieri
 Geometriche giustam^{te}. La Proporzione rivifet-
 tima del Diametro alla Circonferenza gradi $92 \frac{54164}{472733}$
 conciosiacho essendo La corda dell' Arco
 del Massimo Circolo gradi $114 \frac{6}{11}$, e La Corda
 d' Paralello gradi 34 della 2^a Terra da noi
 trovata alla medesima Proporzione gradi $5 \frac{223}{450}$
 essere si mostra l'ambito di tutto il Circuito gra-
 di $300 \frac{313}{1575}$, che dando per ogni grado come confu-
 rano La maggior parte di esse, che fanno spari-
 mentato, rispondere in Terra per ogni grado del
 Cielo miglia $62 \frac{1}{2}$ fanno Miglia $1909 \frac{31}{60}$ gli
 repartiti in 360 per Venezia per ciascun Miglio in
 1909 e tanto vale ogni grado di Longitudine nel
 Paralello Sud. di gradi 34 sopra il glo per La Terra
 d' Meridiano di detti Scopuli, che fanno in gra-
 di 32 abbiano calcolata La ragione in qsto, che se
 detto Legho 1100 per terra, Linea in gradi 34 da
 Occidente in Oriente abbiamo trovato
 Adunque per esse a gradi $92 \frac{54164}{472733}$ e tanto ab-
 biamo navigato piu' all' Occidente, che non fu co-
 gnito agli antichi nel 2^o Paralello di gradi 34 .
 Questa distanza a noi fu nota per La Longitudi-
 ne

ne con varj Strumenti Navigando senza Eclipsi Lunari, o altro aspetto del Moto Solare, pigliando sempre La plenazione a disinglia ora, per La differenza faceva dall' uno all' altro Orizzonte correndo La Nave Geometrici, ne era noto L'Intervallo dall' uno Meridiano all' altro, come in un Libro to tutto amplam^{te} notato insieme col crescimento del Mare in disinglia Clima a ogni tempo, e ora, il che non inutile stima abbia a essere a Naviganti, spero meglio per La Ptoica conferirlo a V. S. M. Mia intenzione era di pervenire in questa Navigazione alcatraio all' estremo Oriente dell' Asia pensando trovare tale impedimento di Nuova Terra, che ho' trovata, e se per qualche ragione pensavo che la trovare non senza qualche fatica di penetrare all' Oceano Orientale, essere stimavo questa opinione di tutti gli Antichi, è stata credendo certam^{te}. Il nostro Oceano Orientale de India uno essere senza interposizione di Terra, questo afferma Aristotile, argomentando per varie similitudini, La che opinione è molto contraria a i Moderni, e L' esperienza falsa, imperocche La Terra è stata trovata da gli Antichi incognita un' altro modo a rispetto di che

a Loro fu noto, manifestam^{te} efere si mostra, e di
 maggiore della nostra Europa dell' Affica, e qua-
 si dell' Asia, se utam^{te} speculiamo La grandez-
 za di quella, come sotto brevità ne farei un poco di
 discorso a V. S. M. L' Equatore distante dal Meri-
 diano dall' Isola fortunata verso l' Occidente gra-
 di no $\frac{32066}{472001}$ L' Ispani verso l' Austro gradi 54
 hanno navigato dove hanno trovato Terra senza fine.
 Tornando poi al Settentrione giusta La detta Linea
 Meridionale correndo il Lido ~~per~~ fino in otto gradi
 Propinquo all' Equatore piu' all' Occidente par-
 ticipando piu' al Settentrione giusta La d^a Linea
 Meridionale continuando il Lido ~~per~~ fino in gradi
 21 non trovando termine gradi $199 \frac{29209}{467012}$ hanno
 navigato, gli giorni con gradi no $\frac{32066}{467011}$ fanno gra-
 di 110 $\frac{44036}{467013}$, e tanto hanno navigato d. d.
 Meridiano dall' Isola Fortunata piu' all' Occiden-
 te, nel Paralello gradi 21 d^a l' altitudine; questa di-
 stanza da noi non e' stata sperimentata ~~per~~ non
 aver fatto d. Navigazione potria variare poco piu'
 o meno, abbiamo quella calcolata Geometrica ~~per~~ La
 Notizia di molti Navigatieri, che L' hanno fe-
 quentata, gli affermano efere Legho 1600 giudicando
 B

¶ L'arbitrio, el' discorso della Nave secondo la
qualità d' Vento, ¶ La continua Navigazione,
Spero in breve, ne daremo ottima certitudine. Dall'
altra parte noi in questa nostra Navigazione fatta
¶ ordine di Vna S. e M. oltre i gradi 90, che dal
1.º Meridiano verso l' Occidente dalla 1.ª Terra
trovammo gradi 34, Navigando Leghe 300, dico Le-
ghe 300, infra Oriente, e Settentrione Leghe 400
quasi all' Oriente continuo, e sito della Terra sia-
mo ¶ venuti infino a gradi 50 Lasciando la Ter-
ra, che più tempo fa trovorno Li Quiritani quali
seguirno più al Settentrione ¶ venendo sino al pic-
colo Etico, e il fine Lasciando incognito.

¶ Giunta adunque la Latitudine Settentrionale con
la Meridionale, videlicet, gradi 54 con Li gradi
66 fanno gradi 120, che tanto contiene di Latitu-
dine l' Affrica con l' Europa, perchè giugnen-
do l' estremo dell' Europa, che sono i Limiti
di Norvegia, che stanno in gradi 71 con l' estre-
mo dell' Affrica, che è il Promontorio, dicono di
Buona Speranza in gradi 35 faranno solo 86, e
se l' Eguesse di d. Terra in parte corrisponde

al Lido Marittimo non è dubbio di grandezza L'aria ecceda, in tal forma troviamo al Globo della Terra molto maggiore non hanno tenuto gl' Astronichi a Repugnanti, e Matematici fanno gl'la rispetto all' acqua, sia minima, il che per esperienza L'opposito veggiamo, e gl'nto all' Aere corporale di spazio non meno La Terra, che L'acqua possedere giudichiamo come alla presenza, meglio spero, e con più ragione sperimentare, e mostrare a V. S. M. tutta gl'la nova Terra, o nuovo Mondo, che di sopra abbiamo narrato contiene, insieme congiungendo all' Africa, et Affrica, il che sappiamo certo, potria giugnere all' Europa con La Norvegia, e Africa, che sarebbe falso, secondo gl' Astronichi, gl' da Promontorio de Cimbi, quasi tutto il Settentrionale dicono essere stato navigato all' Oriente, circuendo circa il Mare Caspio, e il medesimo affermano resterebbe adunque sola interclusa da due Mari situate dall' Oriente, et Occidentale, e gl'le due ne chiude L'uno, e L'altro, perchè oltre ai gradi 54 dell' Equinoziale verso L'Estremo si stende all' Oriente per lungo spazio, e dal Settentrionale passando i gradi 66 segue tornando in

in verso l'Oriente, giugnendo fino a gradi 70
spers con Pajuto di V. S. M. ne avremo in breve
migliore certitudine, La glie Dio Onnipotente pro-
spere a causa veggiamo ottimo fine di gl'ora Nra
Cosmografia, che si adempia La Sacra Vocè dell'
Evangelio. Nella Haven Delfina in Norman-
dia in Porto di Diepa a di 01. di Luglio 1524.

Humilis Servitor
Joannes Verrazzanus

Capitolo tratto dal Libro in lingua Fiamminga
Intitolato Mondo Nuovo, o vero Descrizione
Dell' Indie Occidentali
Raccolta di molte Scritture, e Note di diver-
se Nazioni da Gio. De Laet. Stampato In —
Leiden da Isaac Elteuier
L' Anno 1625
Con privilegio di 12. Anni dalli SS.ⁿⁱ Stati Gene-
rali
Descrizio^{ne} dell' Indie Occidentali Libro III.
Virginia
Capitolo I. Foglio 74 —
IL Viaggio di Gio. da Verrazzano ▲



Giovanni da Verrazzano Fio-
rentino fece partenza con Cari-
ca di Compeario di Francesco Primo Re di Fran-
cia alli 17 di Gennaio 1524 dall' Isola di Canaria pren-
dendo il suo Corso verso Occidente con buon vento d'Oriente

E nel tempo di giorni 15 - fecero in circa 500 - Leghe, di-
poi indirizzorno Lo Corso d' Occidente a Settentrione,
di modo, che doppo altri 15 giorni di Viaggio Scopersero
una Terra nuova, che giaceua basso, Presso L'acqua,
e sopra Li fischio, che colà vedevano, giudicorno, che doves-
se esser abitata, e si misero verso Oostro; Veggioro
ben 50 - Leghe alle Coste sopra trovare un Comodo Porto,
Ma non trovandolo in quell' Acque verso Oostro, tornarono
verso Tramontana, dove medesimam^{te} non trovarono Porti,
Adi si misero verso Le Coste, e mandando il Bro
Coppanso verso Terra, trovarono molta gente alle vive,
o verso Lengue, gli pigliarono La fuga, e qualche vol-
ta restavano a guardare sopra Li Christiani con La
Bocca aperta, Ma finalm^{te} con segni certificati, che
non li faria fatto alcun' Incon^{to}. Li mostraron in buon
Luogo sopra venire a terra, et anco li presentaron delle
Loro vestovaglie. Il Popolo andava nudo eccitata, che
copriano Le Loro vergogna con tante Pellicine, erano di
color Bruno, neri di Capelli, altrimenti delli, e propor-
zionati; Il Lido era coperto di fina sabbia, che si esten-
deva in piccoli Muchi, e L'addietro è bello, et' alto fon-
do, e sperso di Alberi, questa Terra, che prima scoper-
sero era sopra L'altrezza di 34 gradi verso Tramontana
La

La Linea, in una buona, e Salubre aia, trovarono, che colà l' Estate La maggior parte regnavano venti di Maestro, e Ponente, con chiaro, e Lucido tempo, e poca pioggia, e se bene era un Lido aperto non trovarono male a starvi con le Navi, stante Le cofre sono Libere di scogli. Si partirono di quivi tenendosi lungo Le coste, gli trovarono estendosi verso Levante, e viderono continuand. molti fuochi a terra, dopo trovarono il paese estendosi verso Tramontana, il quale si mostrava molto piu bello, et Ameno, calarono La a Terra, e trovarono La gente simile all' antecedente, viderono molte vite, gli camminavano sopra gli alberi, gli al Loro paese potevano dar buoni frutti in caso fusero state ben coltivate, veleggiarono cosi avanti, secondo il Loro paese ben 100. Leghe dove trovarono una bella Riviera, dove si tirava di nuovo la Costa verso Oriente, gli proseguirono circa 50 Leghe, dove scoprirono un' Isola, gli aveva La forma triangolare, giacendo 50. Leghe dalla Pena ferma piena di Montagne, piene, e spesse di alberi, e ben abitata, gli nominarono Claudia, 50 Leghe piu avanti trovarono un buon Porto, dove trovono Gente molto buona, e trattabile, gli avevano un Re, che era vestito

con una Pelle di Cervo artificiosam^{te} inborata, trovarono fra di Loro molto Came Rosso, del q^{le} g^{li} salvatici facevano molto conto. Questa Terra, era giacente sopra l'altezza di gradi $41 \frac{2}{3}$ e si estendeva fra Oriente, e mezzo giorno, La bocca del Porto giaceva aperta verso Ponente, Largo mezza Lega, ma di dentro si tirava tra Oriente, e Tramontana in Leghe, e La veniva piu Largo, e piu Lungo, e fa' un golfo ben Largo di no- Leghe, nel q^{le} giacevano cinque piccole Islette, q^{li} erano molto belle, e fruttifere, nel mezzo, vel circa dentro di q^{sto} Porto vi è uno Scoglio di Pietra, a proposito di fare sopra un Castello, o Fortezza per difendere il Porto, si partirono di La Li 5. Maggio, e corsero avanti appreso Le Coste ben 150 Leghe trovando La terra quasi tutta sim^{il}, se non che era un poco piu alta con alcune Montagne, La costa si estendeva da so. Leghe verso Oriente, e doppo di nuovo verso Tramontana, trovarono colà La gente molto differente dall' Antecedente; Mentre sicome q^{lla} m^o stava piu gentile, e cortese, era q^{sta} molto rustica, e salvatica; sicché per nessun mezzo con q^{sti} potessero aver alcun Commercio; Erano vestiti con pelle d'

Cioi

Orsi, Caroni, e Pelli di Lince e Marini e altre Pelli
 pigliano il loro nutrimento quanto l'altre persone ima-
 ginasi dal pesce, e cacciano, e da alcuni Radici,
 che il Paese produce, non usavano al-
 cuna cosa di grano, ne medesima^{te} L'uscavano la
 Terra; quando osservarono il Paese si abbe le gronde,
 re alcuni fiumi, fonde usavano cambiare alcuna cosa
 usavano loro Supra li scogli, e lasciano a basso gli
 stromi, e all'incontro dimandavano Erbe, come
 da pescare, e simili cose, non usavano lasciare venire
 la gente a Terra per spogliargli le Cortesie de li spia-
 centosi. Sono però al dispetto loro penetrati glihe
 Lega in Terra, trovano poi con le fierie Supra la
 Terra, e poi scappavano nelle Boschi. Non trovano
 in Terra cosa di molto valore, che Boschi molto spul-
 si, e Montagne Salvatiche, glihe ben usavano avere
 in li alcuni Minerali, mentre il Legno aveva signe-
 li di spina dall'occhio pendenti. L'uscavano di la-
 mande il loro capi nudi Sino lungo le Coste, glihe
 trovavano più anco, e con fonde aperte senza alberi con
 Montagne alte fra terra, scoperto per un solo, ed
 giacevano vicino a terra, e fonde piccole con molte an-
 re, faccende molte loro parti, e Conchi da loro parti,
 capi

e così veleggiando avanti verso Greco vennero dopo un ve-
leggiando di 150. leghe, vennero alla Terra, o paese avan-
ti scoperto dalli Brittoni, all'altezza di 50. Gradi ap-
presso Tramontana; La Linea d'onde risolses ritornare
in Francia, et arrivorno a Diepe In luglio il detto An-
no 1524 - In questo raccolto Viaggio del Verrazzano tro-
viamo La Situazione, e condizione di questo Paese prof-
fand. descritto mentre il Paese in tal maniera si estende
entro, e fuori, come in parte abbiamo qui inteso, et ora
appresso sentiremo; Ma siccome lui in pochi Luoghi
fu a terra, non ha potuto Le condizioni de Paesi,
e Popoli più distintam^{te} penetrare. Vediamo ora noi più
diffusam^{te} penetrare cosa che gl' Inglese, e Opsi più
amplam^{te} hanno ritrovato, e messo in luce.

63-66) omitted in R. This calls into question Lawrence Wroth's assertion that R represents Verrazzano's own copy of the text.²⁰

The transcription of the McGill manuscript which follows includes both the Verrazzano text and the de Laet text. In the former, all var-

iations from the published Cèllere, Magliabechian and Cimento manuscripts have been noted, and every fifth line of "McGill" indicated in square brackets. As well, photographs of the McGill manuscript are printed. After more than a century of obscurity, this lost text of Verrazzano is now restored to view.

VERRAZZANO'S COSMOGRAPHY

Restami gia da narrare a V.S.M.¹ l'ordine di detta² navigazione circa³ la⁴ cosmografia, come di sopra dissi parten[5]do dalli⁵ prefatti⁶ scopuli che sono⁷ situati nel fine dell'⁸ occidentale all' antiquinozio,⁹ e nel meridiano¹⁰ descritto¹¹ per le¹² Insule Fortunate in latitudine¹³ gradi 32¹⁴ dall'¹⁵ equatore del¹⁶ nostro Emisfero¹⁷ navigando¹⁸ all'¹⁹ occidentale per fino alla²⁰ prima [10]terra trovammo²¹ leghe 1200,²² che contengono miglia²³ 4800 computando miglia 4²⁴ per lega²⁵ secondo l'uso maritimo delli navilieri.²⁶ Geometriche giustamente²⁷ la proporzione²⁸ sevisettima²⁹ del diametro alla circonferenza³⁰ gradi 92 [15] 54164/472733.³¹ Con cio sia che essendo³² la corda dell' arco³³ del massimo circolo³⁴ gradi 114 6/11, e³⁵ la corda del parallelo³⁶ gradi 34 della prima terra da noi trovata alla³⁷ medesima proporzione³⁸ gradi 95 223/450 essere si mostra³⁹ l'ambito di tutto il circuito⁴⁰ gra[20]di 300 313/1575⁴¹ che dando per ogni grado come confermano⁴² la maggior⁴³ parte di quelli che hanno sperimentato rispondere in terra alla⁴⁴ proporzione⁴⁵ del cielo miglia⁴⁶ 62 1/2 fariano⁴⁷ miglia 18759 31/126 quali⁴⁸ repartite⁴⁹ in 360 per veneria per ciascun miglio⁵⁰ 52 [25] 1989/9072.⁵¹ E tanto vale

¹. R: V. Mtà.

². F: dicta.

³. F: circha.

⁴. R: a la.

⁵. R: da li; F: delli.

⁶. R and F: prefati.

⁷. F: son.

⁸. F: dello.

⁹. R: a li antiqui noto; F: agli antiqui noto.

¹⁰. F: meredian.

¹¹. R: descripto.

¹². R: la.

¹³. R: altitudine di.

¹⁴. R: XXXII.

¹⁵. R: da l'; F: dallo.

¹⁶. R: nel.

¹⁷. R: Emisperio; F: emisperio.

¹⁸. R: navicammo.

¹⁹. R: a lo.

²⁰. R: per insino a la; F: allo.

²¹. F: troviamo.

²². Omitted in R and F.

²³. R: migla.

²⁴. R: quactro.

²⁵. R and F: legha.

²⁶. R: marictimo de navalieri; F: lo uso marittimo degli.

²⁷. R: geometricie iusta; F: geometrice giusta.

²⁸. R: proportione tripla senza; F: proportione tripla.

²⁹. R: sesquiseptima; F: tripla.

³⁰. R: a la circumferentia; F: circonferenza.

³¹. F: 92 5464/472733.

³². R: sendo.

³³. R: del archo; F: archo.

³⁴. R: circolo.

³⁵. F: et.

³⁶. R: pararello di.

³⁷. R: a la.

³⁸. R and F: proportione.

³⁹. R: monstra.

⁴⁰. R: el circolo; F: circolo.

⁴¹. R: 300 713/1515.

⁴². R: confermono.

⁴³. F: maggiore.

⁴⁴. R: a la.

⁴⁵. R and F: proportione.

⁴⁶. R: migla.

⁴⁷. R: farieno.

⁴⁸. F: quale.

⁴⁹. R and F: ripartite.

⁵⁰. R: ciaschuna migla; F: ciaschuno.

⁵¹. R: 52 989/9072.

ogni grado di longitudine nel parallelo sudetto⁵² di gradi 34 sopra il quale per la retta del meridiano di detti⁵³ scopuli, che stanno in gradi 32 abbiamo calcolata⁵⁴ la ragione in questo⁵⁵ che le dette leghe 1200 per retta linea in gradi 34 da⁵⁶ occidente in oriente abbiamo⁵⁷ trovato. Adunque per quelle⁵⁸ a gradi 92 54164/472733 e tanto abbiamo⁵⁹ navigato più all'⁶⁰ occidente, che non fù cognito agli antichi⁶¹ nel detto parallelo⁶² di gradi 34. Questa distanza⁶³ a noi fù nota per la longitudi[30]ne con vari⁶⁴ strumenti navigando⁶⁵ senza⁶⁶ eclipsi⁶⁷ lunari⁶⁸ o altro aspetto⁶⁹ per il⁷⁰ moto solare pigliando⁷¹ sempre la plenazione⁷² a qual si voglia ora⁷³ per la differenza⁷⁴ faceva dall' uno all' altro⁷⁵ orizzonte correndo la nave geometriche⁷⁶ ne era noto l'⁷⁷ interval[35]lo dall'⁷⁸ uno meridiano⁷⁹ all'⁸⁰ altro come in un⁸¹ libretto tutto amplamente notato⁸² insieme col crescimento del mare in qual si voglia clima a ogni tempo e⁸³ ora il⁸⁴ quale non inutile stimo abbia⁸⁵ a essere a naviganti.⁸⁶ Spero meglio⁸⁷ per la teorica conferirlo a [40]V.S.M.⁸⁸ Mia intenzione⁸⁹ era di pervenire in questa navigazione⁹⁰ al Cathaio⁹¹ all' estremo⁹² oriente dell'⁹³ Asia pensando⁹⁴ trovare tale impedimento di nuova terra quale hò trovata, e se per qualche ragione pensavo quella trovare non senza⁹⁵ qualche fregio⁹⁶ di penet[45]rare all'⁹⁷ Oceano Orientale. Essere stimavo⁹⁸ questa opinione⁹⁹ di tutti gl'¹⁰⁰ antichi è stata credendo certamente il¹⁰¹ nostro Oceano Orientale¹⁰² de India uno essere senza interposizione¹⁰³ di terra. Questo afferma Aristotile¹⁰⁴ argumentando per varie similitudini. La quale opinione [50]è molto contraria a i¹⁰⁵ moderni e l' esperienza¹⁰⁶ falsa. Imperocchè¹⁰⁷ la terra è stata trovata da quelli¹⁰⁸ antichi incognita un altro modo¹⁰⁹ a rispetto di quella¹¹⁰ a loro fù

⁵². R: longitudine nel detto pararello; F: uno detto.

⁵³. R: del linea recta dal meredianio di dicti; F: el meredianio.

⁵⁴. R: habbiamo calculato; F: habbiamo calculata.

⁵⁵. R: impero.

⁵⁶. R: d'.

⁵⁷. R: habbiám perverria.

⁵⁸. R: quella e; F: e.

⁵⁹. R: habbiamo.

⁶⁰. R: a lo; F: allo.

⁶¹. R: a li; F: alli antiqui.

⁶². R: decto pararello.

⁶³. R and F: distantia.

⁶⁴. F: varii.

⁶⁵. F: navicando.

⁶⁶. R: sanza.

⁶⁷. F: eclissi.

⁶⁸. R: lunare.

⁶⁹. R: aspecto.

⁷⁰. F: al.

⁷¹. R: pigliando.

⁷². R and F: elevatione.

⁷³. R: hora.

⁷⁴. F: differentia.

⁷⁵. R: da l' uno et l'altro.

⁷⁶. R and F: geometricie.

⁷⁷. R: lo.

⁷⁸. R: de.

⁷⁹. R and F: meredianio.

⁸⁰. R: a l'.

⁸¹. R and F: uno.

⁸². R and F: ho notato.:

⁸³. R and F: et.

⁸⁴. R and F: el.

⁸⁵. R: existimo habbia; F: Habbia.

⁸⁶. R: ad navicanti; F: navicanti.

⁸⁷. R: miglore.

⁸⁸. R: con Vra Mta.

⁸⁹. R: intentione.

⁹⁰. R: navigatione; F: navicatione.

⁹¹. R and F: Cataio.

⁹². R: et a lo extremo; F: allo.

⁹³. R: de l'; F: della.

⁹⁴. R and F read: Asia non pensando.

⁹⁵. R: sanza.

⁹⁶. R: freto da; F: fresco.

⁹⁷. R: a lo; F: allo.

⁹⁸. R: existimavo. Et.

⁹⁹. F: oppinione.

¹⁰⁰. R: li; F: gli.

¹⁰¹. R and F: el.

¹⁰². R: occidentale.

¹⁰³. R and F: interpositione.

¹⁰⁴. R: Aristotele.

¹⁰⁵. Omitted in R and F.

¹⁰⁶. R: et alla experientia; F: et la experientia.

¹⁰⁷. R: impero che.

¹⁰⁸. R: a li; F: quegli.

¹⁰⁹. R and F: mondo.

¹¹⁰. R: quello.

noto. Manifestamente essere si mostra e¹¹¹ di maggiore¹¹² della nostra Europa, dell'¹¹³ Africa, e qua[55]si dell'¹¹⁴ Asia. Se rectamente¹¹⁵ speculiamo la grandezza¹¹⁶ di quella, come sotto brevità ne farò un poco di discorso a V.S.M.¹¹⁷ L' equatore distante dal meridiano dall' Insule¹¹⁸ Fortunate verso l' occidentale gradi 20 32060/472081¹¹⁹ l' Ispani¹²⁰ verso l' Austro gradi 54 [60]hanno navigato¹²¹ dove hanno trovato terra senza¹²² fine. Tornando poi al¹²³ settentrione giusta¹²⁴ la detta linea meridionale¹²⁵ correndo il lido¹²⁶ per fino¹²⁷ in otto¹²⁸ gradi propinqui all' equatore più all' occidentale partecipando più al settentrione giusta la detta linea [65]meridionale continuando il lido¹²⁹ per fino in gradi 21 non trovando termine¹³⁰ gradi 89 29709/46782¹³¹ hanno navigato,¹³² quali giunti con gradi 20 32060/46781 fanno gradi 110 44830/46783,¹³³ e tanto hanno navigato¹³⁴ dal detto meridiano dall' Isole Fortunate più all'¹³⁶ occiden[70]te, nel parallelo gradi 21 dell'¹³⁷ altitudine; questa distanza¹³⁸ da noi non è stata sperimentata¹³⁹ per non aver fatta¹⁴⁰ detta navigazione¹⁴¹ potria variare poco più o manco.¹⁴² Abbiamo¹⁴³ quella calcolata¹⁴⁴ geometrica¹⁴⁵ per la [75]notizia¹⁴⁶ di molti navicalieri,¹⁴⁷ che l'¹⁴⁸ hanno frequentata. Quali affermano essere legho¹⁴⁹ 1600, giudicando per l' arbitrio¹⁵⁰ el discorso della¹⁵¹ nave secondo la qualità¹⁵² del vento, per la continua¹⁵³ navigazione.¹⁵⁴ Spero in breve, ne daremo¹⁵⁵ ottima¹⁵⁶ certitudine. Dall'¹⁵⁷ altra parte noi in questa nostra¹⁵⁸ navigazione fatta¹⁵⁹ [80]per ordine di Vostra S.M.¹⁶⁰ oltre i gradi 92 che¹⁶¹ dal detto meridiano¹⁶² verso l'¹⁶³ occidentale dalla¹⁶⁴ prima terra troviamo¹⁶⁵ gradi 34, navigando¹⁶⁶ leghe 300, dico leghe 300, intra¹⁶⁷ oriente e¹⁶⁸ settentrione¹⁶⁹ leghe 400 quasi all'¹⁷⁰ oriente con-

- | | | | |
|------|--|------|----------------------------------|
| 111. | R: et. | 140. | R: havere facta; F: avere fatta. |
| 112. | F: maggiore grandezza. | 141. | R and F: navigatione. |
| 113. | R: de la. | 142. | F: mancho. |
| 114. | R: de la; F: della. | 143. | R and F: habbiamo. |
| 115. | F: rettamente. | 144. | F: calchulata. |
| 116. | R and F: grandeza. | 145. | R and F: geometricie. |
| 117. | R: V. Mta. | 146. | R and F: notitia. |
| 118. | R: de le isole; F: dalle. McGill omits ultra. | 147. | R: naveleri periti. |
| 119. | R: 20 32060/4781; F: 20 32060/47281. | 148. | F: la. |
| 120. | R: l' Hispani; F: gli Spani. | 149. | R: leghe. |
| 121. | F: navicato. | 150. | R: albitrio. |
| 122. | R: senza. | 151. | R: de la. |
| 123. | R: di. | 152. | R: equalita. |
| 124. | R: septemtrione iusta. | 153. | F: continua. |
| 125. | R: meredionale. | 154. | R: navicatione. |
| 126. | R: lito; F: el lito. | 155. | R: hareno. |
| 127. | R: insino. | 156. | R and F: optima. |
| 128. | R: octo. | 157. | R: da l'. |
| 129. | F: continuando el lito; not in R. | 158. | Omitted in R. |
| 130. | The phrase "propinqui all' equatore...non trovando termine" (lines 63-66) is omitted in R. | 159. | R: navicatione facta. |
| 131. | R: 89 2970/46781. | 160. | R: V. Mta. |
| 132. | F: navicato. | 161. | F: ch'è. |
| 133. | F: 110 et 44830/46783. | 162. | R and F: merediano. |
| 134. | F: navicato. | 163. | F: lo. |
| 135. | R: merediano de le. | 164. | R: de la. |
| 136. | R: a lo; F: allo. | 165. | F: troviamo. |
| 137. | R: pararello di...de la; F: della. | 166. | R: navicammo; F: navicando. |
| 138. | R: distantia. | 167. | F: infra. |
| 139. | R: experimentata. | 168. | R and F: et. |
| | | 169. | R: septemtrione et. |
| | | 170. | R: a l'; F: et allo. |

tinovo, è sito¹⁷¹ della terra sia[85]mo pervenuti¹⁷² infino a gradi 50,¹⁷³ lasciando¹⁷⁴ la terra, che più tempo fa trovarno¹⁷⁵ li¹⁷⁶ Lusitani quali seguirono¹⁷⁷ più al settentrione¹⁷⁸ pervenendo sino al circolo artico¹⁷⁹, e il¹⁸⁰ fine lasciando¹⁸¹ incognito.

Giunta adunque¹⁸² la latitudine settentrionale¹⁸³ con [90]la meridionale,¹⁸⁴ videlicet,¹⁸⁵ gradi 54 con li¹⁸⁶ gradi 66 fanno gradi 120, che tanto contiene¹⁸⁷ di latitudine l' Africa¹⁸⁸ con l'¹⁸⁹ Europa, perche giugnendo¹⁹⁰ l'¹⁹¹ estremo¹⁹² dell'¹⁹³ Europa, che sono i¹⁹⁴ limiti di Norvegia,¹⁹⁵ che stanno in gradi 71 con l'estre[95]mo¹⁹⁶ dell'¹⁹⁷ Africa, che il¹⁹⁸ promontorio, dicano di Buona¹⁹⁹ Speranza in gradi 35 faranno solo 100, e se l' equestre di detta terra²⁰⁰ in parte corrisponde²⁰¹ al lido marittimo²⁰² non è dubbio²⁰³ di grandezza²⁰⁴ l'²⁰⁵ Asia ecceda.²⁰⁶ In tal forma troviamo al²⁰⁷ globo della²⁰⁸ [100]terra molto maggiore non hanno tenuto gl' Antichi a repugnanti e matematici hanno²⁰⁹ quella rispetto all'²¹⁰ acqua, sia minima, il che per esperienza²¹¹ l'²¹² opposto veggiamo.²¹³ E quanto all' aere²¹⁴ corporale di spazio²¹⁵ non meno la terra che l'²¹⁶ ac[105]qua possedere giudichiamo come alla presenza, meglio²¹⁷ spero, e con²¹⁸ più ragione sperimentare e mostrare a V.S.M.²¹⁹ Tutta questa nova terra²²⁰ o nuovo mondo, che di sopra abbiamo²²¹ narrato, contiene, insieme, congiugnendo²²² all' Asia et

171. R: al lito de la; F: continuo el lito.
 172. R: pervenendo.
 173. R: in gradi 54; F: per infino...
 174. "Lasciando...", the text of C begins at this point.
 175. R and C: trovarono.
 176. R: e; C: i.
 177. R: quale seguirono; C: seguivano.
 178. R: septentrione; F: septentrione; C: settemtrione.
 179. R: per insino al circolo; F: circolo; C: perfino al circolo Articho.
 180. F: 'l.
 181. C: Articho lasando il fine.
 182. R: adonque.
 183. R: septemtrionale; C: settemtrionale.
 184. R: meredionale.
 185. Omitted in R, F, and C.
 186. R: cio è; F: é.
 187. R, F and C: non tiene.
 188. R: l'Affrica; C: Africha.
 189. F: la.
 190. C: gungendo.
 191. R and F: lo.
 192. R: stremo.
 193. R: de la; F: della.
 194. R: e; F: è.
 195. R: Norvegga; F: Norveggia.
 196. R: l' extremo; F: lo.
 197. R: de l'; F: della.
 198. R: che è il; F: che è; C: che è al.
 199. Omitted in R, F and C; F: di capo.
 200. R: farieno solo gradi 106 et se il sito terrestre; F: gradi 106...lo sito; C: fariano

- gradi 106, et se il sito terrestre.
 201. R and C: conrisponde.
 202. R: lito marittimo; F: lito; C: litto.
 203. R: dubio.
 204. R, F and C: grandeza.
 205. R: a; F: la.
 206. R, F and C: exceda.
 207. R and F: el; C: el grobo...magiore non ànno.
 208. R: de la.
 209. R: li Antichi et repugnante a mathematici c' hanno voluto; F: gli Antichi repugnantia matematici; C: li antichi et repugnante a matematici ànno voluto.
 210. R and C: a l'; F: alla.
 211. R: experientia; F: esperientia; C: isperienza.
 212. F: lo.
 213. C: oposito veggiamo.
 214. R: Et... al Area; F: Et...allo aere; C: Et...all aria.
 215. R, F and C: spatio.
 216. F: la.
 217. R: a la presentia miglore; F: presentia; C: è chome a la presentia miglore.
 218. Omitted in R, F and C.
 219. R: ragioni viste et sperimentate e mostrare a V.Mta; F: experimetare et; C: esperimentar...vostra serenissima maestà.
 220. Omitted in R, F and C.
 221. R: habbiamo; C: nuova terra,...e...abiamo.
 222. R: non giugnendo a la; F: congiugnendo alla; C: congugnendo.

Africa,²²³ il che [110]sappiamo certo,²²⁴ potria²²⁵ giugnere²²⁶ all'²²⁷ Europa con la Norvegia, e orsia, che sarebbe²²⁸ falso, secondo²²⁹ gl' Antichi, quali da promontorio de Cimbri,²³⁰ quasi tutto il settentrionale dicono²³¹ essere stato navigato all'²³² oriente, circuyendo circa²³³ il Mare Caspio, e il me[115]desimo, affermano, resterebbe adunque sola²³⁴ interclusa²³⁵ da due²³⁶ mari silicati dall' oriente et occidentale, e quelle²³⁷ due ne chiude²³⁸ l' uno e²³⁹ l' altro perche oltre ai gradi 54 dell' equinoziale²⁴⁰ verso l'²⁴¹ austro si stende²⁴² all' oriente per lungo spazio, e²⁴⁴ dal [120]settentrionale²⁴⁵ passando i²⁴⁶ gradi 66 segue tornando in²⁴⁷ verso l'²⁴⁸ oriente giugnendo per fino²⁴⁹ a gradi 70. Spero con l' ajuto di V.S.M. ne averemo in breve migliore²⁵⁰ certitudine, la quale Dio²⁵¹ onnipotente prosperi a causa veggiamo ottimo²⁵² fine di questa nostra [125]cosmografia, che²⁵³ si adempia la sacra voce dell' Evangelo.²⁵⁴ Nella nave Delfina²⁵⁵ in Normandia in porto di Diepa a di 8 di Luglio 1524.

Humilis Servitor²⁵⁶
Joannes Verrazzanus²⁵⁷

LAET'S NIEUVE WERELDT

Giovanni da Verrazzano, Fiorentino, fece partenza con carica di commessario di Francesco primo re di Francia, alli 17 di Gennaro 1524 dall isole di Canaria prendendo il suo corso verso occidente con buon vento d' oriente. E nel tempo di giorni 25 – fecero in circa 500 leghe, di poi indirizzorno lor corso d' occidente a settentrione di modo che doppo altri 25 giorni di viaggio scopersero una terra nuova, che giaceva barso, presso l' acqua, e per li fuochi che colà vedevano, giudicorno che dovesse essere abitata, e si missero verso ostro. Veggiorno ben 50 – leghe alle coste per trovare un comodo porto, ma non trovandolo in quell' acque verso ostro, tornarono verso tramontana, dove medesimamente non trovarono porti. Si che si messero verso le coste e mandando il loro coppano verso terra, trovarono molta gente alle rive, o vero gengive, quali

- | | | | |
|------|---|------|--|
| 223. | F: Africka. | 241. | F: lo. |
| 224. | R: per certeza. | 242. | C: istende. |
| 225. | F: porria. | 243. | R: al; F: allo. |
| 226. | C: sapiamo per certeza...gugnere. | 244. | R, F: spatio; C: adds et after spatio. |
| 227. | R: a la; F: all. | 245. | R: septemtrione; F: septentrionale; C: settentrione. |
| 228. | R: Norvenga e Rossia, che saria; F: Norveggia et Rossia; C: Rossia...saria. | 246. | R: e; F: è. |
| 229. | F: sicondo. | 247. | Omitted in R,F and C. |
| 230. | R: li Antichi...dal...Cimbri; F: gli Antichi... dal...Cimbri; C: li Antichi... dal...Cinbri. | 248. | F: lo. |
| 231. | R: el septemtrione dicano; F: septentrionale; C: settentrione. | 249. | R: per insino; C: gugnendo persino. |
| 232. | R: navigato a lo; F: allo. | 250. | R: aiuto di V. Mta ne haremo meglore; F: aiuto...aremo migliore; C: aiuto vostra serenissima maestà n' aremo...miglore. «ne averemo» omitted in R,F and C. |
| 233. | F: circha. | 251. | Omitted in R, F and C. C: Iddio. |
| 234. | Omitted in R, F and C. | 252. | R: optimo; F: optime; C: vegiamo optima. |
| 235. | C: resterebe...interclusa. | 253. | R: cosmographia et; C: chonsmografia, et. |
| 236. | R: dui. | 254. | R: de lo evangelio; F: bocie dello Evangelio; C: adenpia...del Vangelo. |
| 237. | R: da lo orientale...e quella; F: dallo orientale...et; C: dell' orientale et ocidentale, et. | 255. | R: Dalphina a di VIII di luglio M.D.XXIII; C: in la...Dalfina. |
| 238. | C: dui ne guida; R and F omit chiude. | 256. | F and C: Humilissimo. |
| 239. | R and F: et. | 257. | R: Janus Verazanus; C: Ioanne Verazano. |
| 240. | R: de lo equinoctiale; F: dello equinoctiale; C: di gradi 54 delle equinoctiali. | | |

pigliarono la fuga e qualche volta restavano a guardare sopra li Christiani con la bocca aperta. Ma finalmente con segni certificati, che non li saria fatto alcun' inconveniente li mostrarono un buon luogo per venire a terra, et anco li presentarono delle loro vettovaglie. Il popolo andava nudo eccettuato che coprivano le loro vergogne con certe pellicine. Erano di color bruno, neri di capelli, altrimenti belli e proporzionati. Il lido era coperto di fina sabbia, che si estendeva in piccoli muchi, e l' addietro è bello, et alto fondo, e sperso di alberi. Questa terra, che prima scopersero, era sopra l' altezza di 34 gradi verso tramontana. La linea, in una buona e salubre aria, trovarono, che colà l' estate la maggior parte regnavano venti di maestro e ponente, con chiaro e lucido tempo e poca pioggia, e se benne era un lido aperto non trovarono male a starvi con le navi, stante le coste sono libere di scogli. Si partirono di quivi tenendosi lungo le coste, quali trovarono estendersi verso levante, e viderono continovamente molti fuochi a terra, dopo trovarono il paese estendersi verso tramontana il quale si mostrava molto più bello, et ameno, calarono là a terra, e trovarono la gente simile all' antecedente, viderono molte vite, quelli camminavano sopra gli alberi, quelli al loro parere potevano dar buoni frutti in caso fussero state ben coltivate, veleggiarono cosi avanti, secondo il lor parere ben 100 leghe dove trovarono una bella riviera, dove si tirava di nuovo la costa verso oriente, quale proseguirono circa 50 leghe, dove scoprirono un' isola, quale aveva la forma triangolare, giacendo 50 leghe dalla terra ferma piena di montagne, piene e spesse di alberi, e ben abitata, quale nominarono Claudia, 50 leghe più avanti trovarono un buon porto, dove trovorno gente molto buona e trattabile, quale avevano un re, che era vestito con una pelle di cervo artifiziosamente intorta, trovarono fra di loro molto rame rotto, del quale questi salvatici facevano molto conto. Questa terra era giacente sopra l' altezza di gradi $41 \frac{2}{3}$ e si estendeva fra oriente e mezzo giorno, la bocca del porto giaceva aperta verso ponente, largo mezza lega ma di dentro si tirava tra oriente e tramontana 12 leghe, e là veniva più largo e più lungo, e fa un golfo ben largo di 20 leghe, nel quale giacevano cinque piccole isolette, quali erano molto belle e fruttifere, nel mezzo, vel circa dentro di questo porto vi è uno scoglio di pietra, a proposito di fare sopra un castello, o fortezza per difendere il porto. Si partirono di là li 5 Maggio e corsero avanti appresso le coste ben 150 leghe trovando la terra quasi tutta simile se non che era un poco più alta con alcune montagne, la costa si estendeva da 50 leghe verso oriente e doppo di nuovo verso tramontana trovarono colà la gente molto differente dall' antecedente. Mentre sicome quella mostrava esser molto gentile e cortese, era questa molto rustica e salvatica. Siché per nessun messo con questi potevo aver alcun commercio. Erano vestiti con pelle di gisi, castori e pelle di pesci marini, e altre pelle pigliano il loro nutrimento quanto lontano possono immaginarsi tra pescare e cacciare, e da alcune radice, che il paese colà da persè produce, non avevano alcuna sorte di grano, ne medemamente. Lavoravano la terra. Ancora osservarono il paese inabile da produrre alcun frutto, quando volevano cambiare alcuna cosa venivano loro sopra li scogli, e lasciavano a basso quello volevano, et all' incontro dimandavano coltelli, armi da pescare, e simili robe. Non volevano lasciar venire la gente a terra per qualsivoglia cortesia se li presentarse. Erano però al dispetto loro penetrati qualche lega in terra, tiravano però con le frecce sopra la gente e poi scappavano nelli boschi. Non trovorno in terra cosa di merito o valore, che boschi molto spessi e montagne salvatiche, quale ben mostravano avere in se alcuni minerali, mentre il popolo aveva segnali di rame dall' orecchie pendenti. Partirono di là mettendo il loro corso verso greco lungo le coste, quale trovarono più ameno, e con fondo aperto senza alberi con montagne alte fra terra scopersero ben 32 isole tutte giacente vicino a terra, essendo piccole con molte storte, facendo molti buoni porti e canali tra esse isole, e cosi veleggiando avanti verso greco vennero dopo un veleggiamento di 150 leghe, vennero alla terra, o paese avanti scoperto dalli Brittoni, all' altezza di 50 gradi appresso tramontana. La linea d' onde risolsero ritornare in Francia, et arrivorno a Diepe in Luglio ie detto anno 1524.

In questo raccolto viaggio del Verrazzano troviamo la situazione e condizione di questo paese grossamente descritto mentre il paese in tal maniera si estende dentro e fuori come in parte abbiamo qui inteso, et ora appresso sentiremo. Ma si come lui in pochi luoghi fù a terra, non hà potuto le condizioni de paesi e popoli piùdestintamente penetrare. Vediamo ora moi più

distusamente penetrare cosa che gl' Inglesi e nostri più amplamente hanno ritrovato e messo in luce.

* * * * *

Notes

The authors would like to thank Ms Lorraine Dubreuil, Map Curator, Department of Rare Books and Special Collections, McGill University Libraries, for bringing this manuscript to their attention.

1. Lawrence C. Wroth, *The Voyages of Giovanni da Verrazzano, 1524-1528*, (Yale University Press, 1970), 70, n. 21.

2. *Ibid.*, 79.

3. *Ibid.*, 81.

4. *Ibid.*, p. 148 and passim.

5. Alessandro Bacchiani, "Giovanni da Verrazzano e le sue scoperte nell' America settentrionale (1524) secondo l'inedito codice sincrono Cèllere di Roma," *Bollettino della società geografica italianna*, series IV, vol. X, no. 11 (November 1909), 1274-1323; this was republished with an English translation in A. Bacchiani, "Giovanni da Verrazzano and His Discoveries in North America." *Fifteenth Annual Report, 1910, of the American Scenic and Presevation Society* (Albany, 1910), Appendix A, 133-202. René Herval provided a French translation, from Bacchiani's text in *Giovanni da Verrazzano et les Dieppois à la recherche du Cathay (1524-1528). Étude historique accompagnée d'une traduction intégrale de la célèbre lettre de Verrazzano à François I^{er}...* (Rouen et Caen, 1933). Ch.-André Julien republished Herval's translation in *Les Français en Amérique pendant la première moitié du XVI^e siècle* (Paris, 1946), 51-76. Finally, the Italian text accompanied by Susan Tarrow's English translation, is included in Wroth's study of the Cèllere version, 123-143, see note 1.

6. A transcript of this version was presented by George W. Greene to the New York Historical Society and was subsequently edited and published by Joseph G. Cogswell, with an

English translation and introduction, in *Collections of the New York Historical Society*, 2nd series, vol I (1841), 37-67. The original Italian text was first published by Giovanni Arcangeli, "Lettera di Giovanni da Verrazzano navigatore fiorentino a Francesco I re di Francia sulla scoperta di nuove terre nella costa settentrionale d' America," *Archivio Storico Italiano, Appendice*, vol. IX (1853), 19-55; and then by Guglielmo Berchet, *Raccolta di Documenti e Studi pubblicati dalla R. Commissione Colombiana* (Rome, 1893), part III, vol. II, 332-341.

7. This copy is in the Department of Rare Books and Special Collections, McGill University Libraries, acc. 2216, G12 R14 folio.

8. Alessandro Bacchiani, *Raccolta di Documenti e Studi pubblicati dalla R. Commissione Colombiana* (Rome, 1893), part III, vol. II, 341-342.

9. Alessandro Bacchiani, "I fratelli da Verrazzano e l' eccidio di una spedizione italo-francese in America (1528)," *Bollettino della società geografica italianna*, series vi, vol II (Rome, 1925), 374.

10. G.W. Greene, "Life and voyages of Verrazzano," *The North American Review*, vol xlv, (October, 1837), 308, note.

11. *Ibid.*

12. Napier, Henry Edward, " *Dictionary of National Biography*, vol. xl, 59.

13. Giuseppe Arcangeli, "Lettera," 20-21.

14. J.C. Brevoort, *Verrazzano the Navigator, or Notes on Giovanni da Verrazzano and on a Planisphere of 1529 illustrating his American voyage in 1524. A Paper read before the American Geographical Society of New York, November 28th, 1871.* (New York, 1874), 33-34.

The Voyage of Giovanni da Verrazzano

15. Bacchiani, *Giovanni da Verrazzano e le sue scoperte*, 1275.

16. No information on Peter Redpath's acquisition of the Ramusio has been discovered. It was probably acquired for donation to the Library as part of Redpath's plan of long-term support of and acquisition for the Library.

17. The water-mark has not been located in any of the standard catalogues. It consists of the Medici arms surmounted by a royal crown with the letter "Q" underneath. It is 12 cm in height. The counter mark is an eight-rayed sun with an indistinct image in the centre – a chalice? or face? – with the monogram CR underneath. It is 8 cm in height.

18. Wroth does not indicate this omission in his edition of R; it is clearly a scribal error and an excellent example of a homoeoteleuton. See the transcript for the placement of this and the other variants and errors noted here.

19. Joseph Sabin, *A Dictionary of Books relating to America* (New York: J. Sabin & Sons, 1878), vol. x, 15-16. The first Dutch edition is 38554, the second 38555, the Latin translation 38557, and the French translation [38558].

20. Wroth, *Voyages of Giovanni da Verrazzano*, 145-146, 152. It should be noted that in this Wroth follows Bacchiani.

Diaries from the McGill University Archives – A Sampling

by Robert Michel

The McGill University Archives holds a rich and varied collection of diaries kept by about fifty men and women between 1800 and the present. This sampling focuses on seventeen diarists; a few like Sir William Logan are well known, others are yet to be discovered. The diarists include Victorian children, explorers of Canada, scientists, engineers, and McGill staff and students. The diaries exemplify nearly every form of the genre; some are introspective, others merely list events, some last a few weeks or document a special activity such as travel. Others trace lives from hopeful romance or youthful studies to the toils of career and the cares of age. Several record professional activity: on the Geological Survey of Canada, on the Western Front and on the St. Lawrence Seaway. Diaries possess dramatic and evidential values and offer an important if subtle source to historians, psychologists, and biographers. Most of all they are stories and self portraits preserving a glimpse of the lives of their protagonists.

Les Archives de l'Université McGill possèdent une riche collection de journaux intimes tenus par une cinquantaine d'hommes et de femmes entre 1800 et aujourd'hui. Cet échantillon représentatif est axé sur dix-sept auteurs en particulier; certains comme Sir William Logan sont célèbres. On retrouve parmi eux des enfants de l'époque victorienne, des explorateurs du Canada, des scientifiques, des ingénieurs ainsi que des enseignants et des étudiants de McGill. Les journaux illustrent pratiquement toutes les formes du genre dont l'introspection, la description d'événements, le récit de quelques semaines ou l'illustration d'une activité spéciale comme un voyage. D'autres retracent toute la vie de l'auteur depuis une histoire d'amour pleine d'espoir ou des études de jeunesse jusqu'au labeur d'une carrière et aux outrages de l'âge. Plusieurs font état d'une activité professionnelle: au sein de la Commission géologique du Canada, sur le front occidental et sur la Voie maritime du Saint-Laurent. Ces journaux intimes ont une valeur intrinsèque évidente et ils constituent une source précieuse pour les historiens, les psychologues et les biographes. Mais avant tout, on y trouve des récits et des autoportraits qui éclairent d'une lueur nouvelle la vie de leurs auteurs.

In 1867 Anna Dawson, the sixteen year old daughter of McGill's Principal, wrote in her diary: "Part of the reason why I write this is because I think it will be such fun to read it over when I grow up, when my present self will seem not as myself then. Won't it be fun."¹ In 1938, after retiring as Warden of Royal Victoria College, Susan Vaughan read Pepys' Diary, and felt "the impulse to make some sort of daily, or fairly regular record of the present phase of my life." She returned to her own neglected diary, impelled by a "sense of duty, and a feeling of guilt."² However diarists explain their motives, they seem to share an instinctive urge

to record their present acts and thoughts for future reference.

The University Archives holds diaries of about fifty men and women, mainly Montrealers, including several McGill staff members.³ Professors John Humphrey and Max Dunbar recently gave their diaries to the Archives; excerpts were published in *Fontanus*, 1991. Two more diaries in the Archives have been mined extensively: Stanley B.Frost used the diaries of Principal Cyril James for his biography *The Man in the Ivory Tower* (McGill-Queen's Press, 1991) and parts of George M. Dawson's diaries of western

exploration have been published.⁹ Many other diaries await discovery.

This sampling of the Archives' less publicized diaries is intended to suggest their biographical, psychological and historical value and, most of all, their human interest. The diaries are as diverse as their authors. Some are introspective in the Puritan tradition of self-examination while others merely list events. Some diarists wrote daily and lengthily, perhaps trying to find some order in their lives; others scribbled briefly at long intervals.⁷ Diaries resemble self-portraits. They also tell stories of hope, despair and daily banalities. Their degree of interest depends on such factors as the importance of the author, wit, self-analysis, the subjects documented and the scarcity of similar diaries. Diaries have strong evidential value as they are written near the time of the events they record, not afterwards like autobiographies and memoirs. People can write more frankly in diaries than anywhere else. Introspective diaries such as Anna Dawson's provide the most intimate look at an individual's hopes and fears and motives that one is likely to find. Diaries have psychological interest; why do writers record one thing and not another – meals not marriages, gardens not investments? As historical sources, diaries may provide the best or only record of events. They have an immediacy found in few other writings. When we read prospector Reuben D'Aigle's diaries written in the bush, we feel the summer sun, hear the black flies and wonder what minerals lie underfoot.

A MINISTER-METEOROLOGIST

Many diarists seem fascinated by the weather, although only a few have recorded it scientifically. Alexander Spark D.D. (1762-1819), minister of the Scotch Church of Quebec City, kept a diary from 1798 to 1819 to record daily temperature and barometric pressure. But on the pages opposite his weather data, he wrote down events, observations, and commonplaces. In June 1803 he entered a recipe for tomato ketchup, featuring lots of pepper and port. He recorded the illumination of the Chateau for one of Nelson's victories (1798)⁶ and a bull dog killing a horse in January 1800. In May 1801 he set down the

experience of a Quebec man who had terrible dreams one night and learned three months later that his mother in England had died the night of his dreams. In August 1799 Spark attended the funeral of a private in the artillery whose suicide he had tried to prevent. A month earlier, at the request of the soldier's wife, he had visited him in the hospital. He had found him in a state of "melancholy madness." The soldier said it was too late to help him; he was possessed by an evil spirit who told him to confess to murders he had not committed. Showing the doctor his chest, he declared that an evil spirit was making his heart beat faster. Spark tried to cure his mental illness in the most obvious way, through religion and encouragement. He wrote out a prayer for the soldier, "advising him to get it by heart, & say it frequently, especially when he found evil thoughts rise in his mind." Spark also marked some passages in Scripture for him to read. In a few days, the soldier got better, left the hospital and returned to duty. But the same frenzy seized him again, "in the time of a gale of easterly wind & 4th day of the moon." The soldier then cut his own throat.

Spark copied bits from published romances and tragedies. His diary of May 1802 hinted at an escape from real-life romance in a poem he wrote: "To a Lady returning a lock of her hair."

Take, dearest maid, your present
back,
For e'er since I possessed it,
My heart has been upon the rack,
With cares & fears molested.
If one small lock culled from your
hair,
Occasions such a pother,
God help the man, enchanting Fair,
Who gets you altogether.

Three years later, in 1805 at forty-three, Spark married Mary Ross without mentioning the event in his diary. However, he recorded his marriage indirectly in the form of its economic consequence – the costs of building a house in St. Helen's Street. It came to at least £212. Spark wondered if heavenly and meteorological movements affected people directly. In 1803 he noted that several people who had recently died of palsy and apoplexy had suffered their fatal fits at the time of new or full

moons. Spark wrote his last entries on Sunday 7 March 1819; he recorded cold fair weather of 2 degrees F. in the early morning; 12 degrees by noon, his next entry. Usually he entered the temperature at 3 PM. That day he did not. He died of apoplexy.⁷ His death did not prove his theory for the moon was not full until 11 March.⁸

A TRAVELLER

Travellers and explorers are particularly apt to keep diaries of their adventures. A remarkable impression of the American mid-west was set down by Dr. Bernard Samuel Judah (1777-1831) of New York City (Figure 1). In 1827 he kept a diary of his journey by steamboat, coach and horse boat to visit his son in Indiana.⁹ Judah married his cousin Catherine, daughter of Aaron Hart, merchant of Trois Rivières. Their son Samuel (1799-1869) had left New York seven years earlier to practise law in Vincennes, Indiana.¹⁰ Dr. Judah started out from New York aboard the steamboat *Constitution* on 13 October 1827. As a New Yorker visiting for the first time, he found the West fascinating. It had bustling trade, plenty of resources such as lumber, cheap land, rude manners and flowing whisky – democracy at its best and worst. Writing in a telegraphic style, Judah recorded what he liked and disliked about the towns, people, inns, and meals he encountered. Wherever he went, he set down facts that interested him, noting for example, that 200 bridges spanned the Erie Canal. He began his trip by winning a glass of brandy on some bet in the steamboat's drawing room. Aged fifty, he made the rough journey well enough, except for fainting once. He even relished the accidents of travel; when the boat bumped the lock side, he recorded that the women passengers "were all in a fright." As long as the roads were not bad, he preferred coaches to boats. Sometimes he rode until ten or eleven at night and got up by two or three in the morning.¹¹

Like most travellers, he commented on food and lodgings. Near Fredonia he stayed at a "disagreeable House...nasty Dirty Bed and Bedding – never disliked a place so much as this in my life." A house in Cleveland was an "imposition." At Middlebury, Ohio the Yankee

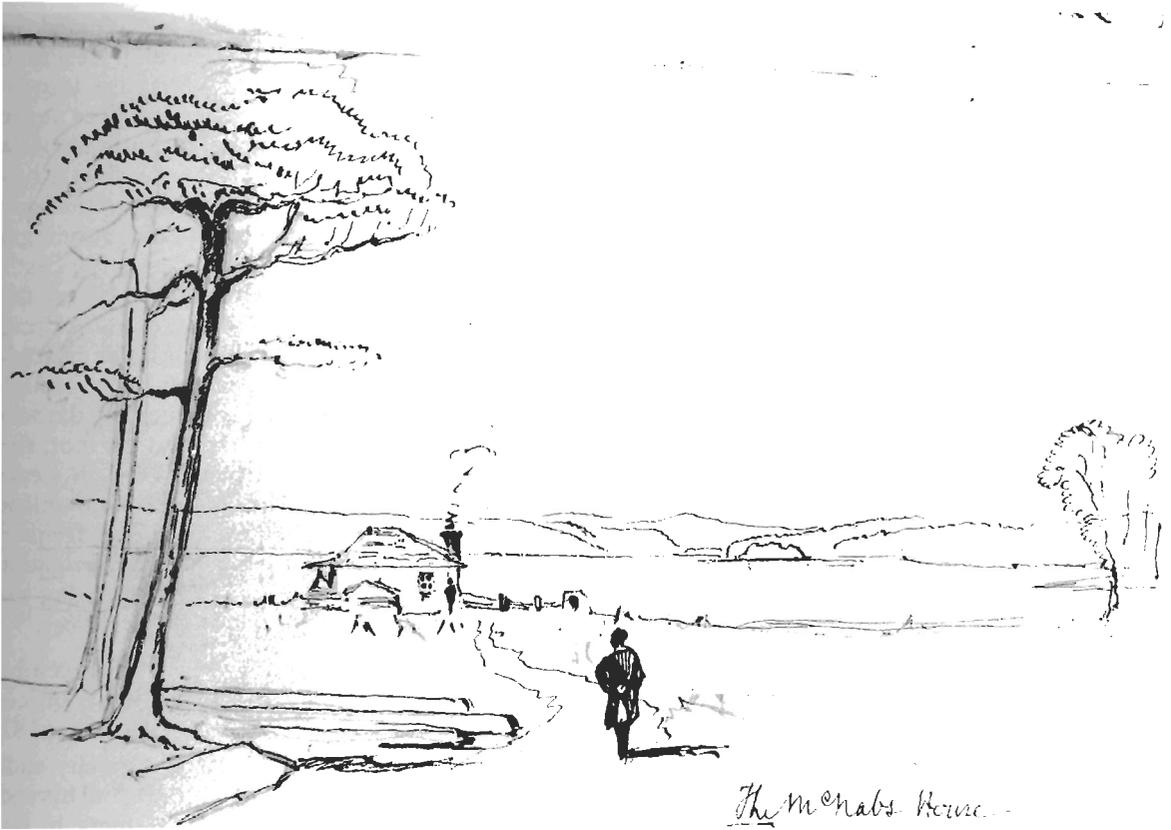
innkeeper had two pretty daughters whom he kept out of sight. Judah went to Portage, Ohio on "very bad roads, Drunken Driver." At the next stop, he noted: "breakfast not good, saucy landlady...impudent servant girl." Nearing Vincennes on 11 November 1827, the coach stopped over at a log cabin: "nothing to boast of – 5 beds in a room – 2 in a bed considering all things pretty good supper, for such a place – had a bed to myself – so, so – could be better."¹²

He fearlessly generalized about manners in the states he crossed. He declared that since "Eastern Females [are] generally discontented," western men preferred to marry western women. He decided "the people of Kentucky are the most haughty, impertinent & beside principally Gamblers." However, he also learned that in the new western states one could not judge men by appearance. On 26 October 1827 he passed a foot traveller, "meanly dressed" with a pack on his back. While the coach stopped at a tavern, the man came in. Feeling sorry for him, Judah offered him a drink for his pluck in walking so far. The man declined but now boarded the stage. Judah was mortified to learn that the object of his pity was a wealthy county judge who also drove cattle; he had been travelling in his drover's clothes. Judah enjoyed talking with the other travellers in the coaches, especially attractive women. At Pitsford, "2 very pretty girls got in the Stage...to go as far as Rochester, very agreeable." In Ohio on 28 October 1827 he sympathetically noted that "a good wholesome girl travelled with us the last 43 miles, hunting her husband who had left her – poor thing – get another." At various points Judah stopped for a day to see friends or present letters of introduction to men who showed him the local sights. He dined at Utica with an acquaintance and five Baptist ministers: "spent my time very pleasant."

Judah commented on the amenities and economies of the towns he passed through. Noting that Niagara was a natural trading point, he found the Falls "Grand beyond description. I do not like the Village." He admired Utica's new buildings and wealthy mechanic class but found Oneida "a Poor miserable Village." Judah visited prisons at



Figure 1. Bernard Samuel Judah. (Photograph by Mark Freedman; McGill University Archives.)



The McNabs Home.

Figure 2. McNab's House, August 1845, from William Logan's diary.

Auburn and Columbus, Ohio; the latter was "a poor miserable dirty building, no cleanliness, 113 Males, 3 Females." At Bedford, Ohio on 30 October 1827 he declared: "misery in all its shapes began to make its appearance – children naked – mud up to their knees and appeared not to have been washed in a month – whisky more and more drank." Cincinnati gave him a better impression of Ohio: "happy people, easy and Independent in all circumstances of life. Living, Dry Goods, Groceries nearly as cheap as in New York." Convinced that westerners drank heavily, he conceded that "I have seen less Drunkards than I expected." Still, their love of whisky amazed him: "It is no uncommon circumstance for a man to drink a quart or more of this liquor & the most wealthy & accomplished prefer it to any of the foreign Liquors."

On 12 November 1827 he arrived at Vincennes and relaxed after his long trip: "very pleasant the last two days – view of the Prairies on fire at night from the Piazza of Samuel. Beautifull." He reckoned his travel expenses at \$75.00 for the 1260 miles from New York to Vincennes. The trip had taken thirty days, including thirteen days stopping at places.¹³ Judah enjoyed meals at his son's: "I must say at Samuels it most looks like home & have eat more than I did during the time I was coming from Buffalo to this place." Cryptically, he referred to "West's daughter, who went from N. Brunswick after Samuel – a public Prostitute." (Samuel had studied at Rutgers College in New Brunswick, N.J.) He observed: "Samuel does not like the people – ambition is his aim." (While Samuel seems to have incurred no disadvantage from being

Jewish, his political advancement had stalled because he supported Andrew Jackson rather than President Adams; eventually he became State Attorney-General.) Judah ridiculed the western political custom of getting up on a stump and addressing bystanders – even Blacks or Indians who could not vote. “Whisky in the bargain Hurra for free elections and Western Manners,” he remarked on 24 November 1827.

Judah criticized Vincennes in detail. One of its few assets was a public library of 1800 volumes. The town had 1400 inhabitants, seven stores, a small cotton factory and dull public houses. Vincennes had been a fur trade station; he found the traders’ descendants looked like French Canadians and kept their customs. Most were poor and lived “in miserable wooden cabins.” Few private houses were painted “and the place does not look like our Eastern Towns.” He admired the house of famed General William Henry Harrison but the rest were shabby. Town lots cost from thirty-five to fifty dollars. His son Samuel’s house was “a two story frame, 26 feet front, 20 deep” and poorly built – like all houses in the western states. The lot was two and a half acres with a smoke house and a good well. Judah described Vincennes as “a miserable hole...looks melancholy.” Emigrants left daily – the poor to Indiana and Illinois, the rich to Missouri. He found few intelligent people to talk to and thought it ridiculous that one man, Homer Johnson, served as “County Clark, Majr. Gen. of Militia, Tavern Keeper, School Master, Surveyor, Doctor, Singing Master – thus you have a specimen of a Western Citizen.” Most of the people lived on corn bread and hominy. Describing their poverty, he added that “money appears to be their god.” They were “generally poorly clad. He noticed “many Blacks – a poor miserable race.”¹⁴

On 27 November 1827 after fifteen days at his son’s, Judah left for Washington by boat on the Ohio. At Fredericksburg, Kentucky he saw 2800 hogs being killed on the shore. He made friends with William Smith from Kentucky, “a dam’d clever fellow” with tobacco holdings worth \$200,000. He found Kentucky men “generally full of cash.” Passing through Cincinnati again, he bought a ticket

for the Virginia Lottery and was pleased that three women passengers boarded. He and the other passengers played whist far into the night as the boat progressed up river at four miles per hour. He enjoyed magnificent views from the Ohio River. The diary gives a good picture of travel at the beginning of the age of steam. Judah liked the steamboats running on the lower Ohio, calling them “floating Castles and very handsomely furnished.” He realized how steam had begun to revolutionize trade along the Ohio and Mississippi. For example, he noted that the workmen who brought northern lumber down the rivers by flatboats no longer had to return slowly by foot; they travelled free as deck passengers on steamboats in return for helping to load and unload. He even found advantages in the frequent cargo losses caused by hazardous navigation; they kept trade profitable by preventing surpluses which would drive down prices.¹⁵

Arriving at Washington on 4 December 1827, he visited the Capitol and other offices, apparently on business. On 15 December 1827 he left for Philadelphia. Here the diary ends; the last few pages are torn out. For all his contempt for the West’s cultural defects, he had marvelled at its growing wealth and energy: “to see the advancement of the west is surprizing – happy people – all they want is the Ambition of the East – too little labour.” Judah’s diary reveals an inquisitive, confident man who had enjoyed seeing the West and like a true tourist, “never regretted to jaunt.”

TWO GEOLOGIST-EXPLORERS

William Logan and George Mercer Dawson kept diaries as they explored, mapped, and collected mineral specimens in the Canadian wilderness. Their work for the Geological Survey of Canada prepared the way for mining, railroads and western settlement. They wrote their diaries to keep track of their work but their personalities slipped into the pages as well. William Edmond Logan (1798-1875), first Director of the Geological Survey, kept a diary of his exploration (for the Survey) in 1845 of the Ottawa River and the head of Lake Timiskaming, 250 miles above Bytown (Ottawa) as well as the Mattawa River to Lake Nipissing. This and other surveys of

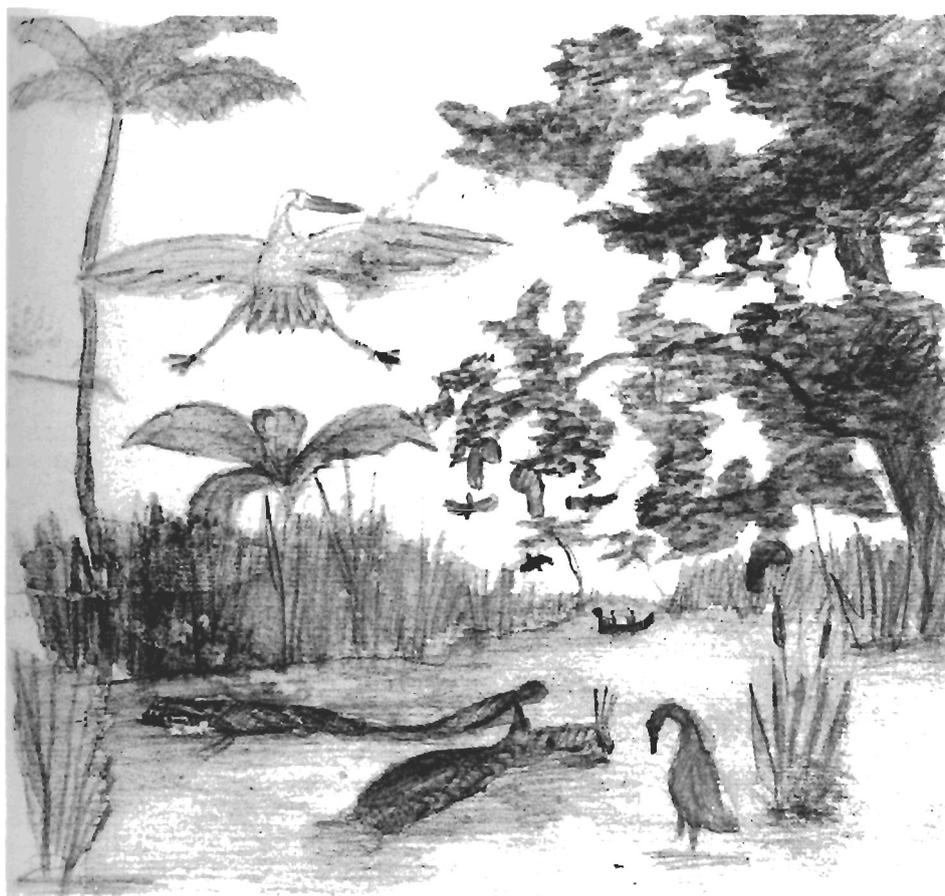


Figure 3. Childhood sketch by George Mercer Dawson.

Precambrian rock ultimately resulted in the hard-rock mining industry.¹⁶ Logan set out from Lachine by canoe, manned by four Indians. He paid twelve pounds for the canoe; the Indians received four pounds a month and a pair of moccasins. He was accompanied by John McNaughtan, a provincial land surveyor. Like the diaries of George Dawson and Reuben D'Aigle, Logan's diary reveals many details of provisioning, expenses and other arrangements necessary for exploring the Canadian wilderness. The route was not totally wild; he could explore out of several settlements and inns.

Logan included sketches of a few views in the diary, including the stone cottage of the

notorious Chief McNab at the settlement of McNab (Figure 2). Archibald McNab (1781-1860) was one of the most colourful colonizers of Canada. After a wild youth in London, penniless, proud and hot tempered, he succeeded as the 17th Chief of Clan McNab to an estate mortgaged to £35,000. In 1822 he fled to Canada ahead of the arrest writs of his creditors, leaving behind his wife and children. In 1823 he persuaded the Executive Council of Upper Canada to grant him land and superintendent powers over land at the junction of the Ottawa and Madawaska Rivers. McNab imported needy Scots of his clan and other Highlanders, taxed, cheated and ruled them until about 1844 when their opposition and lawsuits forced him to withdraw to

Hamilton, where he lived until 1851 before returning to Britain. Hoping to see the chief, Logan and McNaughtan visited his irregular household on 4 August 1845. They found McNab absent; Logan fancied he seldom stayed at home. They met two exotic women, McNab's wife of choice and her daughter: "(a natural daughter) who goes by the name Macnab, while the mother...goes by the name of Mrs. Fisher." Mrs. Fisher was the chief housekeeper. "He cannot make her his wife, because he has one already from whom he is separated." (McNab would have another natural child on returning to Britain after 1851).

Logan noted that McNab was famous for going about in Highland regalia, and had his portrait painted by "Mr. Bradish an american artist friend of mine." Logan described the portrait and its heroic pose:

The chief of course dressed in the highland garb...He is in full McNab costume & he stands full fronting with his dirk in his left hand the point of it stuck in some object near while his right is on the handle of his left pistol in the act of drawing it forth. He has a piper whom he takes with him when he goes to any principal place & I have occasionally heard him blowing his pigs whistle in Montreal.¹⁷

McNab returned to Scotland about 1851. Soon, supported by his estranged wife, he moved to France, where he died in 1860.¹⁸ Logan stayed in the McNab area for several days, observing that the land and farms were excellent and the pine "sticks" were four feet across. The settlers were nearly all Highlanders. Some, from the fishing coasts of North Scotland, were "indolent but sociable and given to intemperance."

Rising at four in the morning, Logan spent much of his time mapping and gathering geological specimens. He collected at least forty-five boxes of mineral samples and fossils. On 29 August 1845 near Black River falls, he made a great discovery of fossil shells in limestone: "I have been at my fossils all day & have made a great collection. I have cut a great many out by means of hammer & chisel & have

smashed the skin of my left hand in many places...I worked twelve hours hammering like any stone mason."

Travel diaries often mention food. Besides catfish, Logan ate a muskrat the Indians killed: "the flavour is strong but not very disagreeable." Simple delights became important; the forty-seven year old Logan enjoyed what comforts he could find in the wilderness. "Our black tea makes a most comfortable beverage. I hate the green tea that is everywhere used in this part of the world, & then they give you no sugar with it." On 8 August 1845 at a settlement Logan had a meal to remember: "Fresh pork with fried wild onions, good milk, green tea but no sugar, & new potatoes." Without rancour he noticed that one of the Indians had helped himself to his special treat. "I have a drum of figs which I have only now opened for the first time & I find a round of them gone. They have been stolen probably by [Mathias] Sanoracé [one of the four Indians hired at Lachine]. He has a tongue as long as my arm & I suspect he has also a sweet tooth."¹⁹

Logan complained occasionally about his assistant but for the most part found him adequate. "Mr McNaughtan complains of his bowels. I am afraid though he is accustomed to the woods, he cannot stand hard work. He is rather slow for me. He tries to be exact, however." Chance encounters offered diversion. McNaughtan spied a dog and teased it by crouching behind a bush trying to look like a bear. The dog's barking brought the owner from his wood chopping. Fearing he might have a rifle, McNaughtan thought it safer to show himself. The dog's owner turned out to be an old acquaintance. They also met "Mr Bernard...Sir George Simpsons pilot, a half savage...an Algonquin, & to our men speaks French not understanding the Iroquois."²⁰

The explorers slept outdoors much of the time. "Our Indians are a good lot of fellows but they are not so handy as the Gaspé men. They never think of placing boughs on the floor for us, but we have a Mackintosh bed, big enough for three. It takes an enormous quantity of wind to fill it." Logan liked his quarters dry. On a rainy night in late July, "Our

two Indians built a caban for us...but as it consisted only of a cover on 4 posts & 2 cross sticks without any sides I informed them that they might occupy the caban & Mr McNaughten and I would sleep under the canoe which we did before a rousing fire. We kept pretty dry."²¹ In mid August they reached Portage du Fort, where a village was taking shape: an inn, blacksmith's forge and a couple of stores – all dependent on the lumber traffic. The diary ends at Bytown in November 1845. Logan had mapped 150 miles of the Ottawa River, including 70 miles of Lake Timiskaming and the tributary Mattawa.

Probably the most important diaries in the Archives are those of George Mercer Dawson (1849-1901), one of Canada's foremost geologists and explorers. He was the son of Sir William Dawson, geologist and McGill's Principal.²² Of stunted growth and heroic accomplishments, George Dawson led expeditions of the Canadian Geological Survey across western Canada. He kept a detailed series of diaries of his geological expeditions and work from 1873 to 1899. Besides documenting Dawson's life and the nuts and bolts of exploring the west, the diaries are a major source of geological and ethnological information. They have been consulted by historians of Canadian exploration and geology, researchers on Indian land claims, and anthropologists. The diaries for 1875 to 1878 (covering exploration of British Columbia) have been published.²³ Dawson gave detailed accounts of his daily activity and occasionally made diagrams and sketches of terrain and Native Canadians' structures. He also described birds, settlements, and transportation. The long set of exploration diaries is complemented by several occasional diaries revealing his private side. Dawson is the youngest diarist in the Archives. Probably encouraged by his father or mother, he kept a diary in 1861 when he was eleven. He wrote about his tutoring from "Miss," his health, games, snowshoing, and purchases of marbles and the like while living with his family on the McGill campus in the old East Wing of the Arts Building (now Dawson Hall). He began to draw pictures; a useful skill for his later travels (Figure 3). He and his friend O'Hara Baynes (son of McGill's Bursar) enjoyed snowball fights with McGill

students and playing "Thief and Hide and go seek" on the campus. One day the two boys went up to the Arts Building cupola "and caught O'Hara's pigon [sic] which we fed and put up again." Sadly, he recorded bad headaches, symptoms of the spinal tuberculosis that left him a hunchback.²⁴ He slowly recovered his strength and was able to attend the Royal School of Mines in London. He kept a diary of his voyage and on 21 September 1869 recorded a terrifying gale: "Ship making very bad weather of it...Shipped several heavy seas in succession and righted with great difficulty. Cargo shifting. Cabin stove broke adrift. Mate was nearly washed overboard." He drew a sketch of the tossing ship (the Lake Erie) with all sails furled but three, holding into the wind.²⁵

Dawson kept a pocket diary of a trip to France and Germany in 1882, not long after the dreaded excesses of the Paris Commune. Far from his Geological Survey, the bachelor of thirty-odd sketched a few women, wrote vague love poems and criticized idle wealth. He noticed some women loading barges with coal along with men in the "Broiling sun." They carried the smaller pieces of coal in baskets on their heads and the larger ones in their hands. One young girl, exhausted:

gives up her work & bursts into tears. Her friend coming to her gives her just such a little half embrace as may often be seen to pass between girls in a drawing-room. The master, speaking in rough patois through a mask of coal-dust hands her two sous to buy cognac. Overseer marks her off the book.

After recording this incident, Dawson pondered the frustrations of the poor: he imagined,

The labouring men & women who look up from the fields & see others lolling in [passing] carriages. They are earning their bread perhaps happily enough. "here ignorance is bliss." But even so, why should homespun industry be insulted by the parade of idle opulence. By the

existence of classes to whom the labouring machinery of the world appears merely an easily moving automaton. Complete & happy enough so long as they can reap the fruit in sufficient quantity for their own exaggerated wants...Is it to be wondered at that they are ready when occasion offers to burst their bounds, cry Vive la Commune & even destroy evidence of the opulence & culture in which they have no part!²⁶

A VICTORIAN TEENAGER

Young people were encouraged to keep diaries as an exercise in writing, time-accounting, self-examination and improvement. Taking on a young assistant in 1846, William Logan impressed on him "the propriety of keeping a journal."²⁷ George Dawson and his sister Anna both kept diaries of their trip to Europe with their parents Principal and Mrs. Dawson in 1865. Aged fourteen, Anna Dawson (1851-1917) noted that the steamer to Liverpool only went nine knots because of poor coal and mentioned a sea-sickness remedy of egg, sugar and wine. She visited Parliament, Mme. Toussaud's, the British Museum and took the underground railway to visit the Kensington Museum. She attended a service at the cathedral at Amiens, its "Alter beautifully illuminated." In Paris she heard a good sermon at the French Protestant church and afterwards a "rather dry sermon" at the Scotch church. In Geneva she and her father saw Calvin's armchair and bought watches; later they climbed risky paths to explore glaciers. In Cologne, "the greediest and dirtiest place we have visited," they failed to find the Church of St. Ursula where the bones of 7000 virgins were exhibited. At Sandhurst she noticed the cadets used the same slang as American youths. Reflecting her father's influence, she reported that Dr. Rolleston at Oxford was "very nice...if only he was not as silly to be a Darwinian." At Edinburgh Castle, she watched two soldiers bringing in a deserter and hoped they would not shoot him.²⁸

She also kept a tiny book from 1866 to 1872 which charted her religious and earthly con-

cerns from adolescence to adulthood.²⁹ She wrote much of it in November and December 1866 when, turning sixteen, she began testing her powers of thinking, writing, and self-examination. At first religion and romantic speculations inspired her equally; by the end of the diary she was twenty and romance prevailed. She began on Sunday, 18 November 1866, perhaps inspired by some Presbyterian sermon: "I am only fifteen yet life to me seems aimless & dull, in an earthly point of view...How beautiful it must be to launch into eternity with Jesus for a guide." Inspired by an awakening sense of time passing, she wondered how the present would look from the future: "It has often struck me that the looking forward on life of youth, & the looking back in old age, must be much the same." She imagined herself old and lonely going through old letters, full of confidences and secrets, which would remind her of youth.³⁰

She examined her feelings about her future role as a woman. In November 1866 she wrote: "It is a fallacy to suppose that very young girls (say 12 or 13) are less shy & constrained than at any other period. In society it may be so...But as to their feelings the inward depths of their hearts are sealed. It is only as they become more mature that they have courage to brave the too often unsympathising minds of those they love best." Some of her preoccupations may have come from her reading: she defended love stories against the charge they "weaken the mental power." She declared, however, that "the novel jealousy is rarely found in real life" and in December 1866 told a story about jealousy "as I know it was once felt by a young girl." Her views on the spiritual role of women were conventional: "A true woman should be ever ready to bestow her sympathy her pity, her magic power of soothing the weary & the suffering without a thought as to the worthiness or unworthiness of him or her, who needs her aid...Tis mans prerogative to reason, womans to love; a man needs head far more than heart, a woman heart infinitely more than head. Harken ye learned, wise & exemplary females of the nineteenth century, & ponder whether with all the attention bestowed on the head, the heart the melting womans heart - is not slighted."³¹



Figure 4. Prospecting photographs from R. B. D'Aigle's scrapbook.

In January 1867 she wrote: "Many people seem to think that young girls look forward to marriage as perfect bliss. Well, I don't, & as I am a young girl myself, only 16 I intend to...state what I expect marriage even the happiest marriage to be – A life of toil & suffering even as single life is, but also a rest on a loving heart which robs trial of half its sting. I do not expect perfect sympathy. (alas! I have found already there is no such thing possible)." After this she made only one or two entries a year. In the style of romantic novels, she wrote brief passages on unrequited love. In 1869 aged eighteen, she addressed a message full of religious sentiment and romance, to a real or imaginary friend. "You ask me to love you! – I did once love you with a fervency & truth, that you were far from understanding." The next entry (1871) expressed great uncertainty and romantic feelings: she asks "What will become of us!...What will become of me!...What will become of him!" Her final entry (1872) described a parting. "As she stood on the bustling quay, the bright river sparkling in the sun's low sky...he turned to her...yet she neither sighed, nor swooned but pressing one hand to her heart as if to close its doors forever...she went back to the busy city where her Master had need of her." If these passages were not scenarios, they may refer to disappointed love or to uncertain relations with her future husband, Bernard J. Harrington (1848-1907). Harrington attended McGill from 1865 to 1869 and Yale from 1869 to 1871, then left briefly for Heidelberg. In August 1871 her father appointed him lecturer in Mining at McGill. They married in 1876 and had nine children. An annotation inserted in the diary, probably by Anna Dawson in old age, looking back on her youth as she had anticipated, remarked: "Poor little thing how hard her lot seemed." Anna Dawson's diary reveals her as a true daughter of William Dawson – religious and analytical, with no care for status or material things.³²

TWO MCGILL STUDENTS

The following diaries are less introspective than Anna Dawson's. Clement McLeod (1851-1917) kept a diary from 1870 to 1875 recording his student life and early employ-

ment at McGill. He arrived from Nova Scotia in Montreal on 13 September 1870 and "after a deal of looking found fine quarters at the Canada Hotel, mighty frenchy and rough." At first intending to board in a French boarding house, he inspected one "but didn't like the look of things" and ended up in an English house. Over the following weeks he called on Principal Dawson, heard a "very fine" sermon at Zion Church and another from a preacher "who could not read his sermon." He found plenty of time for sports and played several forms of football. In 1875 he wrote notes on his surveying in Newfoundland (his other papers contain more on this).³³ McLeod graduated in Applied Science 1873 and went on to teach at McGill and direct its Observatory for forty years.

In 1902 at the age of sixteen, Louis Vessot King (1886-1956) lived at home and took courses at McGill. He kept a detailed record of his reading and McGill courses as well as a summer visit to his cousins' farm in Ontario. On a typical day, he studied history, Latin, physics, trigonometry, did chores such as bringing up the coal, went tobogganing, read "Chums" or some other magazine, and had cocoa before retiring for the night. He kept an account of his income, including a \$12.00 prize won in mathematics, his allowance of \$1.25 and a penny he found on the street. His schoolboy social life contrasted with his challenging studies. He sounded quite mature when reporting his experiments in physics, his future profession: "Went to Laboratory... Worked at Resonance Tube... Found the velocity of sound... Worked also at Specific Density Bottle."³⁴ Encouraged by Ernest Rutherford, King went on to study at Cambridge; he returned to teach physics at McGill from 1910 to 1938.

A CANADIAN TOURIST IN AMERICA

William S. Paterson (1841-1907) of Montreal visited the American South in 1871. (A second diary, undated, with an essay, relates adventures in Cuba and decries the cruel conditions in the sugar plantations.) Paterson reported on his American trip in a quick run-on style. Although apparently written day by day, the entries lack daily dates and resemble travel

narratives (usually written afterwards). Paterson visited the South and several battle-sites of the recent American Civil War with his friend Dwight. The trip started out on the train down the East Coast where he noticed,

Two girls in [the] train to which our special attention was directed. One kept casting around the tail of her eye in our direction and we set our wits to work to find out where she was going. Hope was in the ascendant that she & the stern parents that kept watch & guard over her were to be our Campagnons de voyage.

But at Baltimore they went separate ways. Paterson and his friend visited Florida, shot at an alligator, saw the still-depressed areas of Columbia and Richmond, became acquainted with various Americans, visited the Capitol and treasury buildings in Washington, attended the President's church and a badly-acted play but heard "magnificent singing" coming from a "Negro Sunday School." They also met and played whist with the son of the British Consul at Charleston, who hated Yankee institutions and loved British ones.³⁵

A MONTREALER ON SAFARI

Andrew Hamilton Gault (1882-1958) cut short his science course at McGill (1899-1900) to enlist for the Boer War. In 1912 and 1913, with his wife and some other couples, he went on a safari in East Africa. He kept a diary of the adventure, which describes the outfitting of the safari and his frustration with unlucky marksmanship. "I seem fated not to get a buffalo" he wrote on 19 February 1913. He noted, usually with good humour, the vagaries of African porters. At Wamboyo (26 December 1912) he records: "Broke camp by 7 a.m. to find that 15 porters had bolted during night! Their places were filled by women." On the next day: "Our safari today was an amusing sight for its *personnelle* [sic] finding many of its wives among the Kikuyu hills impressed them into its service; & so our porters come along unencumbered followed by their womenfolk laden down with their loads." More unfortunate than the wives were the prey the hunters managed to hit. On one occasion, Gault confronted that trophy of smoking

rooms, a rhino. He "fired again and caught her through the lung & stopped her. While I was reloading O'B unfortunately opened fire. I hit her again far back & O'B brought her down while she was running around and around like a top. Walked up the 150 yards or so & finished her with a brain shot." Other sport (18 March 1913) included shooting at and missing a 10 foot snake; they dared not follow it into thick grass. Besides uneven shooting, the diary records a few squabbles among the gentlemen hunters, one of whom is referred to as no gentleman. In 1914 Gault targeted Germans instead of animals; he raised the Princess Patricia Canadian Light Infantry and served it as Second-in-Command with great distinction during the First World War. He left his estate Mount St. Hilaire to McGill.³⁶

A MCGILL SOLDIER

The Archives holds brief World War One diaries kept by several staff members or graduates, including Cyrus Macmillan, F.C. Scrimger and Albert Kelly.³⁷ Captain Cyrus Macmillan (1883-1953), Assistant Professor of English, kept a brief pocket diary in 1917. He served in the No. 7 Canadian Siege Battery, led and staffed largely by McGill graduates. Macmillan wrote two messages at the front of the diary asking that in case of death it be sent to his wife in Toronto. He jotted down some verse as well:

Loneliness at the Front

The silver night is faint with beauty,
The iris shimmer in the moon
Soft as the words of love remembered
The night winds croon
No tremor shakes the moon in heaven
The gleaming iris feel no smart
And nothing aches in all this beauty
Except my heart.

Elsewhere, telegraph style prevailed. The diary began on 11 March 1917 in England with "Orders to move Thursday." At dinner before embarkation for France, the Canadians were given champagne: "Marched off at 8. Colonel made feeling speech. Band played us to station. Large chanting crowd auld Lang

Syne...Reached Folkstone at 3 am. Had four hours sleep. Sailed at 11.25. Reached France 2. Up hill to camp. Tents. Got settled by six. Cold. Beautiful country. Bed at 9. Excellent sleep. La belle France at last."³⁷ Macmillan visited the Canadian General Hospital, No. 3 staffed by many old McGill friends: it was "Like home." In late March between censoring letters and riding a motorcycle, he listened to gramophone records: "Good records. Many memories." By 31 March 1917 he is in a tin hut, "living in a swamp. No material to work with. This is Canada's treatment of us." In the April 1917 offensive, he records fatigue, air attacks, firing 250 rounds in one morning, the "awful desolation" of fields full of the dead and receiving candy from home. On 2 May 1917 Canon Scott "held a service tonight. Unique. Had baptism." On 30 July 1917 his batman "got the wind up." Macmillan described a Canadian battalion going up to the line, pipes playing, "Boys singing 'Long Trail' – splendid nerve. – empathetic." He survived to return home to an academic career at McGill.³⁹

A PROSPECTOR

A worn set of pencilled pocket books introduces us to Reuben Bennett D'Aigle (1874-1959), who prospected for forty years in the Klondike, Ontario, Quebec, and Labrador. Legendary and unlucky, he missed discovering the Hollinger gold mine near Timmons, Ontario by a few feet. He held concessions to 2200 miles of iron deposits in Labrador but could not exploit them after the crash of 1929. The diaries cover prospecting trips between 1912 and 1952. They show the nuts and bolts of prospecting in northern Quebec and Labrador, including negotiations for financial backing, the formation of mining syndicates, assembling supplies, expenses, the role of native guides, claim staking, wildlife supply and life in the North generally (Figure 4). D'Aigle's entries convey what prospecting was like; he writes of the melting snows, unknown terrains, and vast grim spaces in which life depended on airplanes, dog teams, native guides and proper supplies. Outside Sept Isles on 10 April 1927 he dreams "of home and our children. I saw them all for the first time since leaving." On 21 April 1927 he notes that Indians approach him for food; this worried

him since his crew carried only what they needed for themselves. He decides to carry extra food to trade to the Indians, especially since they would pay with furs. "But they always try first the hungry talk. I hate to refuse them." Personal habits come to light: on 11 July 1943 he notes "we don't work on Sunday." He records his expenses such as the purchase of a canoe in May 1945 for \$ 45.00. He notes events such as these of 9 October 1945: "We worked on camp. Charlie saw a caribou. The Indian Johnie came and gave us a beaver and some raw hide to fix snow shoes." A typical supply list is that of June 1946: "flour Beans sugar lard butter ham bacon salt matches B. powder." The diary volume for 1935 to 1952 has recipes for boot polish, waterproofing canvass, javelle water, metal polish, and a drink made from ginger root. D'Aigle's diaries trace the starts and stops of a hopeful free spirit, traversing the vast Quebec north, looking for that one lucky strike.⁴⁰

AN ICE BREAKER

Howard T. Barnes (1873-1950), Professor of Physics at McGill, kept a photographic and brief diary record of four iceberg research expeditions to Newfoundland, 1924-1929. Rare for diaries, pictures convey much of the information. Barnes could be called a quintessential Canadian scientist, since he investigated ways to free the nation and its trading ports from its particular enemy, ice—ice on the St. Lawrence, icebergs in the Atlantic (Figure 5). Off Newfoundland Barnes carried out experiments to blow up icebergs and followed various icebergs to learn how they died. He described the loud reports of one breaking up on 13 June 1926: "big growler calved during the night." Barnes sought the best way for ships to blow up icebergs in their paths. On 5 June 1924 he had "Tried to blow up the berg by 250 lbs. of gun cotton. Very little effect and a very little ice broken off." He turned to thermite on an expedition to Newfoundland in 1926. He had to land a safe amount of thermite on the iceberg by balloon or gun. On ignition thermite produced temperatures of 5000 F. which split up and destroyed icebergs. Operating out of Twillingate, he refrained from work on the Sabbath: "July 11. Sunday. Shall not work out of regard to community.

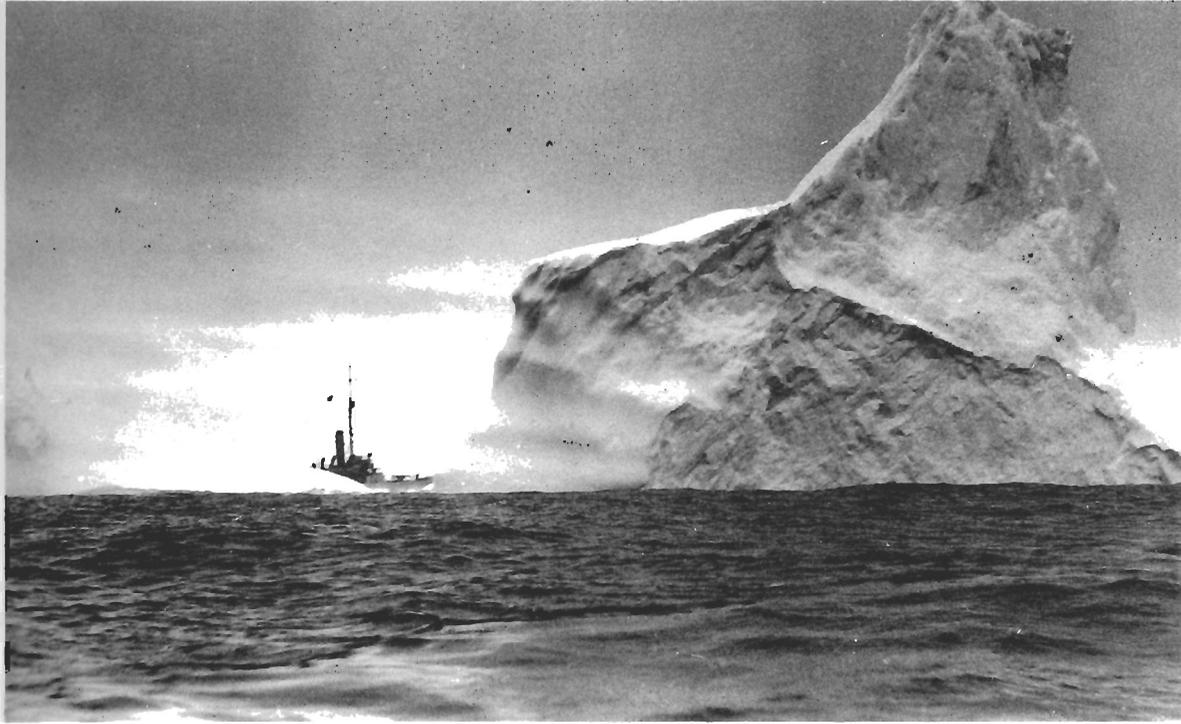


Figure 5. Ice research: expedition to Newfoundland 1924, and on the St. Lawrence River, March 1925.



Figure 6. Susan Cameron Vaughan in front of the Royal Victoria College, 1904-1905.
(From Vaughan's diary.)

Simple and religious people." This trip convinced him that exploding icebergs with thermite would allow ships to cross the short North Atlantic route safely and profitably.⁴¹

A WARDEN OF ROYAL VICTORIA COLLEGE

Diaries by McGill Principals F.C. James and Rocke Robertson⁴² supplement their official papers; a similar record was kept by Susan Cameron Vaughan (1871-1961), Assistant Warden, later Warden, of Royal Victoria College between 1905 and 1937 (Figure 6). Except for the years 1918 to 1922 when she was married to McGill Bursar Walter Vaughan and then widowed, she devoted her life to education. Besides diaries, Vaughan kept "day books" which richly document Royal Victoria College's student life. She frequently complains that the students are not serious. In March 1929 she notes that students strayed back to residence after the Red and White Revue nights at nearly 5 a.m. In March 1932 she declares, "With those who sneer at women's education in the large I am furious. With those youngsters who slack their way through college, neglecting every opportunity of getting an education I am equally furious."⁴³ In 1934 she is "Suffering from intense discouragement. The attitude of the average student seems to me hopelessly idle and frivolous...House students go out constantly or idle their time indoors." She often examines the direction of her own life; at sixty-one (after reading Arnold Bennett) she writes: "I am now at the outer edge of life. I have at the best ten or fifteen more years. What may I expect to do in them?"⁴⁴ She had twenty-nine more years.

A MCGILL PATHOLOGIST

Maude Abbott, (1869-1940) who received her B.A. from McGill in 1890 epitomizes the achievement of women over the obstacles they faced at McGill. Ineligible as a female to attend McGill Medical School, she returned with her M.D. from Bishop's University, Lennoxville, Quebec, to teach in the McGill Pathology Department, 1912-1935 and conduct research on congenital heart disease. Her diaries in the Archives cover 1929 to 1939. One incident

should interest anyone having to cross Pine Avenue near Royal Victoria Hospital. In early October 1929 she was hit crossing the street at 6:30 P.M. by a taxi without lights. A sympathetic passing car driver brought her unconscious to Royal Victoria Hospital. There "Dr. Penfield sewed up the cut over my eye and was so wonderful." She reflected that if the taxi had been going faster or had hit her more squarely "the world would have swung on without me." She refrained from cursing the taxi driver.⁴⁵ While most of Abbott's diary entries are brief relations of events, she (like others) wrote at greater length under the stimulus of travel. Sailing on the *Acquitania* from New York to Cherbourg in April 1932, she recorded dinner dances, horrid movies and a "Delightful Anglican Service in 1st Class." She brought a Canadian friend in Paris a half gallon of maple syrup, and visited fellow doctors in Vienna where she had "my hair cut off [and] charmingly trimmed and curled." Thwarting several attempts to cheat her, she reached Istanbul. She most loved the ruins of Greece and Crete, where she had "a magnificent but really terrifying drive around innumerable hair pin turns." Her final diary entries in the summer of 1940 find her sitting for her portrait by a friend and saddened by the fall of France.

TWO ENGINEERS

James Richardson Donald (1890-1991) took a double degree in Arts and Applied Science at McGill in 1913. During World War II, he was Director of the Chemicals and Explosives Production Branch of the Department of Munitions and Supplies. Donald's diaries are the longest run in the Archives, describing professional and social activities from 1918 to 1987. They served as aide-memoires for Donald's autobiography, *Reminiscences of a Pioneer Canadian Chemical Engineer* (1990), written with the collaboration of R.V.V. Nicholls and Mario Onyszchuk. Of particular interest from 1939 to 1945, Donald's diaries introduce us to a world of Ottawa bureaucrats, military leaders, secret scientific research, night trains to Washington, visiting Russian delegations looking for Canadian explosives, and meetings with C.D. Howe and others coordinating the Canadian war effort. On 7

May 1945 with Germany's surrender, Donald noted the reaction in Montreal: "Pandemonium broke loose, people pouring out of buildings and into the streets...crowds of people parading up and down. I lunched at the University Club, where there was no particular excitement."⁴⁶ The diaries reveal an accomplished, matter of fact man keeping track of his life, perhaps suspecting that someday he would write his memoirs.

George H. Kohl, (1889-1964) took his engineering degree from McGill in 1910. Versatile and resilient, he worked as a hydraulic engineer, started a consulting business in 1926, and worked for the Power Corporation in Montreal. Left unemployed by the Depression, he managed a tannery for a while. In 1940 with his wife he took agriculture courses and ran a mixed farm near Guelph, Ontario until retiring in 1948. He came out of retirement to work for Power Corporation until 1953. Retiring again, he planned to do some consulting; he had kept up with hydraulic engineering through McGill's Engineering Faculty and friends like R.A.C. Henry. In late 1953 he was recruited by Henry to become Chief Engineer and Alternate Member (Canadian Section) on the St. Lawrence Seaway Project from 1953 to 1963.⁴⁷ Recognizing the Project's importance, he kept a record of daily events, engineering problems, policies and decisions, and meetings with Henry, General Andrew McNaughton and others.⁴⁸ The diary covered meetings with American members of the Joint Board and the issues to be resolved: for example, persuading the Americans to accept the Canadian view on channels and velocities at one point (22 January 1955). Kohl also gave personal opinions, probably not found in the Seaway's official records. His greatest job done, he retired for the third time and died soon after. His diaries and the R.A.C. Henry Papers⁴⁹ also in the Archives, give important, personal documentation of the Seaway Project, which seemed to be the model of international cooperation, technological triumph, and mutual profit.⁵⁰

A MONTREALER

Many diaries document a limited aspect or period of their authors' lives. Like the diaries

by Kohl, Judah and Macmillan, they are kept to record special projects, travel, war or some other novel experience. A long-term diary like Vaughan's or Donald's has added dimensions; it becomes the story of a life. Ethel Stevens Martin (1905-1990) kept such a diary. She worked for Imperial Tobacco and was married to A.L. Martin. Covering 1924-1925 and 1939-1989, her diaries relate the social life of a typical English Montrealer. She reported on many cultural events; she discovered the young science of psychology at a lecture at the Mount Royal Hotel in July 1924. She punctuated her entries with a few original poems as well as observations on the poetic. Rowing on Lake Memphremagog in August 1929, she noticed "an overhanging birch on one of the cliffs that made me think of a maiden leaning over to see her pleasant reflection below." For the next sixty years, she wrote about walks with friends; animal welfare; church (Unitarian and others); family (after the death of her mother she dreamed that she was living with her mother and father again); sports, dance and sewing classes; and travel to New York, the Caribbean, Europe, Australia and New Zealand. On 22 November 1989, she hit her head on the floor. She continued normal activities such as an SPCA bazaar but went for tests. She was told she would be all right. Ominously, the diary shows she had trouble writing. Some days later, on a "stormy snowy day," she went out to a friend's funeral. With difficulty and tenacity, she kept up the diary for a few more entries; it stopped a month or so before her death, sixty-five years after it was begun.⁵¹ Like Anna Dawson, she had stored memories of her youth to enjoy in old age; like Susan Vaughan she had assumed the peculiar duty of keeping a record of her life, which she carried out to the end. And with the other people mentioned here, she enjoys a modest immortality through the survival of her diary.

* * * * *

Notes

Acknowledgements: I am grateful for assistance from Carol Wiens, and from Kendall Wallis and Joseph Swift of the McGill Libraries. For information on Bernard Samuel Judah, I am indebted to Janice Rosen of the Canadian Jewish Congress (Montreal) and Mrs. Evelyn Miller of Montreal.

1. Anna Dawson, Diary, 13 April 1867 (MG 1022). The Archives' Manuscript Group (MG) number is given in this and the following first citations of diaries.

2. Susan Cameron Vaughan (1871-1961) Diary, 5 Mar. 1938 (MG 4014).

3. In addition to the University's administrative records, the Archives acquires papers, photographs and other material of research value from McGill's staff and milieu. The Archives holds other records of some of the diarists mentioned here. Many diaries in the University Archives and in the Osler Library, the Department of Rare Books and Special Collections and the McCord Museum are listed in *A Guide to Archival Resources at McGill University* (3 vols. Montreal 1985) produced by the University Archives, from which some biographical information in this article is drawn.

4. *The Journals of George M. Dawson: British Columbia, 1875-1878*, ed. D. Cole and B. Lockner (2 vols. Vancouver 1989).

5. Following the usage of John Batts, the authority on Canadian and British diaries, "diary" will be taken to mean the same as "journal" and to contain reasonably frequent entries written not long after the event: John S. Batts, "Seeking the Canadian Pepys: the Canadian Manuscript Diaries Project", *Archivaria*, No. 9 (Winter 1979-80), 130-31. William Matthews began the systematic identification of Canadian diaries with his *Canadian Diaries and Autobiographies* (Berkeley, California 1950). Research on Canadian diaries has been greatly advanced by John Batts; see, for example, his "Fishing for identity: establishing authorship of a mid-nineteenth-century manuscript diary", *Archivaria*, No. 20 (Summer 1985), 136-141.

6. Probably the Battle of the Nile, 1 Aug. 1798.

7. Spark's diary was preserved with the meteorological records of the McGill Observatory (microfilm 3307). An important and moderate clergyman, he published several sermons and also taught students. See James H. Lambert, "Alexander Spark", *Dictionary of Canadian Biography* (1801-1820), v, 768-771. The term "Apoplexy" could include strokes and other seizures.

8. *The Quebec Almanac; and British American Royal Calendar, for the Year 1819* (Quebec n.d.) under March, n.p. I am advised by J. Swift, that the moon being in a different sign, the death date has no significant connection with the full moon.

9. Bernard Samuel Judah, Diary, 1827 (MG 2018). A useful but inexact transcription of much of the diary (with many phrases altered or elucidated, and several tart comments omitted) was edited by John M. Judah: "A Journal of Travel from New York to Indiana in 1827", *Indiana Magazine of History*, xvii. no. 4 (Dec. 1921), 338-352.

10. Bernard Samuel Judah's father (Bernard Judah) had supported the American Revolution with loans which were never repaid. Information on family members can be found in the Judah Family file of the Archives of the Canadian Jewish Congress (Montreal) which include a genealogy and "La Famille Judah", *Le bien public*, 23 mars 1939. See also *Dictionary of Canadian Biography*, iv, 331: "Aaron Hart"; *Encyclopedia Judaica*, x, 335; and David Rome, comp., *Canadian Jewish Archives* (New Series, nos. 16, 23, 28: Montreal 1980-1982), particularly no. 23, p. 92, citing a letter from E. Levy to A. Hart, n.d. On the lawyer son in Indiana, see *Dictionary of American Biography*, x, 227: "Samuel Judah".

11. Judah, Diary, 21 Nov. 1827.

12. Judah, Diary, 26 Oct.-1 Nov., 11 Nov. 1827.

13. Judah, Diary, 23 Nov. 1827.

14. Judah, Diary, 17-22 Nov. 1827.

15. Judah, Diary, 27 Nov.-4 Dec. 1827.

Diaries from the McGill University Archives

16. William Logan, Diary 1845-1846 (MG 2046). See B.J. Harrington, *Life of Sir William E. Logan* (Montreal 1883), 237-238 and Morris Zaslow, *Reading the Rocks: The Story of the Geological Survey of Canada* (Ottawa 1975), esp. pp. 41-47.
17. The painter was probably Alvah Bradish (1806-1901), an American portrait painter who practised in western New York and Detroit.
18. In addition to Logan's remarks, the information on McNab is taken from the lively biography of McNab by A. Cameron and J. Gwyn in *DCB*, viii. 584-589. See also *Canadian Encyclopedia*, sub "McNab, Archibald".
19. Logan, Diary, 16 Aug. 1845.
20. Logan, Diary, 16 July, 2 Aug., 22 Aug. 1845.
21. Logan, Diary, 27 July, 30 July 1845.
22. George M. Dawson, Diaries, 1861-1899 (MG 1022).
23. George M. Dawson, *The Journals of George M. Dawson: British Columbia, 1875-1878*, ed. Douglas Cole and Bradley Lockner (2 vols. Vancouver 1989). Transcripts with notes of Dawson's diaries for 1873, 1879, 1881 and 1887 have been prepared and circulated by W.J. Ross. Complementing the diaries is the correspondence between George Dawson and his father and others, held and indexed by the University Archives.
24. Dawson, Diary, 1 Mar.-12 Apr. 1861 (MG 1022). An adult appears to have prepared the little book with dates at the top of each page. O'Hara was the son of W.C. Baynes, McGill's Secretary, Registrar and Bursar, 1856-1887. Like the Dawsons, the Baynes family lived in the East Wing.
25. Dawson, Diary, 11 Sept.- 7 Oct. 1869. The drawing is among Dawson's sketches (MG 1022 c.59). The Lake Erie, 930 tons, left Montreal on 11 Sept. 1865 and arrived at Glasgow on 7 Oct. 1869.
26. Dawson, Diary, 1882 (possibly July).
27. This was the son of the Rev. Mr. Adamson (Chaplain to the Legislative Assembly, Montreal): William Logan, Diary, 7-8 June 1846 (MG 2046).
28. Anna Dawson, Diary, 1865, Aug-Sept. (MG 1022). The Dawson Family Papers include diaries of Anna Dawson's brothers George and Rankine.
29. She titled it "Observations, Thoughts, Fancies etc etc". It combines the diary and the commonplace-book genres (MG 1022).
30. Dawson, Diary, 6 and 28 Dec. 1866.
31. Dawson, Diary, 14 Dec. 1866.
32. Before her marriage, she took several university-level courses in the Montreal Ladies' Educational Association given by her father (Mineralogy), Goldwin Smith (English History), John Clark Murray (Logic) and Dr. Duncan MacCallum (Physiology): Register of certificates 1871-1884, M.L.E.A. (MG 1053).
33. Clement H. McLeod, Diary, 1870-1875 (MG 1056).
34. Louis V. King, Diary, 18 Feb. 1902 (MG 3026).
35. William Paterson, Diary (MG 4048).
36. Andrew H. Gault, Diary, 1912-1913 (MG 3068).
37. Albert Kelly, Diary, 1918 (MG 3054); F.A.C. Scrimger, Diary, 1915 (MG 2034); see R.C. Fetherstonhaugh, *McGill University at War: 1914-1918, 1939-1945* (Montreal 1947).
38. Cyrus Macmillan, Diary, 1917 (MG 1057). This was a pocket-sized book published by Lett: "The Soldier's Own Diary". Macmillan taught English at McGill, 1909-1947, and was Dean of Arts, 1940-1947. He was M.P. for Queen's, Prince Edward Island, 1940-1945. See Fetherstonhaugh, *McGill University at War*, 25-26.
39. Macmillan, Diary, 15 Mar. 1917.
40. Beside the diaries, the Reuben D'Aigle Papers (MG 2060) include a scrapbook, photographs and hand drawn maps.
41. Howard T. Barnes, Diaries, 1924-1929 (MG 1016). Thermit (trademark: "Thermit") according to the *Random House Dictionary* is: a mixture of finely-divided metallic aluminum

Diaries from the McGill University Archives

and ferric oxide that when ignited produces extremely high temperatures as the result of the union of the aluminum with the oxygen of the oxide.

42. Cyril James' diaries (MG 1017) are closed until 1993; Rocke Robertson's diaries (MG 2001) are closed until 2000.

43. Susan C. Vaughan, Royal Victoria College Day Books, 1905-1937; Diary, 1899-1940 (MG 4014).

44. Vaughan, Diary, 19 June 1932.

45. Maude Abbott, Diary, 7 Nov. 1929, (MG 1070). See Margaret Gillett, "The Heart of the Matter: Maude E. Abbott, 1869-1940" in Marianne G. Ainley, ed., *Despite the Odds: Essays on Canadian Women and Science* (Vehicule Press, Montreal 1990).

46. J.R. Donald, Diary (MG 2043). The diaries are supplemented by other records of J.R. Donald as well as the records of J.T. Donald & Co. (MG 1003), also held by the Archives.

47. This information was received in a letter, G.Gordon Kohl to Robert Michel, 14 Nov. 1991, in McGill University Archives accession file 91-079.

48. A small amount of McNaughton's papers is in the University Archives (MG 3071).

49. R.A.C. Henry Papers (MG 2069).

50. George H. Kohl, Diaries, 1953-1963 (MG 4154).

51. Ethel Stevens Martin, Diary, 1924-1989 (MG 4143).

The Correspondence of the Royal Institution for the Advancement of Learning in the McGill University Archives

by Réal G. Boulianne

The Royal Institution for the Advancement of Learning, which one associates generally with McGill University, was responsible also for the origin and development of the first system of public education in Lower Canada. Therefore, its correspondence, located in the McGill University Archives (MUA), is essential not only to the history of McGill, but also to the study of education in Quebec.

These documents were used extensively by Macmillan (1921) and Frost (1980 and 1984) in their histories of McGill. This paper, however, will focus specifically on the contribution of these records to the historiographical controversy surrounding the initial development of public education in Quebec.

L'Institution royale pour l'avancement des sciences, que d'aucuns associent généralement à l'Université McGill, est également l'instigateur du premier système d'enseignement public du Bas-Canada. Par conséquent, sa correspondance, réunie dans les archives de l'Université McGill, est essentielle non seulement pour l'histoire de McGill mais pour l'étude de l'enseignement au Québec.

Ces documents ont été largement utilisés par Macmillan (1921) et Frost (1980 et 1984) dans leur histoire de McGill. Néanmoins, cet article porte uniquement sur le rôle de ces documents dans la controverse historiographique qui entoure l'origine de l'enseignement public au Québec.

When the Assembly of Lower Canada established the Royal Institution in 1801¹ it attempted to provide the colony with a much needed system of public education. Except for scattered local opposition, particularly in areas settled by recent immigrants from the U.S.A., the English-speaking population accepted these schools readily, and in most cases eagerly. However, since they came directly under the authority of the governor and were administered *de facto* by the Anglican Bishop of Quebec, the great majority of French Canadians refused to accept them, thus contributing to the failure of the Royal Institution to remain in the field of public education.

After the conquest, and more specifically after 1763 when Quebec became officially a British colony, the French Canadians feared,

not without cause,² that their new colonial masters would attempt to establish British institutions and to assimilate their new subjects into the English-speaking Protestant population of British North America. These fears were not alleviated when the English population of Quebec increased substantially with the coming of the Loyalists, leading to the passage of the Constitutional Act in 1791. This Act created a British system of representative government, and provided for land grants, the Clergy Reserves, and for the support of a Protestant clergy. The structure to support a Protestant clergy was reinforced two years later when the Right Reverend Jacob Mountain was appointed Lord Bishop of the newly created See of Quebec. One of Mountain's first concerns was for the development of education.

Education, which had been neglected since the conquest, came eventually to the attention

of the colonial authorities. The Governor, Lord Dorchester, formed a committee of the Legislative Council in 1787, under Chief Justice William Smith, to study the situation and to make recommendations for its improvement. At the same time he consulted Bishop Charles Inglis of Nova Scotia on the subject. Before the appointment of Jacob Mountain, Inglis included Quebec within his jurisdiction, and when he came on his visitation in 1789, he proposed specific recommendations to improve education. A few months later, the Committee of the Legislative Council reported finally to the governor and proposed a state supported system of education to be crowned by a secular, non-sectarian college or university. However, in view of the opposition of Mgr. Hubert, the Roman Catholic Bishop of Quebec, nothing was done to implement this.

The Smith proposal may not have been implemented, but a similar plan was formulated a few years later by Bishop Mountain who was interested not only in improving education for the English of Lower Canada, but also in using it to help integrate the French and English-speaking subjects of the Crown into a united Anglo-Protestant population. He wrote about this to Dorchester in 1795.

I would also beg leave to introduce here a subject by no means remotely connected with that which I have thus far had the honor of submitting. I mean the general state of Education in this Province. Had the appointment of S. Masters taken place under your L's Administration, I have no doubt that we should have found the bounty of Gov't accurately applied to the purposes for which it was originally designed – the liberal instruction of youth; the inducing the Inhabitants to embrace by degrees the Protestant Religion – etc. – At present, it is a matter of sufficient notoriety that either from incapacity or inattention in the Parties employed there is not a Grammar School in the Province that is worthy of the name, – that of inferior Schools there are none which proceed upon the prin-

ciples stated above. This abuse is of great public moment. The almost inevitable necessity which will thus be imposed upon the higher orders of Society to send their Children to the United States for the completion of their Education is pregnant with alarming mischiefs.³

Mountain's proposal was supported by the colonial administration. Through the efforts of the Lieutenant-Governor, Sir Robert Shore Milnes, his Civil Secretary, Herman Witsius Ryland, and the Attorney General, Jonathan Sewell, none of whom was particularly sympathetic to the aspirations of the French Canadians, legislation was enacted in 1801 establishing the Royal Institution for the Advancement of Learning.

THE EDUCATION ACT OF 1801

The Act of 1801 created the structure for a centralized, state supported system of education in Lower Canada. The governor was authorized to appoint a board of trustees to administer the system and to make rules and regulations for the schools under its control. In addition, he was to name commissioners and visitors, local residents responsible for the construction and supervision of schools. Furthermore, he was to license all teachers and issue government warrants for their salaries. The law placed a great deal of authority in the hands of the governor and, effectively, in those of the proposed board of trustees. Like the Smith proposal of 1789, it provided for elementary schools in villages and parishes, intermediate schools at the county level, as well as a college or university.

The Roman Catholic Church, which had opposed the 1789 project, now, under the leadership of Mgr. Plessis, similarly opposed the Royal Institution. It feared the interference of the state in a jurisdiction it claimed as its own. As well, it was afraid that the schools would be used to anglicize and protestantize the French Canadians, certainly a stated aim of Mountain and the colonial authorities.

This opposition was one of the reasons for the eventual failure of the Royal Institution to create a school system in fact as well as in law.

contained, shall extend to alter or prejudice the Right of His Majesty, His Heirs or Successors, or those of any Person or Persons, or Body Politic or Corporate whatsoever, not particularly mentioned in this Act.

Public Act.

Public Act.

XVI. And be it further enacted by the Authority aforesaid, that this Act shall be deemed and taken to be a Public Act, and all Judges, Justices and other Persons are hereby required to take notice thereof as such, without the same being specially pleaded.

C A P. XVII.

An Act for the Establishment of Free Schools and the Advancement of Learning in this Province.

Res. 1801-1802. 1801-1802. 6th April 1801. 7th April 1802. 12th August 1802.

28th April 1801, Presented for His Majesty's Assent and Reserved " for the signification of His Majesty's Pleasure thereon."

7th April 1802, Assented to by His Majesty in His Privy Council.

12th August 1802, The Royal Assent signified by Proclamation of His Excellency the Lieutenant Governor

MOST GRACIOUS SOVEREIGN.

Provisoire.

WHEREAS Your Majesty from your Paternal Regard, for the welfare and prosperity of your Subjects of this Province, hath been most graciously pleased to give directions, for establishing of a competent number of Free Schools for the instruction of their Children, in the first Rudiments of useful Learning, and also occasion may require, for Foundations of a more enlarged and comprehensive nature; And whereas Your Majesty hath been further most graciously pleased to signify your Royal Intentions, that a suitable proportion of the Lands of the Crown, be set apart, and the revenue thereof appropriated to such purposes, Therefore We, Your Majesty's Faithful and Loyal Subjects, the Legislative Council and Assembly of your Province of Lower Canada, with the most lively gratitude for this new instance of Your Majesty's Paternal Attention, to the wants of Your Majesty's Subjects, and desirous to contribute every thing in our power, for the execution of a plan so peculiarly beneficial to the rising Generation, do most humbly beseech Your Majesty, that it may be enacted, and be it enacted by the King's Most Excellent Majesty by and with Advice and Consent of the Legislative Council and Assembly of the Province of Lower-Canada, constituted and assembled by virtue and under the Authority of an Act, passed in the Parliament of Great Britain, intituled, " An Act to repeal certain parts of an Act passed in the fourteenth Year of His Majesty's Reign, intituled, " An Act for making more effectual Provision for the Government of the Provinces of Quebec in North America," And to make further provision for the Government of the said Province; And it is hereby

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ne s'étendra à nuire ou préjudicier aux Droits de Sa Majesté, ses Héritiers ou Successeurs, et à toutes Personnes ou Corps Politique ou Corporations quelconques, lesquels ne seroient pas mentionnés dans le présent Acte.

Droits de Sa Majesté, &c.

XVI. Et qu'il soit de plus statué par l'Autorité susdite, que cet Acte sera censé être regardé comme Acte public, et tous Juges, Juges à Paix et autres Personnes sont par le présent requis de le regarder comme tel, sans qu'il soit spécialement allégué.

Acte public.

C A P. XVII.

Actes pour l'Établissement d'Écoles Gratuites, et l'Avancement des Sciences dans cette Province.

8me. Avril, 1801. Présenté pour la Sanction de Sa Majesté, et réservé " Pour la signification du Plaisir de sa Majesté sur icelui."

7me. Avril, 1802. Sanctionné par sa Majesté dans son Conseil Privé.

12me. Août, 1802. La Sanction Royale déclarée par Proclamation de son Excellence le Lieutenant Gouverneur.

TRES GRACIEUX SOUVERAIN,

VU que Votre Majesté, par ses Egards, Paternels pour le bien-être et la prospérité de ses Sujets en cette Province, a bien voulu donner très gracieusement des directions pour l'Établissement d'un nombre compétent d'Écoles Gratuites pour l'instruction de leurs Enfants dans les premiers Elémens des Sciences utiles, et aussi lorsque les circonstances le requerroient, pour des Fondations de nature plus étendue; et Vu que Votre Majesté a encore bien voulu signifier Très Gracieusement ses Intentions Royales pour qu'une proportion convenable des terres de la Couronne fut mise à part, et que le revenu en fut approprié à ces objets, Nous, les Fidèles et Loyaux Sujets de Votre Majesté, le Conseil Législatif et l'Assemblée de Votre Province du Bas Canada, pénétrés de la plus vive reconnaissance pour cette nouvelle marque de l'attention Paternelle de Votre Majesté aux besoins des Sujets, de Votre Majesté, et désirant contribuer, en tout ce qui est en notre pouvoir, à l'exécution d'un plan si particulièrement avantageux à la Génération naissante, Supplions en conséquence très humblement Votre Majesté qu'il puisse être statué, et qu'il soit statué par la Très Excellente Majesté du Roi, par et de l'Avis et Consentement du Conseil Législatif, et de l'Assemblée de la Province du Bas-Canada, constitués et assemblés en Vertu et sous l'Autorité d'un Acte passé dans le Parlement de la Grande Bretagne, intitulé, " Acte qui rappelle certaines parties d'un Acte passé dans la Quatorzième Année du Règne de Sa Majesté, intitulé, " Acte qui pourroit plus efficacement pour le Gouvernement de la Province de Québec dans l'Amérique Septentrionale" et

Provisoire.

" qui

Figure 1. The act establishing the Royal Institution, from Provincial Statutes of Lower Canada, volume III, 1801. (Government Documents Department, McGill University Libraries).

The Correspondence of the Royal Institution

Another was the lack of support from the Crown which never fulfilled its promises to provide land grants to help finance the schools.⁴ Also, after 1814, the Assembly, year after year, fought to pass legislation more suitable for population in the great majority French and Roman Catholic.⁵

From 1801 to 1818 the Royal Institution was essentially a dead letter. The governor never appointed a board of trustees, and those schools for which the government paid a teacher's salary had neither direction nor adequate supervision. In 1801 there were four of these, and by 1818 their number had risen to thirty-five. However, under these conditions, many had become mere sinecures, often seen as rewards for good and faithful servants of the government.⁶ The Royal Institution, as a system of education, was virtually non-existent.

The death of James McGill in 1813 helped change the situation. His will provided £ 10,000 and his Burnside Estate for the creation, within ten years of his death, of a college or university bearing his name. His executors, one of whom was the Rev. John Strachan of Upper Canada, finding it difficult to realize the bequest, linked their fortunes to that of the Royal Institution.⁷ In 1816, Strachan wrote to Mountain to this effect and suggested that the government might move on the Royal Institution.⁸ It did. On October 8, 1818, the Governor-General, the Duke of Richmond, issued *Letters-Patent establishing the Royal Institution*, and all those schools receiving government salaries were placed under its jurisdiction. The Board of Trustees was appointed and, on December 4, 1819, Bishop Mountain was named Principal.⁹ Mountain named the Rev. Joseph Langley Mills, Chaplain to the Forces, as its Secretary,¹⁰ and the Board of Trustees held its first meeting in January, 1820.¹¹

The first Board, headed by Bishop Mountain, was made up principally of members of the colonial administration, representatives from the Executive and Legislative Councils as well as from the judiciary of both Lower and Upper Canada.¹² Mgr. Plessis was nominated to the Board but, as could be expected, refused to serve on a body so predominantly English and Protestant in which

he would have been subservient to the Anglican Bishop. His refusal meant the continued opposition of the Roman Catholic clergy, the same situation that had hindered the Royal Institution since 1801.

Nevertheless, the Board carried on with its task of trying to make the Royal Institution not only the official system of education in Lower Canada, but also an effective one. It promulgated a set of regulations which, for the time, appeared fair and liberal. Uniformity of textbooks was prescribed, and their selection was left to the clergy of both denominations for the schools in their respective parishes. Priests and ministers were invited and authorized to inspect the schools and to visit the pupils of their denomination. Furthermore, provisions were made for separate religious worship. In addition, in French-speaking areas, the teachers appointed were to be French and Roman Catholic. The visitors, local residents, were to report to the Royal Institution through its Secretary¹³

From 1820 onward, with a central administration in place, the Royal Institution began to expand, albeit mostly in English-speaking areas. This expansion, especially in the Eastern Townships and in western Lower Canada, was due in good part to the efforts of the Society for the Propagation of the Gospel in Foreign Parts (SPG) missionaries who saw the development of education an integral part of their mission. *There had been thirty-five government supported schools, although unorganized as a system, in 1818. By 1824, there were forty-one, and by 1829, eighty-four.*¹⁴ These schools now came under the direct supervision of the Royal Institution, the SPG missionaries and the visitors reporting regularly on their progress to the Secretary.

Since the great majority of the French Canadians did not participate in the state school system, the colonial authorities took steps to alter it to make it more acceptable to them and to the Roman Catholic Church. As early as 1821, shortly after the Royal Institution started its operation, the Governor-General, Lord Dalhousie, initiated negotiations with the Roman Catholic hierarchy to find an acceptable solution to this situation. These negotiations between the governor(s)

and Mgr. Plessis, and after his death with his successor, Mgr. Panet, went on very slowly from 1821 to 1829. An agreement was reached finally that year to form two virtually independent committees of the Royal Institution, one for the Roman Catholics under the authority of their bishop, and the other for the Protestants, under the Anglican bishop – a system not unlike the one which governed Quebec education from the middle of the 19th century until 1964! On March 2, 1829, the Legislative Council presented the text of the bill to the Assembly. Although the bill received first reading, it was not passed but was referred to the next session.¹⁵

The Assembly then passed its own education legislation for Lower Canada, the Syndics' Act, which was sanctioned by the Administrator of the Province on March 14, 1829.¹⁶ Although the Act did not suppress the Royal Institution nor its financial support, it offered the residents of Lower Canada an alternate system, one supported more generously by state funds. After much activity since 1814, the Assembly, rather than the colonial authorities and the churches, had managed finally to place itself in control of public education.

The effect of the Syndics' Act was to eliminate the need for the Royal Institution to continue its activities in the field of public education. From 1829 onward, the number of Royal Institution schools declined. From a peak of eighty-four schools in 1829, there were only sixty-two left in 1831, and three in 1844. By 1846 it had no elementary schools left under its jurisdiction.¹⁷ In fact, after 1837, the Royal Institution had narrowed its interest primarily to its grammar schools in Montreal and Quebec City and to McGill College.

THE ACT OF 1801 AND CANADIAN HISTORIOGRAPHY

Until the publication of volumes III and IV of Louis-Philippe Audet's *Le Système scolaire de la Province de Québec* in 1952,¹⁸ there had been no really comprehensive and well documented study of the Royal Institution. Most historians, particularly French-language historians, had seen in this school system an attempt, if not a plot, by the colonial author-

ities to assimilate the French Canadians. François-Xavier Garneau, whose influence on French-Canadian historiography is well known, took this stand firmly.

On autorisa également l'établissement de l'Institution Royale, crée en apparence pour «l'encouragement de l'instruction publique», mais destinée, dans la pensée de ses promoteurs à faciliter l'anglicisation du pays. La direction de l'enseignement, par cette dernière mesure, se trouva entre les mains du pouvoir exécutif. Le gouverneur nomma les administrateurs, désigna les paroisses où l'on ouvrirait des écoles, choisit des instituteurs; et à sa demande le roi dota en terres deux collèges qu'on se proposait de fonder, l'un à Québec, l'autre à Montréal. L'évêque protestant fut appelé à la présidence de l'Institution: cela la rendit impopulaire dès le principe. [Au surplus, elle n'exista jamais que de nom.] Les Canadiens, qui ne voulaient abjurer ni leur langue, ni leurs autels, la repoussèrent; et elle ne servit, pendant plus d'un quart de siècle, qu'à mettre obstacle à un système d'éducation plus conforme à leurs vœux.¹⁹

This evaluation became essentially, with very few exceptions, the standard interpretation of the work of the Royal Institution for approximately one hundred years. These conclusions were based solely on the correspondence of the colonial officials and of the Roman Catholic clergy in the early 19th century. The records of the Royal Institution were neither cited nor used.

Dr. J.-B. Meilleur, Superintendent of Education for Lower Canada from 1842 to 1855, published a history of education in the Province.²⁰ Meilleur had been also, as a member of the Assembly, an active participant on its education committee while the Royal Institution had still been in operation, and as such, knew of its activities and of its records. This put him in a good position to evaluate its contribution to the development of public

Castle of Lewis
Quebec 23 May 1825

Sir

I am directed by His
Excellency the Lieut Governor to acquaint
you for the information of the Royal
Institution that he approves of the
Recommendation of that Board for the
Commission of John Rindfeld Allsopp
as the foundation of the Royal Grammar
School at Quebec after the ensuing
Midsummer Vacation

I have the Honor to be
Sir
Your most Obedt Servant
L. Montizambert
Captn

The Reverend
Dr Mills

Figure 2. Appointment of John Allsopp to the Royal Grammar School, Quebec, 23 May, 1825. (Royal Institution Papers, McGill University Archives.)

The Correspondence of the Royal Institution

education in Lower Canada. Yet, his conclusions were virtually the same as Garneau's.

Cette loi, destinée à servir de base, dans l'esprit des auteurs, à l'anglification de l'origine française en Canada, par un système d'instruction publique sécularisé, et fonctionnant en anglais...²¹

Le gouvernement et l'Institution royale avaient, en vertu de cette loi, la liberté de monopoliser le pouvoir en faveur de l'Eglise anglicane...²²

A more complete study of the Royal Institution might have been expected from someone in Meilleur's position. However, like Garneau, he went no further than to examine the intentions of the founders in 1801.

A more valid evaluation of the work of the Royal Institution was written in 1914 by George W. Parmelee, Director of Protestant Education from 1924 to 1930. In his article, "English Education," in *Canada and Its Provinces*,²³ he engaged the issue of the Royal Institution more fully than previous historians. Making use of the correspondence of the Royal Institution, he was able to examine in some detail the actual operation of the school system and to refute, with compelling historical evidence, some of the more inflammatory charges against it. In using the Royal Institution records to correct some of these earlier inaccuracies and accusations, Parmelee made a substantial, if generally unnoticed, contribution to the history of that institution.

Like Parmelee, Cyrus Macmillan in *McGill and Its Story, 1821-1921*,²⁴ used the Royal Institution correspondence and described, to some extent, the actual operation of the school system after 1820. Likewise, he looked beyond the intentions of the founders in 1801.

Unfortunately, neither Parmelee's nor Macmillan's evaluation of the Royal Institution made an impact on Canadian historiography. Yet, it is difficult to understand how serious scholars, writing on the subject after 1921, could have ignored their contribution.

It is quite evident that Lionel Groulx in *L'Enseignement français au Canada*, published in 1931, had consulted both Parmelee and

Macmillan. Despite this, in his twenty page treatment of the Royal Institution, the most detailed study of the subject yet, he neglected to take their contribution into account. He still saw only the plot of the colonial authorities to assimilate the French Canadians and made no reference to the Royal Institution in its operational phase after 1820, its most productive years as a school system.

...enfin, fondation d'un système d'écoles anglaises avec maîtres dirigés et payés par le gouvernement pour enseigner l'anglais gratuitement au Canadiens.²⁵

Il y a lieu de se demander si monopole d'état plus vigoureusement organisé, mainmise plus absolue des autorités coloniales sur l'esprit des prochaines générations, pouvaient être imaginées.²⁶

Groulx continued to perpetuate the Garneau position even though he had to be aware, through his knowledge of Parmelee and Macmillan, that there had been more to the Royal Institution than the initial intentions of the colonial authorities, and that there were documents available to pursue this line of inquiry further. This was a serious omission for a historian of Groulx's stature and influence. Unfortunately, the Garneau-Groulx interpretation continued to prevail in subsequent histories. Authors like Bruchesi (1951), Rumilly (1951), and even Mason Wade (1955) and others, accepted the same interpretation.²⁷

It took a general history of Canada, Arthur Lower's *Colony to Nation*, published in 1946, to introduce some new and interesting insights on the subject. Lower's hypothesis challenged seriously the traditional interpretation that the Royal Institution had been designed specifically to assimilate the French Canadians.

The Royal Institution is held up by many French Canadians today as an example of the 'tyranny' to which their ancestors were subject, another English attempt to anglicize and proselytize them. Complete purity of motive need not be attributed to the authors of the project

but a reading of the Act in the spirit of English parliamentary institutions suggests that it contained little that could not have been used by French and Catholic people to their own advantage. Too much power was given to *The Governor*, yet as early as 1802 those words had some similarity to *The Crown*. The first membership of the Institution was far too heavily weighted with English and for that (a condition common to every phase of government in the province at that time) there is no defense. Yet if the French people had taken the Act and worked it, as they afterwards worked Responsible Government, they would sooner or later have brought matters to the same point of democratic control and would have had a system of free elementary education long before they actually obtained it. The difficulty lay not so much in the Act as in French misunderstanding of the genius of English institutions, especially of the great part of government that resides in convention rather than in law; and it lay still more in the opposition of bishop and clergy, who, not finding themselves given specific mention and place under the terms of the Act, believed they were shouldered out of the all-important field of education. But they too, a reading of the Act would suggest, could have found their place in the scheme, if they had desired it. They did not desire it: they thought in terms of a church which should have a position in society independent of, if not superior to, the state, not of a church subject to the general law of the land. The charge of tyranny would seem to have little foundation when levelled against an act carried in an assembly of which the great majority were French and Catholic.²⁸

It is worth noting that Lower, in a general history of Canada, could present such a fresh,

interesting, if largely unsubstantiated hypothesis. However, it was a hypothesis worth exploring.

Two years later, in 1948 Louis-Philippe Audet presented a brief paper on the Royal Institution to the Royal Society of Canada. Although he did not make reference to Lower, (there is no way of knowing whether or not he had read Lower) he presented essentially the Lower hypothesis.

Ce rapport est significatif. Ces paroisses qui ont accepté et utilisé, pour l'éducation de la jeunesse, la loi de 1801, ont-elles pris une attitude si anti-nationale et compromis les principes religieux et patriotiques de leurs ressortissants? Si, au lieu de onze paroisses, la plupart avaient sollicité l'appui du pouvoir public, et si l'autorité religieuse avait pris les précautions nécessaires pour sauvegarder la foi de ses ouailles, les résultats n'auraient-ils pas été totalement différents? La politique d'abstention nous a joué dans le passé de fort mauvais tours. La collaboration franche et loyale sur une base équitable qui sauvegarde les droits de chacun est autrement féconde. Cette dernière attitude est même la seule qui nous permette de revendiquer nos droits avec quelque chance d'être entendus. Notre histoire eût été tout autre si nous l'avions compris plus tôt.²⁹

The major significance of this article is not that it brought much new information to light. It did not. There was not even a reference to the now virtually forgotten Royal Institution documents used by Parmelee and Macmillan some thirty years previously. However, the hypothesis presented and the questions raised pointed directly to the need for a detailed study of the Royal Institution, one based not solely on the writings of colonial authorities, but one which examined thoroughly the actual operation of the Royal Institution as a school system and the fate of those French Canadians who had accepted its authority. Audet's hypothesis would lead him to re-discover the records of the Royal Institution.

Val Cartier School List 14th April 1825

<i>Names.</i>	<i>Entered.</i>	<i>Discontinued.</i>	<i>Aged.</i>	<i>Classes.</i>
<i>Thomas Murphy</i>	<i>Feb: 5th</i>	<i>Mar: 1</i>	<i>16.</i>	<i>Writing and Arithmetic</i>
<i>Margaret Mather</i>	<i>" "</i>		<i>8</i>	<i>Reading.</i>
<i>Janet Mather</i>	<i>" "</i>		<i>6</i>	<i>D^o</i>
<i>William Clarke</i>	<i>" "</i>		<i>9</i>	<i>D^o</i>
<i>Agnes Clarke</i>	<i>" "</i>		<i>7</i>	<i>D^o</i>
<i>Catherine Kerr</i>	<i>" "</i>		<i>10</i>	<i>D^o</i>
<i>Margaret Kerr</i>	<i>" "</i>		<i>7</i>	<i>D^o</i>
<i>William Brown</i>	<i>" "</i>	<i>April 10.</i>	<i>13</i>	<i>D^o & Writing</i>
<i>Marian Brown</i>	<i>" "</i>		<i>10</i>	<i>Spelling & Reading.</i>
<i>Mary Mc Cartney</i>	<i>" "</i>		<i>11</i>	<i>D^o D^o</i>
<i>James Mc Cartney</i>	<i>" "</i>		<i>9</i>	<i>D^o</i>
<i>Thomas Lochman</i>	<i>" "</i>			<i>D^o</i>
<i>Robert Innis</i>	<i>" "</i>	<i>" D^o</i>	<i>6</i>	<i>D^o</i>
<i>James Sweeney</i>	<i>April 1st</i>		<i>10</i>	<i>D^o</i>
<i>Helen Sweeney</i>	<i>" "</i>		<i>12</i>	<i>D^o</i>
<i>George Haney</i>	<i>" "</i>		<i>7</i>	<i>Testament & Spelling</i>
<i>Louisa Haney</i>	<i>" "</i>		<i>10</i>	<i>D^o D^o</i>
<i>Elizabeth O'neil</i>	<i>" "</i>		<i>7</i>	<i>Reading</i>
<i>Jane O'neil</i>	<i>" "</i>		<i>5</i>	<i>D^o</i>

Of these 7 are free scholars.

David Miller Teacher.

Figure 3. Report from the school at Val Cartier, 14 April 1825. (Royal Institution Papers, McGill University Archives.)

**THE ROYAL INSTITUTION
CORRESPONDENCE AND THE MCGILL
UNIVERSITY ARCHIVES**

The search for the Royal Institution documents took Audet, quite logically, to McGill University. Although McGill had no archives as yet, with the help of the Principal, F. Cyril James, the correspondence of the Royal Institution was located among the stored papers of the Board of Governors of the university. There were three different kinds of documents:

1. Letter-Books, 1820-1858;
2. Incoming Correspondence, 1820-1853;
3. Minute-Books, 1837-1856.

With these documents at his disposal, Audet began his task of writing the history of the Royal Institution.

It was fourteen years later, in August 1962, that McGill established the MUA. To the first archivist, A. D. Ridge, fell the task of putting order in the McGill University papers, including those of the Royal Institution. The first of these documents to be entered into the archives were the Letter-Books, as Accession 100, on December 18, 1963. The second was the Incoming Correspondence, on December 16, 1965, as Accession 447, and the last the Minute-Books, on April 3, 1967, as Accession 681. These four accessions are now part of Record Group 4: Secretariat of the Royal Institution for the Advancement of Learning and the Board of Governors.

These six Letter-Books, beginning 22 April 1820 and ending 29 September 1858, are hand written copies of outgoing correspondence (the practice before carbon paper and other duplicating methods) written by the Secretary of the Royal Institution. They are in chronological order and they contain the directives and inquiries of the Board of Trustees, through the hands of the Secretary, to commissioners, visitors, teachers, Anglican and other clergymen, as well as to the governor and other colonial officials. This today would represent, more or less, the correspondence and directives coming from a provincial department of education.

The Incoming Correspondence, 1820-1853, was organized into 113 packets of letters, bundled more or less chronologically, each bundle containing generally the correspondence for a quarter of a year.

These are packets of original letters received by the Royal Institution, written generally to the Secretary. Since the letters are bundled only chronologically, letters in any packet might come from hundreds of people from a variety of regions in the province.³⁰ A considerable part of this correspondence is made up of school reports from the visitors as well as letters to the Secretary from the SPG missionaries regarding the schools in their missions. There are letters also from commissioners, visitors, teachers, parents, and other local officials. This correspondence describes essentially the local operation of the various schools with their issues, problems, and controversies. Today, it would represent the activities of education at the school board level.

The two volumes of Minute-Books, begin on 3 February 1837 and conclude on 13 June 1856. These contain the deliberations of the Board of Trustees. Its policies were implemented by the Secretary, and were reflected in his correspondence.

Unfortunately, the Minute-Book(s) from 1820 to 1837 are missing. This represents a serious gap in the Royal Institution documentation, particularly for the period when that body's primary focus was public education. However, the gap is not as critical as it might appear. The major decisions and directives of the Board can be reconstructed quite readily from the Secretary's correspondence in which he often refers to Board decisions and Board policies. In addition, he wrote comments on the covers of the incoming letters making further reference to the Board of Trustees. Nevertheless, the availability of these Minute-Books would simplify the researcher's task and would give an *imprimatur* to what are now deductions, sound though they might be. Moreover, these books might well have contained other information which the Secretary had no need, nor wish, to communicate to others. Finding these Minute-Books would certainly contribute to a further understanding of the Royal Institution.

Rapport de l'École de St. Roch,

Le Soussigné, visiteur nommé pour
l'École de Formation Royale de St. Roch, certifie
avoir examiné le ditte école que j'en trouve
dans un état de prospérité.

Les élèves sont au nombre de trente
deux, dont quatorze ont admis grades.

La conduite de maître est régulière
& conforme aux règles de l'Institution.

St. Roch le 29 Sept. 1825.

Louis Belge

Figure 4 .Report from the school at St. Roch, 29 September 1825. (Royal Institution Papers, McGill University Archives.)

Audet's re-discovery of the Royal Institution documents was going to make an impact on Canadian historiography. No longer could historians focus solely on the founding of the school system in 1801 and on the stated plans of its originators. The gap of relative inactivity from 1801 to 1818 would have to be recognized and explained, and more importantly, the actual, not alleged, operation of the schools would have to be considered. Moreover, it would have to be recognized also that, with the possible exception of Bishop Mountain, the people who administered the school system after 1820 were different from those who had initiated the law in 1801. Even Bishop Mountain, in his latter years (he died in 1825) was a far different person from the energetic and somewhat autocratic prelate who arrived in 1793 determined to establish the Church of England in the Canadas. He was an older, wiser, and to a great extent disillusioned man who had made his peace reluctantly with the conditions of the colonial church in Lower Canada, including the somewhat privileged position of the Church of Rome.

LOUIS-PHILIPPE AUDET AND THE HISTORY OF THE ROYAL INSTITUTION

In 1952, Audet published volumes III and IV of his six volume *Le Système scolaire de la Province de Québec*. These 739 pages, devoted exclusively to the history of the Royal Institution, represented by far the most comprehensive study yet. Prior to this, Groulx's twenty pages had been the longest work on the subject, and as has been stated already, a very incomplete, some might say biased, treatment indeed.

Audet re-examined, as others had done, the conditions under which the Act was passed in 1801 as well as the controversy that had followed. More importantly, however, he concentrated on the Royal Institution as an operational system of education. He identified the schools and examined their textbooks, programs of study, and pedagogical problems. He studied the teachers, their methods, competence, salaries, pensions, etc., as well as the work of the local officials, the commissioners and visitors. He examined the activities of the central authorities, the principal, the Board of

Trustees, and the Secretary. He looked at the regulations of the Board and at its administrative and financial problems. In addition, he outlined the attempts of the governor to reform the system to make it more acceptable to the French Canadians by proposing the formation of two identical and virtually autonomous committees of the Royal Institution. Audet even described the foundation and early history of McGill in the context of the work of the Royal Institution. In all, he produced a most thorough and scholarly history of Quebec's first education act. His conclusions were similar to those of his 1948 article which had served as his hypothesis.

Concluons. À la lumière des innombrables pièces d'archives que nous avons consultées, des procès-verbaux du Bureau et surtout de la correspondance officielle de l'Institution Royale, nous estimons que le jugement de l'histoire sur la loi scolaire de 1801 et sur le rôle de l'Institution Royale devrait être le suivant: sans minimiser l'influence de Jacob Mountain et de Jonathan Sewell dans l'élaboration du projet de 1801, il reste évident que le texte de cette loi ne contient à peu près rien qui n'aurait pu être utilisé par les Canadiens français catholiques à leur propre avantage. Les prévisos des articles 4 et 8, soustrayant les écoles catholiques à l'autorité de l'Institution Royale, constituent, à toutes fins pratiques, un système scolaire pour les Canadiens de langue anglaise, mais avec l'espérance que les Canadiens français voudront, eux aussi, en profiter. Il est faux de dire que l'Institution Royale fut un organisme tyrannique qui s'appliqua à défranciser et à décatholiciser les Canadiens: les documents historiques prouvent le contraire. Enfin, même si elle a rendu assez peu de services à la population canadienne-française, l'Institution Royale ne fut pas une faillite, car elle contribua à l'éducation de la jeunesse de langue anglaise dans les trois domaines de

The Correspondence of the Royal Institution

l'enseignement élémentaire, secondaire et supérieur. Tout compte fait, elle fut une pierre d'attente, ou mieux encore, une étape décisive dans la conquête de nos libertés scolaires, préparant ainsi une ère de justice pour tous.³¹

Audet's study was long overdue. It not only refuted quite conclusively the charges of a nefarious plot to use education to assimilate the French Canadians but it established also the relative importance of the Royal Institution in the history of Lower Canada. The records of the Royal Institution made this major contribution to Canadian historiography possible.

THE ROYAL INSTITUTION DOCUMENTS AND FURTHER STUDIES

Although Audet had gone through the complete records of the Royal Institution, he had not come near exhausting their data. A wealth of information remained, and still remains, to be used by researchers.

A topic which Audet had explored only sufficiently to support his hypothesis remained to be explored further – a study focusing specifically on those French-Canadian parishes that had accepted to operate schools under the Royal Institution, as well as the fate of those French-Canadian pupils who had attended Royal Institution schools under English administration. Audet had made a start in this direction when, in 1956, he wrote a paper, once more for the Royal Society of Canada: "Deux Écoles royales, 1814-1836: Sainte-Marie de la Nouvelle Beauce et Cap Santé," in which he presented a complete history of the Royal Institution schools in these two French-Canadian parishes. The result of these studies reinforced his previous conclusions.

Rien encore dans tout cela d'une offensive concertée pour angliciser et protestantiser les Canadiens!

Il me semble, pour ma part, que si les chefs religieux et civils du Bas-Canada avaient accepté cette loi de 1801 et décidé de l'utiliser, comme nos parlementaires le firent pour le gouvernement responsable, ils auraient tôt ou tard amené les chose

au même point de contrôle démocratique et auraient réussi à obtenir un système d'écoles gratuites, bien avant l'époque où ils les obtinrent en réalité.³²

Audet had studied only two French-Canadian schools in detail. There were more. In 1818 there had been eleven French-Canadian schools in Roman Catholic parishes,³³ and over the years there were some twenty schools where the French Canadians had been in the great majority, or had formed a substantial proportion of the student body of large English administered schools.³⁴ The fate of virtually all the French-Canadian pupils in Royal Institution schools remained to be studied. This is what this writer did in 1964 in a M.A. thesis presented to the Department of History of the University of Ottawa: "The French Canadians under the Royal Institution for the Advancement of Learning, 1818-1829," and in a subsequent article in *Histoire Sociale/Social History* in 1972.³⁵

These studies, based almost exclusively on the Royal Institution documents, focused on virtually all those French Canadians who had come under its administration. The following topics were examined: the origin and development of the schools; the identification of the pupils, teachers, commissioners, visitors; the curriculum and textbooks; the local administration of the schools and relations with the central authorities; the role of clergymen, including that of the SPG missionaries; specific problems and issues in the various settlements, particularly if these involved French-English/Catholic-Protestant relations, as it sometimes did. In short, virtually everything connected with those French Canadians in Royal Institution schools was examined and analysed. The evidence found reinforced Audet's conclusions.

Despite having been used extensively in the studies quoted above, the Royal Institution documents still contained substantial information for historians interested in educational, church, social, and regional history. Unfortunately, because of its bulk and its organization, this correspondence could be examined only with a great expenditure of time and effort.

The Correspondence of the Royal Institution

In 1972, this writer made part of this documentation more readily available to researchers in a Ph.D. thesis presented to the Department of History of McGill University: "The Royal Institution for the Advancement of Learning: The Correspondence, 1820-1829, A Historical and Analytical Study." This was a voluminous work, 1,423 pages in five volumes.

The purpose of the thesis was threefold: a historiographical review and analysis of writings on the Royal Institution from 1832 to 1964; a detailed account of the totality of Royal Institution activities in Lower Canada – studies of 116 seigneuries and townships; a reorganization of that correspondence pertinent to public education from 1820 to 1829. The chronological limits represented the period when the Royal Institution was concerned more specifically with public education.

The problem of consulting the Royal Institution documents in the MUA, particularly the incoming correspondence, was that they were organized only chronologically. There was no index nor inventory, and because the correspondence was so voluminous, literally thousands of letters, there was no other way to find information except to read through the whole mass of the correspondence.

The task of compiling an index would be overwhelming. However, that of providing an inventory and summaries, although considerable, was feasible. It required making a careful summary of each letter and introducing some kind of structure to organize the data.

Because the focus of the thesis was on Royal Institution activities in the seigneuries and townships, the basic organization of the inventory was geographical as well as chronological. The summary of each letter was filed chronologically according to the settlement where the school was located, and because very often letters contained information about more than one school or more than one area, each summary was cross referenced and copies filed under each area mentioned. For example, the Rev. Thomas Johnson, Rector of Hatley, visited a very large number of schools. Often his reports contained information about more than one school, and more than one settle-

ment. Thus, the entry for a letter from Johnson to the Rev. J. L. Mills, the Secretary of the Royal Institution, written on January 20, 1825 would contain the following information:

1. reference to the MUA: Accession 447/11, (now R.G.4, c.41, f.9525);
2. correspondents: Johnson to Mills;
3. date: 20 January 1825;
4. identification of areas concerned:
Hatley (Village)
Hatley (Church District)
Compton
Barnston
Stanstead
Seigneurie of St. Hyacinthe,
Yamaska Mountain Settlement;
5. a summary of the letter, filed under each of these areas.

The correspondence referring to these seigneuries and townships was classified further under each of the administrative districts of Lower Canada: Montreal, Three Rivers, Quebec, and the unorganized District of Gaspé. The seigneuries and townships in each district were organized according to the topographical description of British North America prepared by the surveyor Joseph Bouchette in 1832.³⁶ The District of Montreal contained Royal Institution information on thirty seigneuries and thirty townships; the District of Three Rivers, six seigneuries and eleven townships; the District of Quebec, twenty-five seigneuries and two townships; the District of Gaspé, twelve settlements. This represented in all 116 areas in Lower Canada which had had some contact with the Royal Institution.

Although there was often more than one school in some seigneurie or township, the summaries were filed only under these major divisions. For example, in Stanstead there were schools in eight settlements: Church District, Capt. Rose's Dist., Moulton's Dist., Major Boynton's Dist., Bebee Plain, Griffin's Corner, and Jones' District. Copies of letters referring to each of these areas were all filed chronologically under the Township of Stanstead. The history of Royal Institution

The Correspondence of the Royal Institution

activities was to focus on the history of seigneuries and townships, not on that of individual settlements, the exception being those in the unorganized District of Gaspé.

The entry for each of the 116 areas was organized in a similar pattern. There was first a section of historical data on the seigneurie or township, and this was followed by the summaries of all the letters pertinent to the area in strict chronological order.

Historical Data

1. name of seigneurie or township;
2. county in which located;
3. boundaries (surrounding seigneuries and/or townships);
4. location of the school(s), giving range and lot numbers from the Bouchette surveys where available;
5. description of the population, e.g. American settlement; Irish Protestant settlement; French Canadian majority; large numbers of Methodists; etc...;
6. brief history of the founding of the school;
7. names of all local officials: commissioners, visitors;
8. names of all visiting clergymen, specifically their contribution to the operation of the school, and their influence on the local population;
9. names and dates of appointment of all teachers for each school;
10. narrative of specific problems and issues in the area, particularly if these involved relations French-English/Catholic-Protestant, as well as Anglican-Dissenters.

The summaries of all the relevant correspondence followed this historical description, thus providing a complete documentary history of all Royal Institution activities in the seigneuries and townships in Lower Canada from 1820 to 1829.

These histories and inventories are found in volumes II, III, IV, and V, of the thesis, volume I being the historiographical study of the Royal Institution.

Vol. II, p. 223-614:	Dist. of Montreal,	30 seigneuries;
Vol. III, p. 615-905:	Dist. of Montreal,	30 townships;
Vol. IV, p. 906-1,115:	Dist. of Three Rivers,	6 seigneuries 11 townships;
Vol. V, p. 1,116-1,404:	Dist. of Quebec,	25 seigneuries 2 townships;
	Dist. of Gaspé,	12 settlements.

Of course there are limitations to this inventory. First, it covers only the period from 1820 to 1829. Secondly, it includes only data pertinent to public education. Thirdly, it focuses exclusively on Royal Institution activities at the local level. Therefore, it does not include correspondence concerned specifically with the central administration of the Royal Institution, church-state relations, nor the development of McGill College. These topics were all covered completely and fully by Audet in his two volume history which includes all pertinent references to the Royal Institution correspondence. Finally, there is no index. Researchers wanting only specific information, for example, on some clergyman or teacher, or on textbooks and curriculum, must leaf through the individual studies of the seigneuries and townships. Of course, it is still much easier and faster to do this than to have to read, and decipher the handwriting (at times a difficult task) of thousands of actual letters. If a particular summary proves interesting, the reference is available to seek the original document in the MUA. Obviously, much archival work still remains to be done to make the Royal Institution correspondence more readily available to researchers. This partial inventory was a start.

This correspondence still has much to offer scholars. The social historian, for example, will find information relating to the lives of ordinary people: school budgets, cost of construction and repair of schools, teacher's salaries and pensions, family budgets, patterns and styles of living, levels of poverty in pioneer settlements, the state of roads and communications, etc... The church historian can study the involvement of SPG missionaries in pioneer settlements and evaluate their influence

on the people, as well as their relations with the dissenters, particularly with the Methodists. Local historians can find a mine of information about various aspects of the history of some 61 seigneuries, 43 townships, and the 12 settlements in Gaspé.

For example, this writer has been using the Royal Institution correspondence recently to delve further into the activities of the Anglican clergy in education in Lower Canada. A study of the educational policies of the Church of England presented in 1986³⁷ has led to another which will highlight principally the work of the SPG missionaries.³⁸ The Royal Institution correspondence contains data for many more such studies.

* * * * *

Notes

For the history of McGill University, see: Cyrus Macmillan, *McGill and Its Story, 1821-1921* (Toronto: Oxford University Press, 1921); Stanley Brice Frost, *McGill University for the Advancement of Learning*, vol. 1, 1801-1895 (Montreal: McGill-Queen's University Press, 1980); and, Stanley Brice Frost, *McGill University for the Advancement of Learning*, vol. 2, 1895-1971 (Montreal: McGill-Queen's University Press, 1984).

1. Anno quadragesimo primo Georgii III. A.D. 1801. CAP. XVII. An Act for the Establishment of Free Schools and the Advancement of Learning in the Province.

2. The instructions to the governors made this quite clear. See the instructions to Murray (1763) and Carleton (1768) in: Adam Shortt and Arthur G. Doughty, eds., *Documents Relating to the Constitutional History of Canada, 1759-1791* (Ottawa: King's Printer, 1918), 181-205; 301-324.

3. Thomas R. Millman, *Jacob Mountain, First Lord Bishop of Quebec, A Study in Church and State, 1793-1825* (Toronto: University of Toronto Press, 1947), 171.

4. John Wilfrid Netten, "The Anglican Church: Its Influence on the Development of Education in the Province of Quebec From 1760-1900," (M.Ed. diss., Bishop's University, 1966), 78-79; and Réal G. Boulianne, "The Royal Institution for the Advancement of Learning: The Correspondence, 1820-1829, A Historical and Analytical Study," (Ph.D. diss., McGill University, 1970), 1:12.

5. Boulianne, "The Royal Institution," 1:14.

6. Augustus Wolff of Berthier and Edmund Victor Baron de Koenig of L'Islet were cases in point. See: *Ibid.*, 2:607, and 5:1, 238.

7. Netten, "The Anglican Church," 82-83.

8. *Ibid.*, 83.

9. *Ibid.*, 81.

10. *Ibid.*

11. *Ibid.*, 81-82.

The Correspondence of the Royal Institution

12. The initial Board of Trustees was composed of:
 - The Lieutenant-Governor of Upper Canada
 - The Lord Bishop of Quebec
 - Jonathan Sewell, Chief Justice of Lower Canada
 - James Monk, Chief Justice, Court of the King's Bench, Montreal
 - The Chief Justice of Upper Canada
 - The Speaker of the Legislative Council, Lower Canada
 - The Speaker of the House of Assembly, Lower Canada
 - John Richardson, Executive Council, Lower Canada
 - Ross Cuthbert, Executive Council, Lower Canada
 - The Rev. John Strachan, Executive Council, Upper Canada
13. Boulianne, "The Royal Institution," 1:16.
14. Louis-Philippe Audet, *Le Système scolaire de la Province de Québec*, (Québec: les Presses universitaires Laval, 1952), 4:182.
15. Audet devotes all of Chapter 2 to this topic: *Ibid.*, 4:21-105.
16. *Ibid.*, 4:95-96.
17. *Ibid.*, 4:182.
18. Audet, *Le Système scolaire de la Province de Québec*, vol. 3, *L'Institution Royale, Les débuts: 1801-1825*, and vol. 4, *L'Institution Royale, Le déclin: 1825-1846*.
19. F.-X. Garneau, *Histoire du Canada*, 8^e édition (Montréal: Editions de l'Arbre, 1945), 7:51-52.
20. J.-B. Meilleur, *Mémorial de l'Éducation du Bas-Canada (1615-1865)*, 2^e édition (Québec: Léger Brousseau, 1876).
21. *Ibid.*, 118.
22. *Ibid.*
23. George W. Parmelee, "English Education," in *Canada and Its Provinces*, eds. Adam Shortt and Arthur G. Doughty (Toronto: Glasgow, Brook and Co., 1914), 16:445-501.
24. Cyrus Macmillan, *McGill and Its Story, 1821-1921* (Toronto: Oxford University Press, 1921).
25. Lionel Groulx, *L'Enseignement français au Canada*, Tome 1. *Dans le Québec* (Montréal: Librairie d'Action canadienne-française, 1931), 75.
26. *Ibid.*, 77-78.
27. Jean Bruchési, *Histoire du Canada* (Montréal: Beauchemin, 1951). Robert Rumilly, *Histoire du Canada* (Paris: La Clé d'Or, 1951). Mason Wade, *The French Canadians, 1760-1945* (Toronto: Macmillan, 1955).
28. Arthur M. Lower, *Colony to Nation, A History of Canada* (Toronto: Longmans, Green, 1946), 156-157.
29. Louis-Philippe Audet, "La loi scolaire de 1801," *Mémoires de la Société Royale du Canada* 42 (Troisième Série, mai 1948), 5.
30. The letters are no longer bundled in packets but unfolded and in acid free folders.
31. Audet, *Le Système scolaire*, 4:391-392.
32. Louis-Philippe Audet, "Deux Écoles royales, 1814-36: Sainte-Marie de la Nouvelle Beauce et Cap Santé," *Mémoires de la Société Royale du Canada* 50 (Troisième Série, juin 1956), 24.
33. Audet, *Le Système scolaire*, 3:136.
34. Réal G. Boulianne, "The French Canadians and the Schools of the Royal Institution for the Advancement of Learning, 1820-1829," *Histoire Sociale/Social History* 5 (no. 10, November 1972), 160-161.
35. *Ibid.*, 144-164.
36. Joseph Bouchette, *The British Dominions in North America; or A Topographical and Statistical Description of the Provinces of Lower and Upper Canada, New Brunswick, Nova Scotia, the Islands of Newfoundland, Prince Edward, and Cape Breton. Including Considerations on Land-granting and Emigration. To which are annexed, Statistical Tables and Tables of Distances*, 2 vols., (London: Longman, 1832).

The Correspondence of the Royal Institution

37. Réal G. Boulianne, "The Church of England and Educational Policy in Early 19th Century Lower Canada," (Paper delivered to the Canadian History of Education Association, Halifax, N.S., 19 October, 1986).

38. The author is now working on the manuscript of a book entitled tentatively, *The Church of England Clergy and Education in Lower Canada, 1793-1829*.

Although the Royal Institution documents are a major source for this study, they have been complemented by Church of England papers in Lambeth Palace, London, and the SPG correspondence in Rhodes House, Oxford. This research was supported by a grant from the Social Sciences and Humanities Research Council of Canada.

Sidney Dawes and the McGill Museum of Canadian Art

by Norma Morgan

McGill has an extensive art collection which for one hundred years consisted largely of portraits. Sidney Dawes wanted McGill to have an art gallery and offered to give the University a group of paintings that would form a nucleus of an art collection. McGill still does not have an art gallery but it did receive sixty-four Canadian paintings from Dawes. The collection has grown since that time to include more than eleven hundred works. The article includes a complete catalogue of the Dawes donation.

McGill possède une riche collection d'œuvres d'art. Pendant un siècle, celle-ci se composait essentiellement de portraits. Sidney Dawes voulait que McGill ait un musée des beaux-arts, ce qui explique qu'il ait fait don à l'Université d'un groupe de tableaux qui devaient former le noyau de sa collection. McGill n'a toujours pas de musée des beaux-arts mais a effectivement hérité de soixante-quatre tableaux canadiens de Dawes. Cette collection a pris de l'ampleur depuis cette époque et elle comporte aujourd'hui plus de 1 100 tableaux. L'article se termine par un catalogue complet du don de Dawes.

Very few people are aware that McGill University owns an extensive art collection that embellishes libraries, student and faculty lounges, offices and residences of the University. It is also not well known that some of the more important works of the collection were given to the University by one man with a specific purpose – to create an art gallery at McGill.

McGill has acquired works of art since its foundation and it is largely the result of the generosity of benefactors, graduates and friends that the collection is such a large and splendid one. During its first hundred years, McGill collected portraits commemorating leading figures in the history of the University (usually paid for by subscription or donated by the subject), and a limited number of paintings, prints and reproductions given to the residences by graduating classes or purchased by the Warden's Fund at Royal Victoria College.¹

In 1962, Sidney Dawes (1888-1968) a leading Montreal industrialist and a graduate of

McGill (B.Sc. '10) offered to purchase and present to the University a number of traditional Canadian paintings as a nucleus for an art gallery.² It was his intention that his gift, together with the early Canadian sketches and paintings in the McCord collection would "...be a historical collection of worthwhile Canadian painters right up to the present time."³ He wanted the gallery to be located in the Student Union building on Sherbrooke Street which would be available when the Student Union moved to its new location on McTavish Street.

Chancellor R. E. Powell supported Dawes' suggestion.⁴ Powell had recently been informed by F. R. Scott that a friend of his, Arnold Wainwright, had an important collection of Krieghoff paintings that he was prepared to bequeath to McGill if the University could promise to provide suitable space to hang the collection.⁵ Powell was anxious to assure Wainwright that the Student Union would be converted into a museum and that his paintings would hang there.⁶

Powell had already discussed the future use of the Union Building with the Principal, F.

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Cyril James, who agreed in principle.⁷ At a meeting of the Board of Governors on the 15 October 1962:

The Chancellor reported that there is a possibility of the University being given a collection of Canadian Paintings if there be a suitable place to display them and he also pointed out the necessity of moving the McCord Museum shortly. On his recommendation it was moved, seconded and resolved that an Architect be appointed at a fee not to exceed \$1,000 to make a preliminary survey and estimate the cost of conversion of the old Student Union Building on Sherbrooke Street to provide suitable quarters for these and other exhibits of the McGill Museums.⁸

Powell then asked Sidney Dawes, who was in the construction business, to form a feasibility committee with Galt Durnford as architect.⁹ One month later, at the opening of an exhibition entitled *Everyman's Canada* at the McCord Museum, Principal James announced that the Museum would move to the Student Union site on Sherbrooke Street.¹⁰

Dawes was delighted and enthusiastically began to make plans for the new art gallery. He was interested in attracting additional collections such as Wainwright's Krieghoffs and he and Powell began to identify owners of private collections who might be approached for donations.¹¹ He apparently expected to make some sort of arrangement with the Montreal Museum of Fine Arts (MMFA) for the loan or gift of paintings. Dawes arranged a meeting with Colonel Hugh Wallis, President, and Evan Turner, Director, of the MMFA to visit the Union site¹² and later told the University Museums Committee that important material from the Museum "would become available" to a new art museum at McGill.¹³ Dawes discussed with Powell the possibility of asking Alan Jarvis, recently retired Director of the National Art Gallery of Canada to act "... in an advisory capacity, such as helping us to collect Canadian paintings, speaking to the students about Art..."¹⁴ He also interested himself in the administration of the new gallery.

He and Dean F. K. Hare, a member of his committee, brought a candidate to Montreal from Regina to be interviewed for the position of Director of the new gallery, proposing that he might initially teach in the Art History Department.¹⁵

Sidney Dawes wrote to Powell: "...most Universities have Art History Museums of their own comprising numerous collections and it is high time that McGill started one also."¹⁶ This was Dawes' major goal and he pursued it with vigour and tenacity.

The University Museums Committee also greeted with enthusiasm Principal James' announcement that the McCord Museum would move to the Student Union. It had for some time proposed that the McCord Museum which had been closed since 1936 and was housed in a building about to be demolished, and the Ethnological Collection, closed in 1939, be combined and a new site found for them. The Student Union building was well situated for this purpose. An analysis of space requirements made by the Museum staff showed that the combined collections would effectively use all the space available at the Student Union site. Dawes argued, however, that the property was too valuable to use for storage; that it should be used for exhibition and lecture rooms and additional material should be stored elsewhere. When it became clear to the University Museums Committee that Dawes and Powell were proposing that the McCord Museum become primarily an art gallery the Committee responded with an official statement of its position.¹⁷ Professor Fried expressed the feeling of many of the Museums Committee members when he said that:

The University should give no thought to creation of yet another museum unit until its existing collections could be made available for teaching purposes... One must take a practical view of related costs including additional salaries, maintenance of the collections, and supplementary museum activities over the coming years.¹⁸

Dawes and Powell had not understood that the Museums Committee's plans would not



Figure 1. Principal F. Cyril James, Arnold Wainwright and A. Sidney Dawes.

accommodate the concept of combining an art gallery with the McCord Museum. As the Museum had been closed for so many years it is perhaps not surprising that the Chancellor misunderstood the McCord's role as a museum of Canadian History. At a meeting of the University Museums Committee, the Chancellor noted that the McCord's recent exhibition, "...*Everyman's Canada*, obviously an art exhibit, had misled him into thinking that the Museum policy was veering away from a museum of objects towards an art gallery."¹⁹ The Committee explained that the exhibition displayed only one aspect of the collection. However, the McCord would be

grateful for a gift of paintings, "...as long as the subject matter falls within the scope of the historical collections."²⁰

When Alice Johannsen, Director of McGill University Museums learned that Dawes had already purchased several paintings which he intended to give to the University, she wrote an urgent letter to Chancellor Powell, delivered to his home:

After all the discussions and correspondence with the University Museums Committee it must be plain that the university Museums have worked out policies and prior-

ities through many years and that a University Museum of Fine Arts has no immediate place in these plans until after such time as our urgent need for space for the McCord and Ethnological Collections can be met.

I sincerely hope that some means may be found for the University to accept Mr. Dawes' generous offer without compromising the future of the McCord and Ethnological Museums, and allow these paintings to be seen under suitable safety restrictions in residences and other University buildings.²¹

Johannsen also pointed out that important donors "...have emphatically expressed...that they might substantially increase their support of the McGill Museums' cause if they could be assured that the Union site would be turned over to the McCord and Ethnological Museums."²²

There was no support for an art gallery from the Department of Art History either. The history of Canadian art was not taught at McGill at that time. The Chairman, W.O. Judkins, "...did not contemplate teaching anything in Canadian art before 1967, if then."²³ It is not surprising then that he was not interested in hiring the prospective Director to teach in his department as he felt that the candidate's qualifications were to teach only history and criticism of North American Art.²⁴ The Chairman of the Department of Art History told the Museums Committee that a McGill art gallery would be an unnecessary luxury, and that the MMFA could provide any necessary facilities.²⁵

Meanwhile Rocke Robertson, who had just replaced James as Principal in December, attempted to mediate between Dawes' eagerness to establish an art gallery and the Museum Committee's reluctance to share space in the Union building with a collection of paintings. Robertson asked F. K. Hare, Dean of Arts and Science to consider "...setting up picture displays in the New Arts Building..." explaining to the Chancellor that it "...would be the best way to ensure that students saw fine pictures."²⁶ After consultation

with all of the interested parties, Robertson sent a memorandum to Powell concerning the Student Union Building and the Museum. In it he explained that there was a good possibility that the Student Union would be used to house the McCord and Ethnological Museums and that he had "...suggested to the Senate Development Committee that they consider seriously setting up a building behind the Union and connected to the Union to house such things as the Faculty of Music, other art collections, etc." He continued:

I would recommend (a) that we express our extreme gratitude to Mr. Dawes and assure him that we are very keen to possess the pictures that he has shown us (the fifteen or so Canadian paintings); (b) we should tell him that these pictures will greatly increase the value of our collection of Canadiana and that we can readily house them; (c) we ought to explain to him that we are not yet in a position to plan a general Art Gallery but that if the McCord Museum is to be placed in the Students' Union we would like to name one of the galleries after him and, (d) we should ask him to slow down on his approach to potential donors until such time as our plans are more clear cut.²⁷

In spite of Robertson's recommendation, neither Powell nor Dawes seemed to have understood that an art gallery would not be a major part of the McCord Museum. In February the candidate who had been interviewed for the position of Director of the art gallery informed Dawes that he had accepted a position at another university. Powell noted in a memorandum that "Dawes also thinks that the man would be glad to come to McGill when we are ready for him, probably two years hence."²⁸ Dawes wrote to the candidate:

As soon as the old Union building has been converted into the McGill Museum of Art they will require a Director who will also lecture and I can assure you that they will approve a salary for both positions

of \$8,000 per annum plus a free apartment in the Museum.²⁹

Copies of the letter went to Dean Hare and to Principal Robertson who naturally felt that Dawes had no right to take for granted that the old Union Building would be converted into the "McGill Museum of Art." He wrote Powell that a decision had not been reached and that although most of the space would be required for the McCord and Ethnological collections "...it is still very possible that there will be room for the pictures that Mr. Dawes originally planned to give to the University." He felt that Dawes was moving too rapidly. He was "...trying to force on us a full blown Museum of art. The only solution that I can see is to build an additional building but we are not nearly ready to decide the need for this."³⁰ Powell replied a month later (he had been on vacation), "Apparently I got a bear by the tail when I responded to his apparent eagerness to do something for the University."³¹ He said he would talk to him.

During this exchange of letters, Dawes was purchasing paintings to give to McGill, and had written the University stating his intention to make his first donation of eight Canadian paintings and two Group of Seven sketches. It was at this point that a compromise was reached, negotiated by J. H. Holton, Secretary of the Board of Governors. Dawes would give paintings to McGill University agreeing that he would "...not insist that the pictures, if accepted, remain with the McCord Collection at all times but may be from time to time exhibited in public spaces in various buildings."³² The University Museums Committee was satisfied that the paintings "...should be accepted in the name of the University, not in the name of the McCord Museum. In this way they could be placed at the disposal of the Museum as occasion warranted, without compromising the position of the Museum with respect to the creation of a Museum of Fine Art at McGill."³³

Nevertheless Dawes appeared to expect that there would eventually be an art gallery at McGill. He continued to purchase paintings suitable for the collection as he envisioned it and actively explored different avenues to accomplish his goal of a gallery. With the

donation of the first group of paintings he stated that "The dates of these paintings range from 1871 to 1930 and they will be 'a nucleus' of paintings to start a History of Art Collection commencing with the McCord prints to the present time."³⁴ A month later he wrote, "The Gagnon and Coburn paintings fit well into any Canadian History of Art Collection, which I hope McGill will one day have."³⁵

Dawes was also eager to help to raise funds for the conversion of the Union building. He telephoned the Chairman of the Canada Council and learned that "...a donation towards the formation of a McGill Art History Museum on a 50/50 basis would come within the purposes for which The Canada Council was formed." He asked Powell to write or authorize him to do so.³⁶

When she learned of Dawes' intentions, Alice Johannsen, Chairman of the McGill Museums wrote the Principal that she "...was alarmed to learn...that, despite all our previous efforts at restraint, Mr. Sidney Dawes is actively and privately negotiating for a Canada Council grant 'to enable McGill to renovate the old Union as an Art History Museum.'"³⁷

Powell, on the other hand was concerned with soothing his potential donors. He wrote Robertson:

As you probably realize, I think I need to do something to pacify Sidney Dawes, Arnold Wainwright and Frank Scott, referring to their eagerness to have McGill become the owner of valuable pictures and books. If something can't be done, they will probably lose interest - and so will I.³⁸

At the same time another potential donor wrote the Principal asking to meet him to "...discuss the possibility of building a collection of Canadian art at the University."³⁹ Although completely unrelated to Dawes' and Powell's proposals he also apparently advocated the "...eventual construction of a new University Art Museum."⁴⁰ A meeting was arranged between the donor, Alice Johannsen, Professor Maxwell J. Dunbar, Chairman of the University Museums Committee and Professor W. O. Judkins,

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Chairman of the Department of Art History. After this meeting Judkins, who was an American and had very definite and rather restricted views as to the role of his department, wrote a lengthy memorandum to the Principal: "The Department of Fine Arts (Art History), in relation to the problem of a University Fine Arts Museum." In it he pointed out that a gallery might tend to entice family bequests, and as "...Canadian art in the antiquarian sense (if not the aesthetic) already falls within the province of the McCord Museum, ...that there might be some merit in the idea of a small gallery housed within an enlarged McCord Museum." He believed however, that "...for the pursuit of Art Historical studies a Fine Arts Museum is of only partial value, and if the collections are restricted to Canadian and/or Contemporary art, the benefits are almost negligible." He stated that "...the proposal of a new University Art Museum should be emphatically declined."⁴¹

Several months later, Powell wrote the Principal that Dawes was continuing to buy pictures for McGill and asked if the University would take possession of some of them. He believed that Dawes still hoped "...that places will be provided in new buildings."⁴² Robertson asked the Libraries' Committee to consider displaying the paintings in the libraries. The members of the Committee concurred in the proposal with one exception, and agreed to see that they were always appropriately displayed while not binding themselves to display them in the Redpath Library permanently.⁴³

In January of 1964 the Senate Development Committee "...reached its decision to recommend that the former Students' Union Building should be assigned as the home of the McCord Museum."⁴⁴ Records do not reveal any further correspondence concerning an art gallery at McGill.

Powell continued to be concerned about the Dawes and Wainwright gifts, writing to the Principal every few months reminding him that suitable places should be found to display pictures. Although he was still a member of the Board of Governors, he had retired as Chancellor in May 1964. He wrote the Principal in October that, "Although I'd like

to extricate myself, I think my obligations to Mr. Wainwright and Mr. Dawes will continue to keep me interested if not a bit involved."⁴⁵ He asked the Principal if there could be a committee to determine the location of Dawes' paintings and possibly rotate them. The principal was quick to act. Russell Harper had just been appointed Chief Curator of the McCord Museum and Robertson asked him with Professors Judkins and John Bland to form a committee.⁴⁶ Dawes admired Harper and subsequently consulted with him concerning some of his purchases for McGill.

The McCord Museum opened in the Student Union Building in March 1971. Arnold Wainwright bequeathed twenty-two Kriehoff paintings to the University which are in the McCord Museum. Dawes continued to purchase and give paintings to the University until 1967, the year before his death. He gave in all sixty-four paintings dated from 1863 to 1963 by thirty-three Canadian artists. All of the works donated by Dawes were purchased specifically to give to McGill.⁴⁷ Dawes with his chauffeur delivered many of the paintings himself and his chauffeur often hung them. A few were accepted by the McCord Museum but most were originally hung in libraries and in Divinity Hall.

In 1971, after a number of the Dawes paintings were moved out of the libraries, Professor R. Melzack of the Psychology Department suggested to the Visual Arts Sub-Committee (which had been formed in 1967) that the Dawes paintings should be collected, catalogued and displayed together. This was accomplished⁴⁸ and an exhibition of twenty-one of them was held in the libraries in 1972.

Sidney Dawes was a dynamic and aggressive business man with a history of active commitment to his community. Born in Lachine in 1888, he was the grandson of the founder of one of the major breweries in the Montreal area. He graduated from McGill in 1910 with a Bachelor of Science degree in Engineering.⁴⁹ He served in the Royal Canadian Artillery in the first World War and was awarded the Military Cross. After the war he became President of Atlas Construction Company, one of the foremost Canadian construction companies, responsible for many major power devel-

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opments, aqueducts, bridges and tunnels, in eastern Canada. Dawes was a man with a powerful personality and enormous energy which he also turned to many endeavours outside his business career. He was an active participant and administrator in the sports field, serving on the Canadian associations of Lawn Tennis and Amateur Skiing, the latter as president. He founded and became the first President of the Canadian Olympic Association and was the Canadian member of the International Olympic Committee. He served on the Board of Trade and the Protestant School Commission. In the arts, he was an active member of and important donor to the Montreal Museum of Fine Arts. He served on the Acquisition Committee for Canadian Art from 1953 to 1962, the latter four years as chairman. He began giving paintings to the MMFA in 1940, giving at least one and as many as ten each year for the next ten years. During the fifties he gave six more paintings. His final donation was in 1961, the year before he became interested in the gallery at McGill. All of the paintings donated by Dawes to the MMFA were by Canadian artists, all from Quebec with the exception of four major paintings by Tom Thomson.⁵⁰ He also accumulated an extensive personal collection of works by Canadian artists which included six works by J. W. Morrice and several by Robert Pilot who was married to his niece. The entire collection was bequeathed to his family.

As Powell wrote, Dawes, Wainwright and Scott were eager to have McGill become the owner of pictures and books, but Dawes may have been partly motivated by the fact that he had had a falling out with the MMFA.⁵¹ As chairman of the Acquisitions Committee at the MMFA, his relatively conservative views conflicted with the more "modern" taste of the new Director, Evan Turner. Dawes believed that Canadian art was not really valued sufficiently by Canadians and was disturbed that the paintings he had given the MMFA were not being hung. He wanted to establish a gallery of traditional Canadian art, a subject he felt was not sufficiently covered by the MMFA.

Regardless of his motives, Dawes gave a remarkable collection of Canadian paintings to

McGill. The collection reflects his bias towards traditional art and completely ignores the schools that emerged in the nineteen forties after the publication of the *Refus Global*. His donation included a painting by each member of the Group of Seven including four by McGill's own Arthur Lismer, paintings by twenty different Quebec artists, works by Casson and Milne among others from Ontario and two works by Emily Carr.

The University still does not have an art gallery, but had there been one it is very likely that due to the space constraints found in most galleries, many of Dawes' paintings would have been collecting dust in storage much of the time. As it evolved, almost all of his paintings except those in the McCord collection are hanging in locations where they can be enjoyed by the whole University community – faculty, students and visitors, having the exposure that he would have wished.

The gift of the Dawes Collection in the 1960s was the first major donation of art to the University. Since that time McGill has acquired three other important collections of art. A gift of \$10,000 from the Charles E. Merrill Trust in 1973 to purchase art enabled McGill to buy thirty-eight works, mostly by Quebec artists. The *Montreal Star* collection of paintings and sculpture was donated to McGill in 1981 after the newspaper was closed, and a collection of ten tapestries was given to the University in the 1980s by Regina Slatkin (BA '29).

Many other individual works of art have been donated by friends and graduates through the years and the McGill collection now includes more than eleven hundred items: portraits, paintings and sketches, prints, sculpture, stained glass and tapestries. It will be through the generous spirit of the University's friends that the collection will continue to grow in the future.

The catalogue that follows includes all the paintings donated by Sidney Dawes to McGill University.

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Notes

1. In 1962 McGill owned slightly more than one hundred portraits, the sculpture known by students as "The Three Bares," the statue of Queen Victoria and approximately seventy-five paintings, prints and reproductions.
2. McGill University Archives (MUA), RG41, C12, Minutes of the University Museums Committee, 28 November 1962. Dawes referred to the proposed gallery by different names: McGill Museum of Art, History of Art Collection, McGill Art History Museum, McGill Art Gallery.
3. MUA, RG1, C11, Sidney Dawes memorandum, 22 December 1962.
4. I. M. Dobell believes that Dawes and Powell together "dreamed up" the idea of an art gallery at McGill at their club, the Mount Royal Club. (interview I. M. Dobell, 12 December 1991).
5. MUA, RG1, C11, F. R. Scott to R. E. Powell, 20 July 1962.
6. MUA, RG1, C11, R. E. Powell to Arnold Wainwright, 5 December 1962.
7. MUA, RG1, C11, R. E. Powell Memorandum, 4 May 1962.
8. Minutes of the Royal Institution for the Advancement of Learning Governors of McGill University and the Royal Victoria College, 15 October 1962.
9. MUA, RG1, C11, R. E. Powell to A. T. Galt Durnford, 22 October 1962. R. E. Powell to A. Sidney Dawes, 26 October 1962. Chairman, Dawes; Members: Profs. Frank Scott and Hare, Greville Smith, R. E. Powell, J. D. Johnston and Alice Turnham [Johannsen]; Possibilities for later consideration: Duncan Hodgson, Galt Durnford; To be contacted by Dawes: Walter Stewart through Mrs. Stewart, and Miss Caverhill. (Notes of telephone conversation between R. E. Powell and Sidney Dawes, 1 November 1962). Anson McKim was added (R. E. Powell memorandum, 12 November 1962). Alice Turnham [Johannsen] suggested that Prof. Dunbar be invited to join committee (Alice J. Turnham to R. E. Powell, 16 November 1962). Approved at the Board of Governors February 1963 (R. E. Powell to J. H. Holden, 13 February 1963).
10. MUA, RG41, C12, Statement by University Museums Committee, 5 December 1962.
11. MUA, RG1, C11, "Mrs. Pitfield's outstanding collection of Krieghoff" (R. E. Powell to A. Sidney Dawes, 14 November 1962; "Mrs. Murray Chipman has a lot of nice pictures" (R. E. Powell memorandum, 19 November 1962; Dawes would ask all his friends to donate art for the art gallery (I. M. Dobell, interview, 27 February 1992).
12. MUA, RG1, C11, Hugh Wallis [president of the MMFA] to Rip [R. E. Powell], 5 October 1962.
13. MUA, RG1, C12, Meeting to Discuss Academic Interests Common to McCord Museum and Teaching Departments, 11 January 1965.
14. MUA, RG1, C11, A. Sidney Dawes to R. E. Powell, 7 December 1962.
15. MUA, RG1, C12. There are several letters between Dawes, Powell, Hare and the candidate.
16. MUA, RG1, C12, A. Sidney Dawes to R. E. Powell, 5 March 1963.
17. MUA, RG41, C12, Statement by University Museums Committee, 10 December 1962.
18. MUA, RG41, C12, Minutes of the University Museums Committee, 28 November 1962.
19. MUA, RG41, C12, Minutes of the University Museums Committee, 28 November 1962.
20. MUA, RG41, C12, Minutes of the University Museums Committee, 28 November 1962.
21. MUA, RG1, C11, Alice J. Turnham [Johannsen] to R. E. Powell, 21 December 1962. Alice Johannsen Turnham was known throughout most of her professional life at McGill as Johannsen and is referred to as such

Sidney Dawes and the McGill Museum of Canadian Art

in this paper.

22. MUA, RG41, C12, Alice J. Turnham [Johannsen] to Rocke Robertson, February 1963.

23. MUA, RG41, C12, Meeting to Discuss Academic Interests Common to McCord Museum and Teaching Departments, 11 January 1965.

24. McCord Museum, Registrar's files, W.O. Judkins to F. Kenneth Hare, 31 January, 1963.

25. MUA, RG41, C12, Minutes of the University Museums Committee, 5 December 1962.

26. MUA, RG2, C310, H. Rocke Robertson to the Chancellor, 10 December 1952.

27. MUA, RG2, C310, H. Rocke Robertson to the Chancellor, 28 January 1963, Robertson also suggested that a room should be named for Wainwright. A plan for a possible addition was prepared, (R. E. Powell to A. Sidney Dawes, 13 December 1962).

28. MUA, G1, C13, R. E. Powell Memorandum, 19 February 1963.

29. MUA, RG1, C13, A. Sidney Dawes to Gerald Finley, 22 February 1963.

30. MUA, RG1, C13, H. Rocke Robertson to R. E. Powell, 27 February 1963.

31. MUA, RG1, C13, R. E. Powell to H. Rocke Robertson, 27 March 1963.

32. Visual Arts Committee files (VAC), J. H. Holton to A. Sidney Dawes, 14 March 1963.

33. MUA, RG41, C12, Minutes of the University Museums Committee, 25 March 1963.

34. VAC, A. Sidney Dawes to J. H. Holton, 11 March 1963.

35. VAC, A. Sidney Dawes to J. H. Holton, 4 April 1963.

36. MUA, RG1, C12, A. Sidney Dawes to R. E. Powell, 10 June 1963.

37. MUA, RG2, C310, Alice J. Turnham [Johannsen], 13 June 1963.

38. MUA, RG1, C13, R. E. Powell to H. Rocke Robertson, 4 June 1963.

39. MUA, RG2, C310, S. H. Schecter to H. Rocke Robertson, 24 April 1963.

40. MUA, RG2, C310, W. O. Judkins to H. Rocke Robertson, undated [27 June 1963].

41. MUA, RG2, C310, W. O. Judkins to H. Rocke Robertson, undated [27 June 1963].

42. MUA, RG2, C310, R. E. Powell to H. Rocke Robertson, 14 November 1963.

43. MUA, RG2, C310, Stanley [S. B. Frost] to H. Rocke Robertson, 22 November 1963.

44. MUA, RG2, C310, Senate Development Committee: Report of the Sub-Committee on the McCord Museum, 16 June 1964.

45. MUA, RG2, C310, R. E. Powell to H. Rocke Robertson, 7 October 1964.

46. MUA, RG2, C310, R. E. Powell to A. Sidney Dawes, 12 November 1964.

47. Dawes presented invoices with his donations. Unfortunately most were returned to him.

48. One painting, an Arctic scene, was found in Ottawa in the offices of the Arctic Institute which had been housed on the McGill campus from 1948 to 1975.

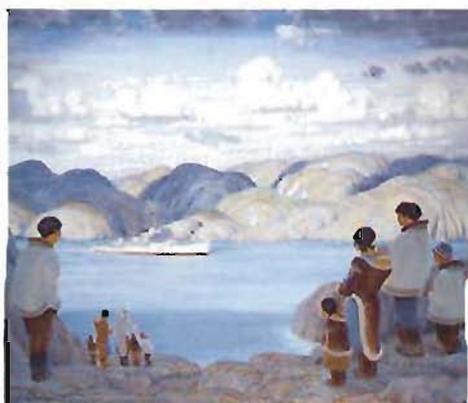
49. The biographical information was supplied by John Bourne, Dawes's son-in-law, December 1991.

50. MMFA material from the Archives and Director's office, MMFA, January 1991.

51. Interviews with Walter Klinkhoff and Joan Bourne (Dawes' daughter). Also Powell to Dawes, 29 November 1962, "Grenville Smith is also 'fed up' with the Museum."

The Sidney Dawes
Collection
at McGill University

A Catalogue



T. H. BEAMENT, 1898-1984
Stranded Iceberg, 1963
oil on canvas, 90.2 x 105.4 cm
signed lower left: *Harold Beament*
purchased
65.001

T. H. BEAMENT, 1898-1984
H.M.C.S. Labrador, 1963
oil on canvas, 91.4 x 106.6 cm
signed lower left: *Harold Beament*
purchased 1963
66.022

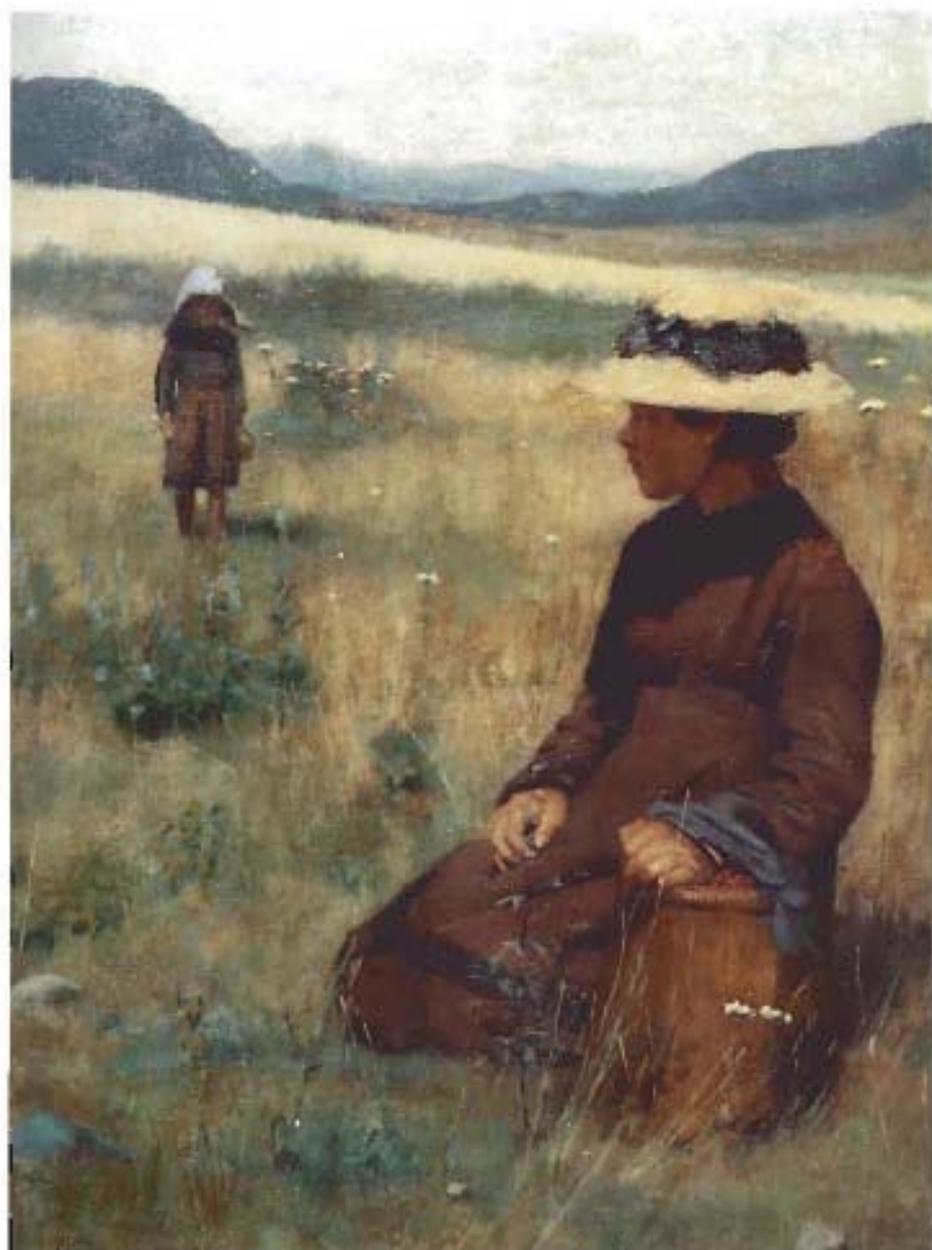
Sidney Dawes and the McGill Museum of Canadian Art



At left:
T. H. BEAMENT, 1898-1984
Winter Travel
Baffin Island, 1963
oil on canvas
90.2 x 105.4 cm
signed lower right:
Harold Beament
purchased
65,002

Below:
T. H. BEAMENT, 1898-1984
Something in Sight, 1949
oil on canvas
91.4 x 106.6 cm
signed lower right:
Harold Beament
purchased 1963
66,021





WILLIAM BRYMNER
1855-1925
*Gathering Wild
Strawberries* 1885
oil on canvas
54.9 x 39.7 cm
signed lower left:
Wm. Brymner 1885
purchased
Dominion Gallery
Montreal 1963
63.005

Sidney Dawes and the McGill Museum of Canadian Art

At right: WILLIAM BRYMNER, 1855-1925
Autumn River, ca 1915
oil on panel, 24.1 x 33.1 cm
signed lower right: *Wm. Brymner*
purchased Walter Klinkhoff Gallery 1964
66.016



Below: FRANKLIN CARMICHAEL, 1890-1945
Whitefish Hills, 1933
oil on canvas, 76.2 x 91.4 cm
purchased Blair Laing, Toronto 1964
65.017



Sidney Dawes and the McGill Museum of Canadian Art



Below:
EMILY CARR, 1871-1945
Indian School, Lytton, B.C.
1910
watercolour
38.5 x 54.6 cm
signed and dated lower
right: *M. EMILY CARR*
purchased Alex Fraser
Vancouver 1964
64.002

In 1929, Emily Carr wrote in an article entitled "Modern and Indian Art of the West Coast" in a *Supplement to the McGill News* (June 1929) in which she described her trips to Indian territory: "I would work hard all winter to be able to afford a trip to the villages in the summer, for trips off the beaten track cost money. First I sketched in a desultory way just for the joy of it, but by and by I began to realize that these things were passing and I started in earnest to make a collection of paintings of the villages and totem poles. I did not do many portraits of the people because I found it hurt them so. The old people, who were the interesting ones, were superstitious; they believed that the spirit was trapped in the picture and would for ever be held there."

Above:
EMILY CARR, 1871-1945
B.C. Forest, ca 1934
oil on paper, 91.4 x 61.0 cm
signed lower left: *M E CARR*
66.004



Sidney Dawes and the McGill Museum of Canadian Art

A.J. CASSON, 1898-1992
On the North Channel
Little Current, ca 1959
oil on canvas
61.0 x 76.2 cm
signed lower right:
A.J. CASSON
63.008



A.J. CASSON, 1898-1992
Northern Lake, ca 1960
oil on panel, 50.8 x 61.0 cm
signed lower right: A.J. CASSON
purchased Walter Klinkhoff Gallery
1964
66.015



F.S. COBURN, 1871-1960
Logging Team, 1928
oil on canvas, 64.7 x 57.1 cm
signed lower right: *F.S. COBURN 28*
purchased from
Kenneth T. Dawes 1963
64.003

Sidney Dawes and the McGill Museum of Canadian Art

ALLAN EDSON
1846-1888
*Forest with Brook
in Autumn, ca 1874*
watercolour
58.4 x 43.2 cm
66.018

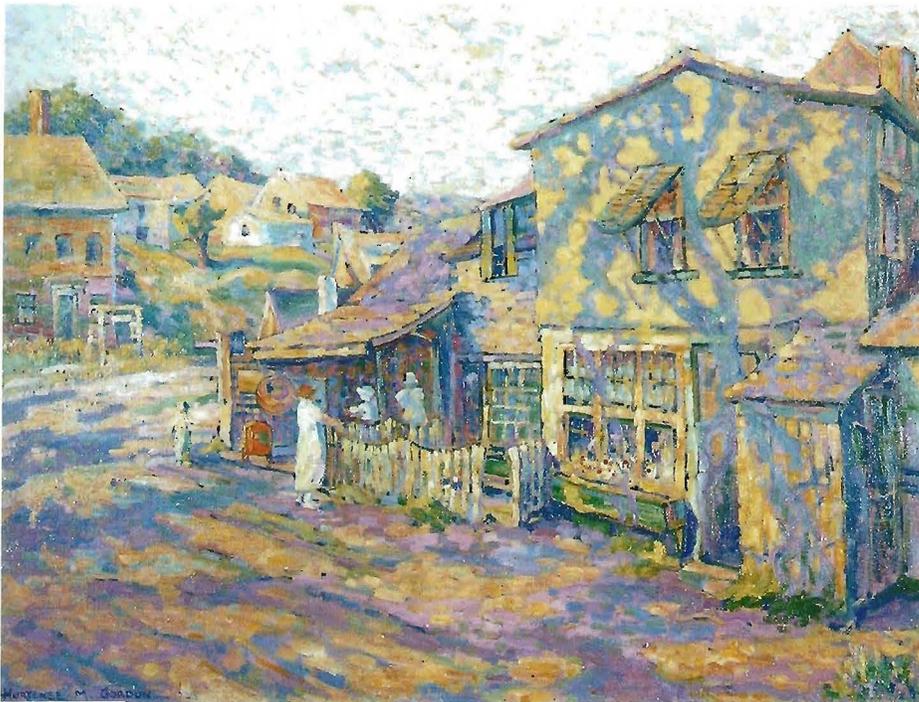


At left:
ALLAN EDSON 1846-1888
*Forest with Shepherd and
Sheep in Autumn, ca 1874*
watercolour
58.4 x 43.2 cm
66.017

Sidney Dawes and the McGill Museum of Canadian Art



CLARENCE GAGNON
1881-1942
Street in Dinan, 1908
oil on canvas
78.8 x 63.5 cm
purchased from
Kenneth T. Dawes
1963
66.023



HORTENSE GORDON
1889-1961
Country Store, 1925
oil on canvas
61.0 x 81.3 cm
signed lower left:
HORTENSE M. GORDON
purchased 1965
66.024



At right (and on cover):
LAWREN HARRIS
1885-1970
Red Sleigh, House Winter, 1919
oil on canvas, 116.8 x 132.1 cm
signed lower left:
LAWRENHARRIS/1919
purchased Blair Laing,
Toronto 1962
66.001



Above:
LAWREN HARRIS, 1885-1970
Chestnut Tree, House, Barrie, 1916-1917
oil on canvas, 113 x 101.6 cm
signed lower right: *LAWRENHARRIS*
purchased Dominion Gallery, Montreal 1964
66.008

This painting was exhibited in the Lawren Harris Retrospective Exhibition at the National Gallery of Canada in 1963.



Above:
RANDOLPH HEWTON
1888-1960
*St. Vite des Caps
Charlevoix County*
ca. 1929
oil on canvas
50.8 x 61.0 cm
signed lower right:
R S HEWTON
purchased 1965
66.026



At left:
A.W. HOULSTOCK
1820-1901
*Creek above LaPine
Falls, Quebec, 1890*
watercolour
33.6 x 52.7 cm
signed lower left:
*Creek above LaPine
Falls/Quebec 1890*
purchased
Dominion Gallery
Montreal 1963
63.003



EDWIN HOLGATE, 1892-1977
Woman before a Window, 1960
oil on canvas, 65.1 x 54.6 cm
signed lower right: E. HOLGATE
purchased Dominion Gallery, Montreal 1962
63.002

Sidney Dawes and the McGill Museum of Canadian Art

Near right:
F.W. HUTCHISON, 1871-1953
Lake of Two Mountains in Winter, 1945
oil on canvas, 76.8 x 92.1 cm
signed lower right: F.W. Hutchison
65.004



Far right:
F.W. HUTCHISON, 1871-1953
Autumn Landscape, Farm near St. Urbain, 1940
oil on canvas, 65.1 x 88.9 cm
signed lower right: F.W. Hutchison
65.005



F.W. HUTCHISON, 1871-1953
Stream with Geese, Charlevoix County, 1943
oil on canvas, 65.5 x 76.2 cm
signed lower left: F.W. Hutchison
65.006

Sidney Dawes and the McGill Museum of Canadian Art

A.Y. JACKSON, 1882-1974
Dawn in the Yukon, 1943
oil on canvas, 81.3 x 101.6 cm
signed lower left: *A Y Jackson*
purchased Dominion Gallery
Montreal 1962
66.009



A.Y. JACKSON,
1882-1974
*Great Bear Lake near
Port Radium*, 1963
oil on canvas
81.3 x 101.6 cm
signed lower right:
A Y JACKSON
purchased
Dominion Gallery
Montreal 1962
66.012





A.Y. JACKSON, 1882-1974
Autumn in Temagami, 1955
oil on canvas
81.3 x 101.6 cm
signed lower left:
A Y Jackson
purchased 1964
66.005

Jackson's niece, Dr. Naomi Groves wrote (to the author, 17 September 1990): "... one amazing bonus is that the Temagami 1955 canvas is painted at the place I go to every (almost) summer, the Shining Wood Lodge on North Maline Lake 10 miles south of Temagami village, I recognize the lake, he had the cottage 2 doors down from mine and it was AY who told my husband Walton and me about that nice place to stay, so I truly have the sense of a sort of miracle at work – think of it being there at my university since the 1960s."



Above:
FRANZ JOHNSTON
1888-1949
Forest Interior, 1930
oil on canvas
76.2 x 101.6 cm
signed lower right:
FRANZ JOHNSTON'30
purchased 1964
66.010

Facing page:
FRANZ JOHNSTON
1888-1949
Mountain Landscape, 1922
tempera, 99.1 x 73.7 cm
signed lower right:
Franz H. Johnston
purchased Blair Laing
Toronto 1962
65.018



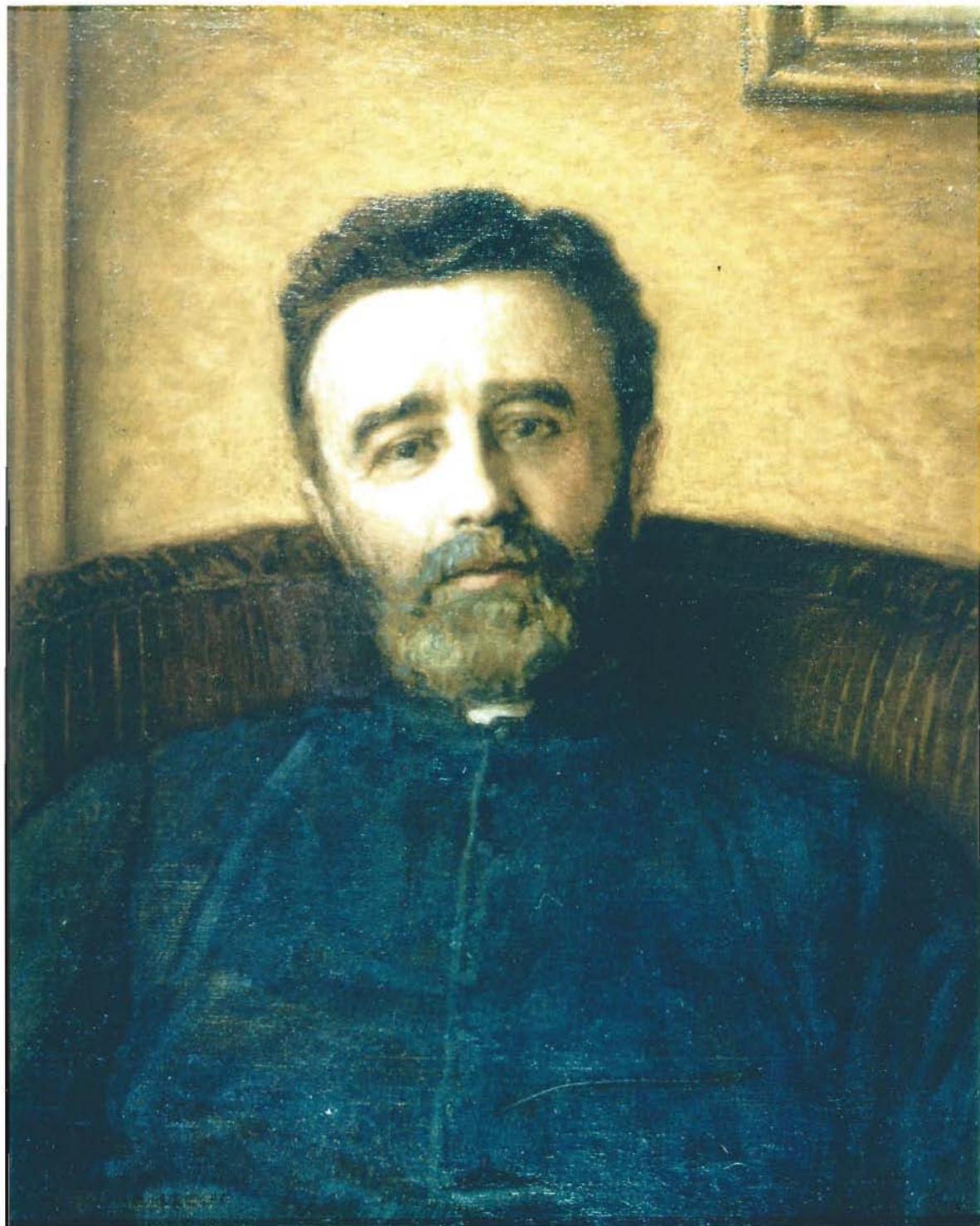
CORNELIUS KRIEGHOFF, 1815-1872
Returning Home, Lake Memphramagog, 1863
oil on canvas
33.0 x 45.7 cm
signed lower right:
C. Krieghoff/Quebec
purchased from Kenneth T. Dawes 1963
64.001



Dawes wrote to Powell (2 May 1963), "This Krieghoff was in my father's uncle's living room when my brother Kenneth and I used to go there for lunch every Thursday, at which time I was about 8 which would make it 1896.

As the old uncle, who wore sideburns, was a pillar of the Presbyterian Church and controlled the length of the sermon by banging his stick on the floor when it was time to stop, I am sure that he would have purchased the Krieghoff, which is signed and dated 1863, from a dealer or the artist soon after that date.

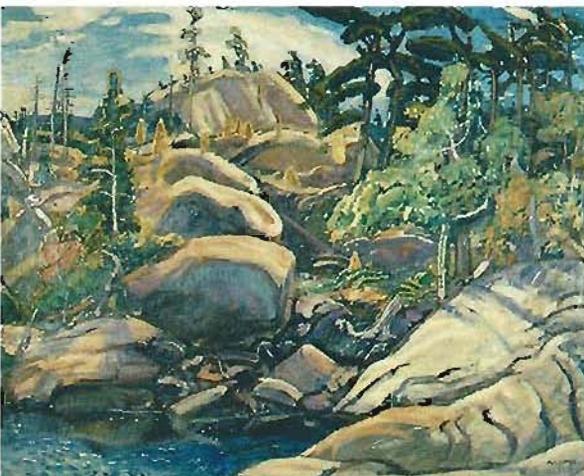
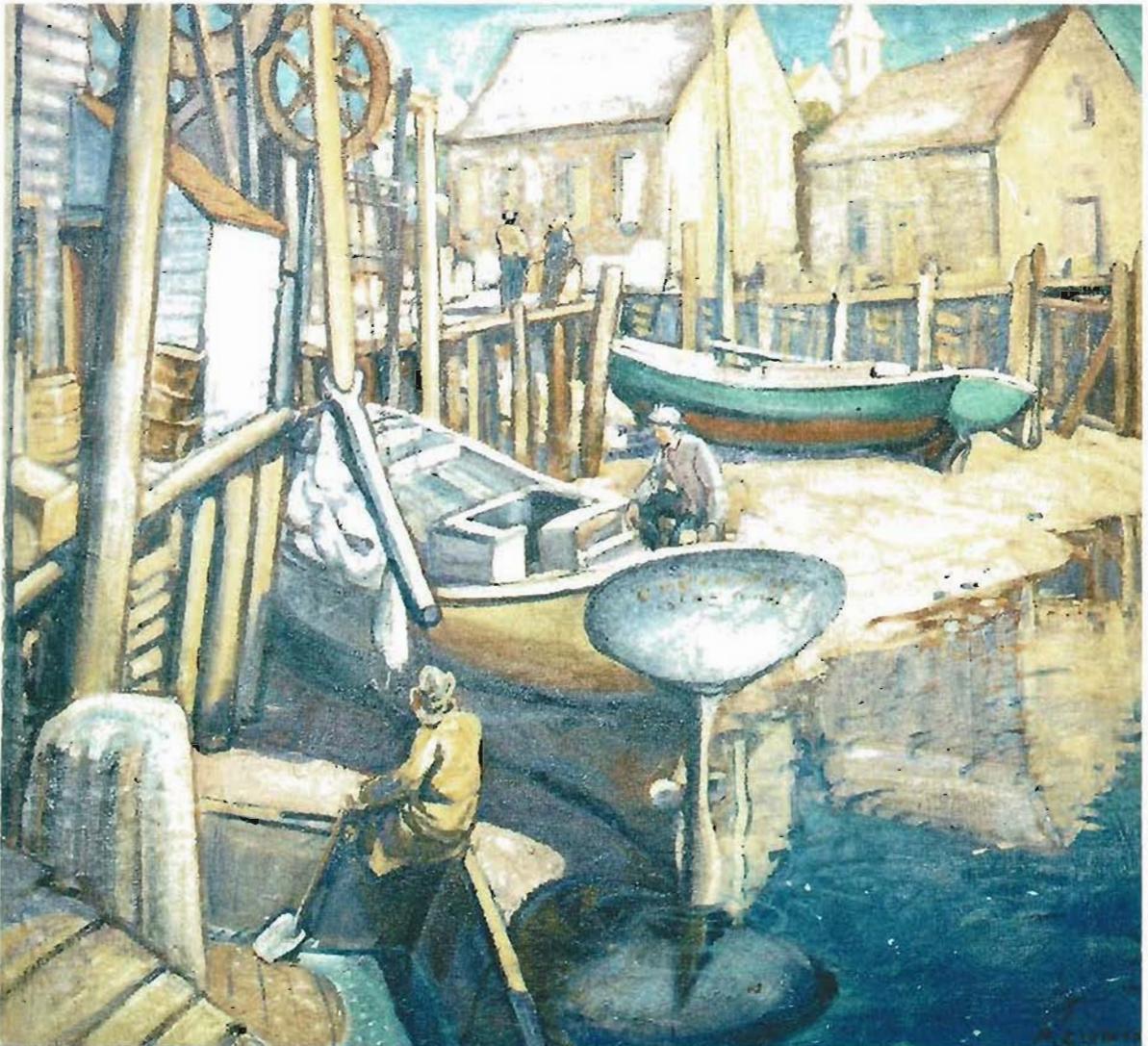
As this painting had been in our family probably ever since it was painted and as 1863 was the last year that Krieghoff painted at Lake Memphramagog, in my opinion there is no doubt as to its authenticity."



OZIAS LEDUC, 1864-1955
Monsieur l'Abbé Vincent, ca 1906
oil on canvas, 55.8 x 45.7cm
purchased 1963
63.009



OZIÁS LEDUC
1864-1955
Still Life, ca 1913
oil on canvas
30.5 x 40.6 cm
signed lower centre:
OZIÁS LEDUC
purchased 1963
63.012



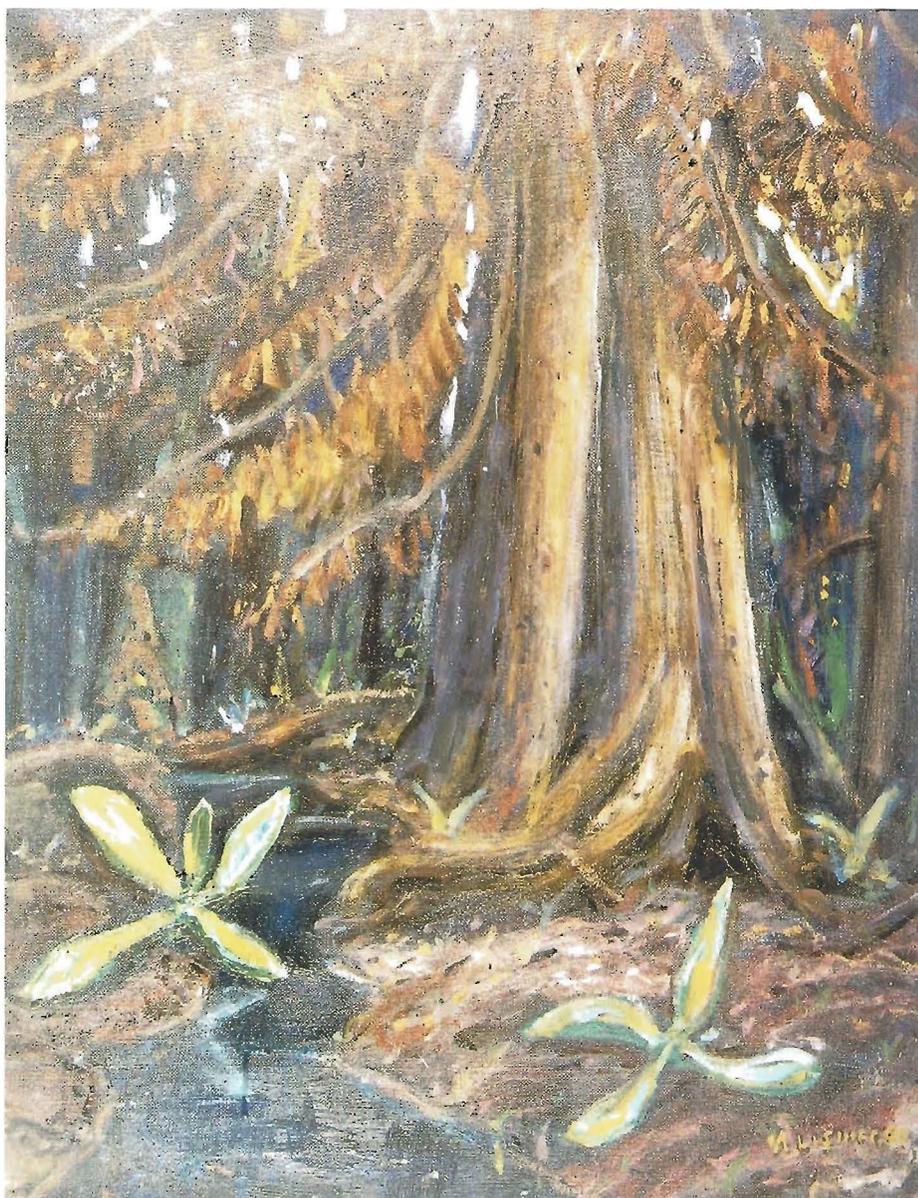
At left:
ARTHUR LISMER
1885-1969
Georgian Bay, 1931
oil on canvas
81.3 x 101.6 cm
signed lower right:
LISMER 31
purchased Blair Laing
Toronto 1962
66.003

Above:
ARTHUR LISMER
1885-1969
Seal Cove, Grand Manan
1931
oil on canvas
91.4 x 101.6 cm
signed lower right:
A LISMER
purchased 1964
66.006

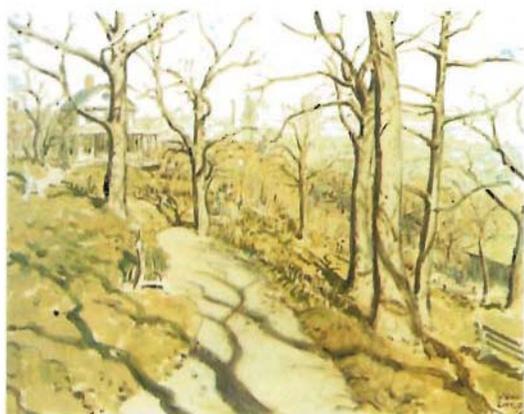
Lismer taught in the School of Architecture, McGill University from 1941 to 1947 and in 1954, and was Assistant Professor of Fine Arts from 1948-1953. Caroons by Lismer hang in the Lismer Room of the Faculty Club.

At right:
ARTHUR LISMER
1885-1969
Cedar Swamp, B.C.
1962
oil on canvas
71.1 x 55.9 cm
signed lower right:
A. LISMER 62
65.008

Below:
ARTHUR LISMER
1885-1969
Low Tide, Grand Manan
1931
oil on canvas
81.3 x 101.6 cm
signed lower left:
A LISMER 31
purchased 1964
66.007



Sidney Dawes and the McGill Museum of Canadian Art



JOHN LITTLE, 1928-
Park below Westmount Lookout, 1963
oil on canvas
76.2 x 101.6 cm
signed lower right: *John Little '63*
purchased Continental Galleries 1964
64.007

The house portrayed by Little at the edge of the park is almost one hundred years old. Permission to demolish the building has been granted but it still stands today.



JOHN LYMAN, 1886-1967
Hamilton Harbour, Bermuda, 1958
oil on canvas, 50.8 x 81.3 cm
signed lower right: *Lyman*
purchased Dominion Galleries
Montreal 1963
66.014

Sidney Dawes and the McGill Museum of Canadian Art

At right:
J.E.H. MACDONALD
1873-1932
Mount Caudoie, Rockies
1927
oil on canvas
83.8 x 111.8 cm
signed lower right:
J.E.H. MacDonald
Purchased Blair Laing
Toronto 1962
66.002



Below:
C.S. MILLARD
1837-1917
Cascades, September
1871
watercolour
48.2 x 88.9 cm
signed lower left:
C.S. Millard/Sep 1871
purchased
Dominion Gallery
Montreal 1963
63.004



Sidney Dawes and the McGill Museum of Canadian Art

DAVID MILNE, 1882-1953

Spring Pool, 1928

oil on canvas, 50.8 x 61.0 cm

signed lower right: *David Milne*

purchased Blair Laing, Toronto 1962

63.001

In 1928, the year *Spring Pool* was painted, Milne sold his house near Lake Placid, moved back to Canada and spent the summer at Lake Temagami, Ontario.



KATHLEEN MORRIS
1893-1986

The Saddler's Shop, Ottawa

1928

oil on canvas

55.9 x 61.0 cm

signed lower right:

K M Morris

purchased Walter Klinkhoff

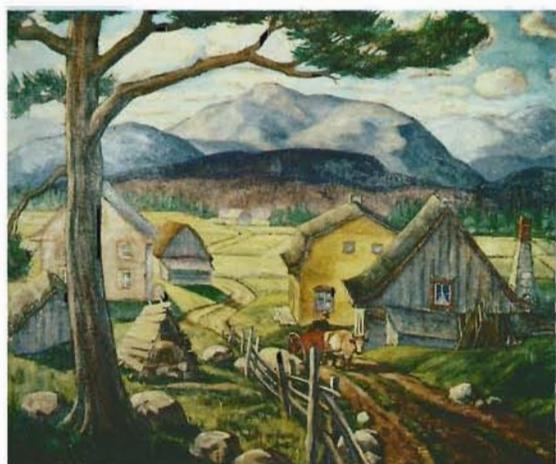
Gallery, Montreal 1964

65.007

A Montrealer, Morris
lived in Ottawa from
1922 to 1928 when she
returned to Montreal.

An oil sketch of
The Saddler's Shop is in
a private collection
in Montreal.





Above:
GORDON PFEIFFER, 1899-1983
Ripening Grain, Saint Urbain, 1937
oil on canvas, 90.2 x 129.5 cm
signed lower right: *G. Pfeiffer*
purchased from the artist 1963
64.004

At Left:
GORDON PFEIFFER, 1899-1983
Fourth Range, Charlevoix County, 1932
oil on canvas, 101.6 x 121.9 cm
signed lower right:
G. PFEIFFER
purchased from the artist 1963
65.013

Sidney Dawes and the McGill Museum of Canadian Art

GORDON PFEIFFER
1899-1983
Cape Trinity, 1934
oil on canvas
101.6 x 121.9 cm
signed lower left: *G. Pfeiffer*
purchased from the
artist 1963
65.014

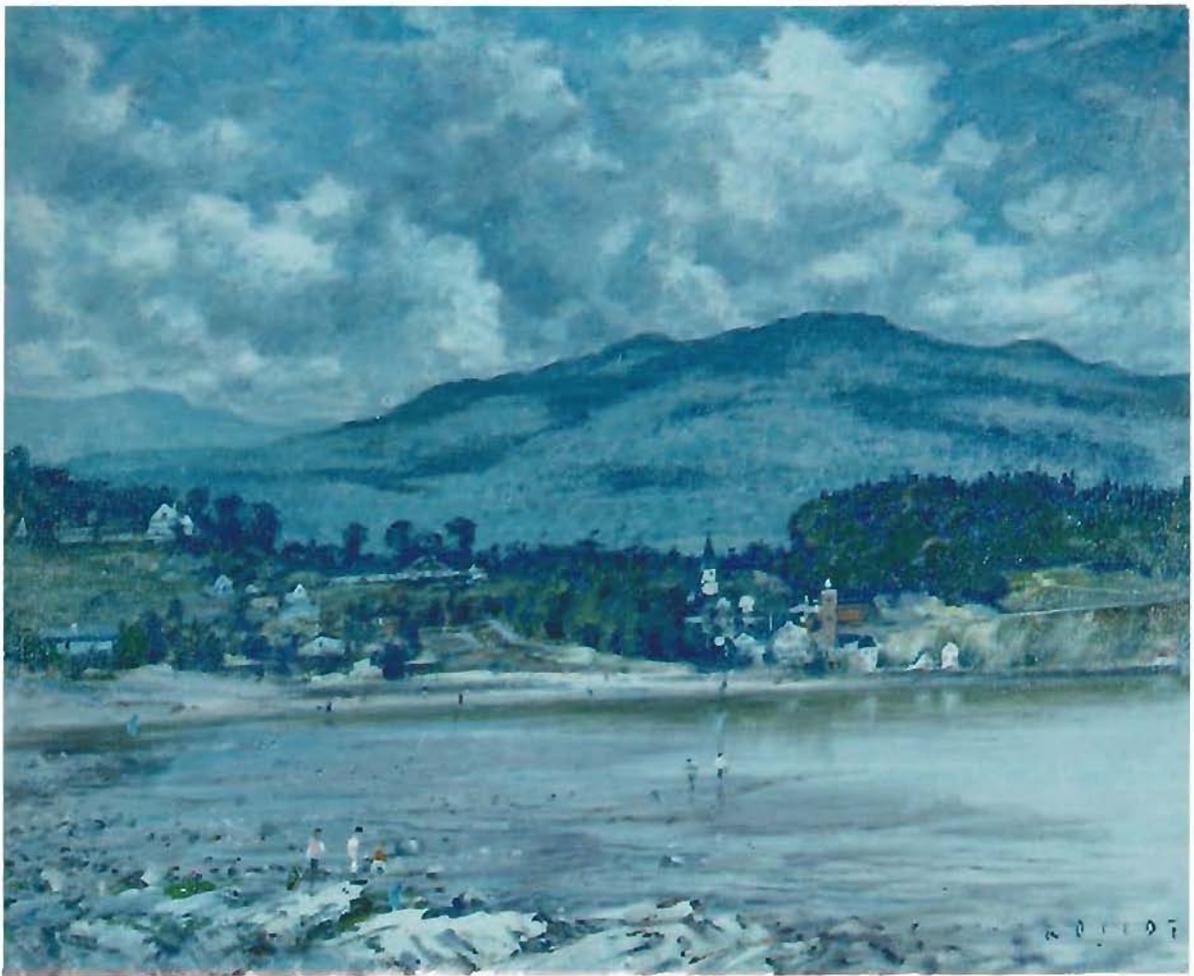


Below:
GORDON PFEIFFER
1899-1983
Laurentian Lake, 1958
oil on board
101.6 x 121.9 cm
signed lower left:
G. Pfeiffer
purchased 1964
65.016

At right:
GORDON PFEIFFER
1899-1983
Laurentians, Winter, 1933
oil on canvas
91.4 x 101.6 cm
signed lower right:
Gordon E. Pfeiffer 33
65.015



ROBERT PILOT
1898-1967
*Mount Murray from
Point au Pic, 1962*
oil on canvas, 66.0 x 88.9 cm
signed lower right: R PILOT
65.003



Sidney Dawes and the McGill Museum of Canadian Art

ROBERT PILOT, 1898-1967
The Ramparts, 1949
oil on canvas
61.0 x 81.3 cm
signed lower right:
R PILOT 49
purchased 1965
66.025

Pilot, the stepson of Maurice Cullen, was married to Dawes' niece. He and Dawes were friends and travelled together. Pilot often visited the Dawes at Murray Bay. Many of Pilot's paintings were painted in the Quebec and Lower St. Lawrence region.



Sidney Dawes and the McGill Museum of Canadian Art

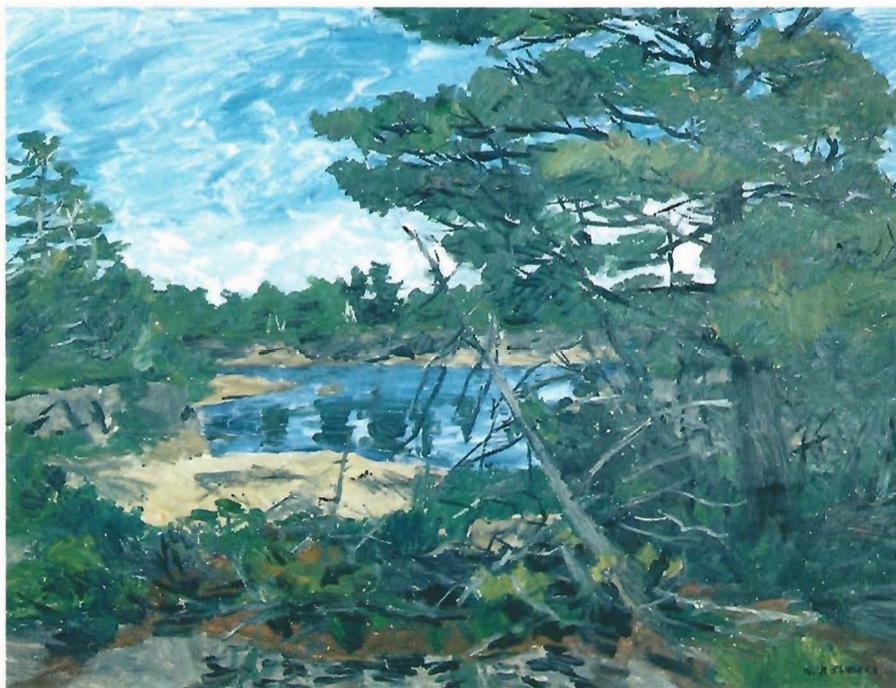
ROBERT PILOT, 1898-1967
The Basilica at Twilight
Quebec City
1961
oil on canvas
86.4 x 137.2 cm
signed lower right:
R. PILOT/61
purchased 1964
66.013



ROBERT PILOT, 1898-1967
Spring Day, St. Eustache, ca 1950
oil on canvas, 61.0 x 81.3 cm
signed lower left and lower right:
R. PILOT
66.020



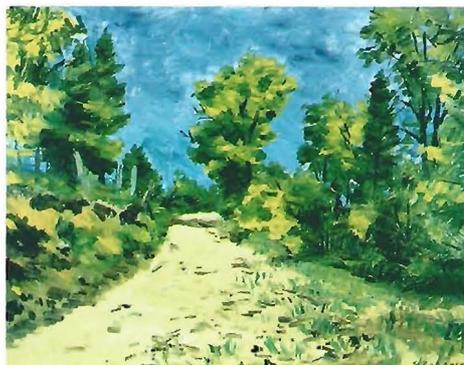
Top:
GOODRIDGE
ROBERTS, 1904-1974
Summer Montebello, 1956
oil on board
61.0 x 91.4 cm
signed lower right:
G. Roberts
purchased Dominion
Gallery, Montreal 1962
65.010



Roberts acquired a summer house with Alfred Pinsky near Calumer, Quebec, not far from Montebello in 1956, the year this work was painted

Middle:
GOODRIDGE
ROBERTS, 1904-1974
Pine Tree on the Shore
1962
oil on canvas
91.4 x 121.9 cm
signed lower right:
G. Roberts
65.009

Roberts spent one month at the farm of Professor M. Dunbar near North Harley in 1962, but it must have been when he visited Point au Baril in Georgian Bay the same year that he painted *Pine Tree*.



Bottom:
GOODRIDGE
ROBERTS, 1904-1974
Country Road on a Bright Day, 1959
oil on canvas
71.1 x 91.4 cm
signed lower right:
G. Roberts
purchased Continental
Galleries, Montreal 1964
64.005.

GOODRIDGE ROBERTS
1904-1974, *Reclining Nude*, 1958
oil on canvas, 73.7 x 91.4 cm
signed lower right: *G. Roberts*
65.012



GOODRIDGE ROBERTS
1904-1974
Still Life, Flowers and Fruit, 1955
oil on canvas
63.5 x 81.3 cm
signed lower right:
G. Roberts
purchased Dominion Gallery
Montreal 1963
65.011

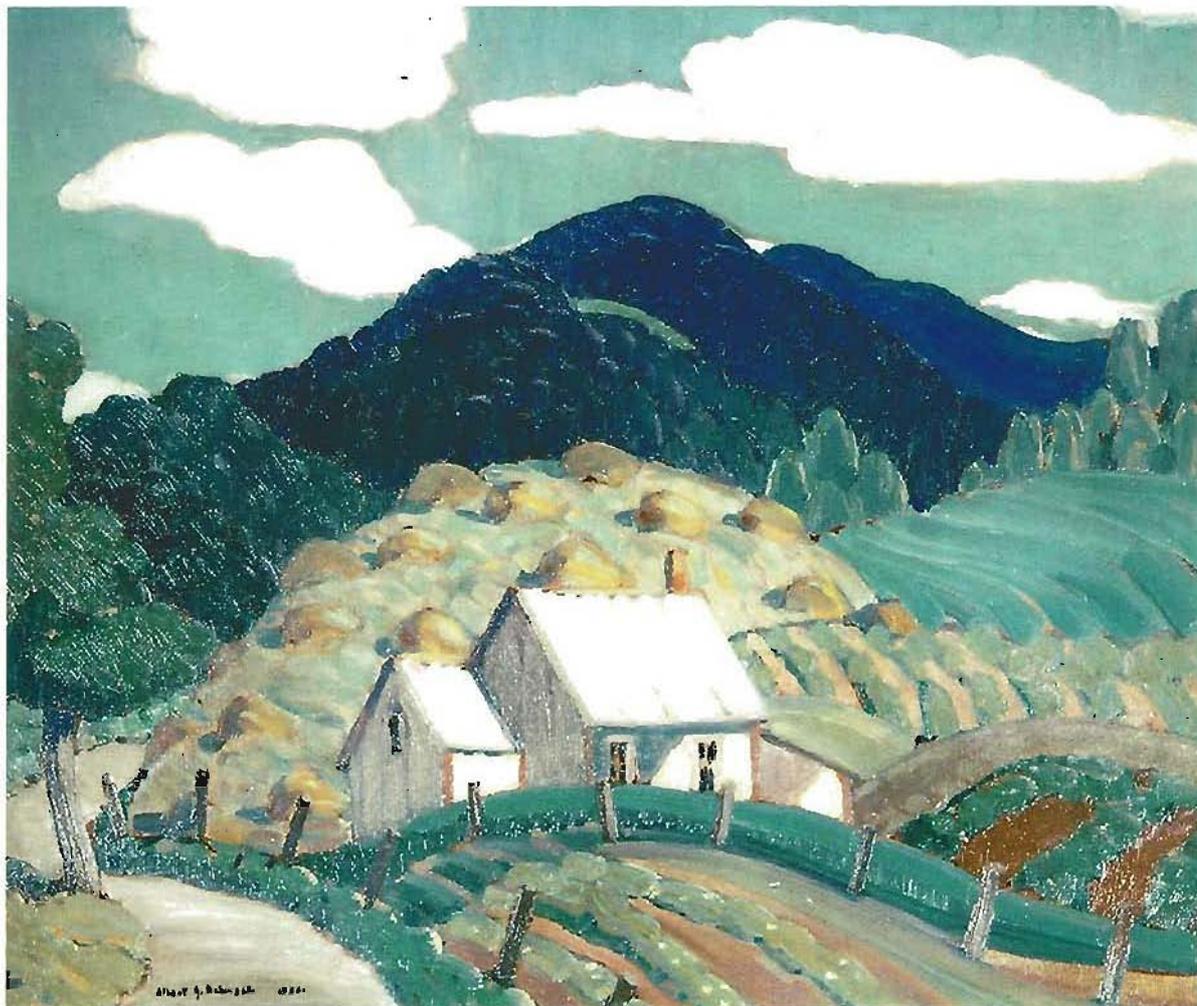


Sidney Dawes and the McGill Museum of Canadian Art

GOODRIDGE ROBERTS, 1904-1974
Phlox, Blue Cloth, 1960
oil on canvas, 81.3 x 81.3 cm
signed lower right: *G. Roberts*
purchased Continental Galleries
Montreal 1964
64.006



Sidney Dawes and the McGill Museum of Canadian Art



Above:
ALBERT ROBINSON, 1881-1956
Farm in the Hills, Knowlton, 1930
oil on canvas, 55.9 x 66.0 cm
signed lower left: *Albert H. Robinson 1930*
purchased 1963
63.011

At left:
ALBERT ROBINSON, 1881-1956
Corner on the St. Lawrence, 1921
oil on canvas, 55.9 x 66.0 cm
signed lower left: *Albert Robinson 1921*
purchased 1963
63.007

Robinson accompanied A.Y. Jackson on winter sketching trips to the Lower St. Lawrence. In an article in a *Supplement to the McGill News* (June 1927) Jackson wrote: "Winter had no established canons, and the artist has a sense of adventure and freedom painting it. Anywhere below Quebec is good sketching ground in winter."

Sidney Dawes and the McGill Museum of Canadian Art

M.A. SUZOR-COTÉ, 1869-1937

Spring Landscape, Athabaska, 1921

oil on canvas, 81.3 x 101.6 cm

signed lower right:

M.A. SUZOR-COTÉ/1921

purchased 1964

66.011



M.A. SUZOR-COTÉ

1869-1937

Eastern Townships, ca 1908

pastel, 39.4 x 60.3 cm

signed lower right:

Suzor-Coté

purchased Dominion

Gallery, Montreal 1963

63.006



Sidney Dawes and the McGill Museum of Canadian Art



F.H. VARLEY
1881-1969
*Reflections, Caribaldi Park
B.C., 1927*
oil on canvas
30.4 x 38.1 cms
purchased 1963
63 010



F.A. VERNER, 1836-1928
Buffalos on the Canadian Prairie, 1885
oil on canvas, 76.8 x 127 cms
signed lower right: *Verner/1885*
purchased Dominion Gallery
Montreal 1962



ROBERT WHALE, 1805-1887
*Indians with Dead Caribou and Bark Canoe
at Big Rock, Memphramagog, 1868*
oil on canvas
53.3 x 68.6 cm
signed lower centre:
R. Whale 1868
66.019

My Dear Eve ...

The Letters of Ernest Rutherford to Arthur Stewart Eve

Part IV: 1915-1919

Montague Cohen

Parts I-III of this article, annotated transcripts were presented of 28 letters, plus two postcards, by Ernest Rutherford in Manchester to Arthur Stewart Eve in Montreal. These letters and cards, written in the period 1907-14, are part of a hitherto unknown collection found during the construction of the old Macdonald Physics Building of McGill University. This article is the last in the series and comprises six letters written in 1915, plus one dated April 1919. As in the previous articles, Rutherford's letters are interleaved with annotated extracts and summaries of nine letters from Eve to Rutherford written in the same period; these are part of the Cambridge University collection. Since this correspondence was exchanged wholly during World War I, many events related to the War are mentioned or discussed, ranging from raids on English and German cities, the use of asphyxiating gases on the battlefield, the sinking of the liner Lusitania and the call in the London Times for the replacement of Lord Kitchener as Secretary for War. The role of science and scientists in the war is a recurrent theme, but the attitude of the two men is quite different: Rutherford is fully occupied with the detection and location of submarines on behalf of the Admiralty Board of Invention and Research, but manages to find time for a small amount of radiation research, particularly on the properties of the new Coolidge X-ray tube, a comparison of the penetrating powers and frequencies of X- and γ -rays, and the interaction of high-speed α -particles with light atoms. Eve at first combines academic duties with the military training of McGill students but in July 1915 becomes a full-time army officer and by October 1916 is sent to England as Second in Command of the 148th Regiment. However, his wish to go to the front is denied and in September 1917 he is appointed (somewhat reluctantly) Director of the Admiralty Experimental Station at Harwich in succession to W.H. Bragg. The correspondence closes in April 1919 with a pair of letters relating to Rutherford's appointment to the Cavendish Chair of Physics at Cambridge and Eve's plans to return to academic life in Montreal.

Dans les parties I à III de cet article, sont présentées les transcriptions annotées de 28 lettres et deux cartes postales envoyées par Ernest Rutherford alors à Manchester à Arthur Stewart Eve à Montréal. Ces lettres et cartes écrites entre 1907 et 1914 font parties d'une collection jusqu'ici inconnue que l'on a découvertes durant la reconstruction de l'ancien pavillon Macdonald de physique à l'Université McGill. Cet article est le dernier de la série et il comporte six lettres écrites en 1915 et une autre datée d'avril 1919. À l'instar des articles précédents, les lettres de Rutherford sont interfoliées avec des extraits et des résumés annotés de neuf lettres d'Eve à Rutherford écrites durant la même période; celles-ci font partie de la collection de l'Université de Cambridge. Étant donné que cette correspondance a été échangée entièrement durant la Première Guerre mondiale, beaucoup d'événements y ayant trait y sont mentionnés ou analysés, comme les raids lancés sur des villes anglaises et allemandes, l'utilisation des gaz asphyxiants au champ de bataille, le naufrage du paquebot Lusitania et l'appel lancé par le Times de Londres pour le remplacement de Lord Kitchener comme ministre de la Guerre. Le rôle de la science et des scientifiques dans la guerre est un thème qui revient souvent, même si l'attitude des deux hommes est très différente à cet égard: Rutherford est entièrement occupé par la détection et la localisation des sous-marins au nom du Board of Invention and Research de l'Amirauté, mais il réussit à trouver le temps de faire quelques recherches sur les radiations, notamment sur les propriétés du nouveau tube de Coolidge, sur les pouvoirs

pénétrants et les fréquences des rayons X et γ et l'interaction des particules α de grande vitesse et des atomes légers. Eve parvient tout d'abord à mener de front ses fonctions d'universitaire et l'entraînement militaire d'étudiants de McGill mais, en juillet 1915, il devient officier de l'armée à plein temps et en octobre 1916, il est envoyé en Angleterre comme commandant adjoint du 148^e Régiment. On refuse toutefois d'accéder à sa demande d'aller au front et en septembre 1917, il est nommé (à contrecœur) directeur de la station expérimentale de l'Amirauté à Harwich en remplacement de W. H. Bragg. L'échange de correspondance se termine en avril 1919 par deux lettres relatant la nomination de Rutherford à la chaire Cavendish de physique à l'Université de Cambridge et les plans d'Eve de reprendre sa vie d'universitaire à Montréal.

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This article is the fourth, and final, part of a series devoted to the correspondence of Ernest Rutherford and Arthur Stewart Eve in the period 1907-19. The four articles were made possible by the discovery, during the reconstruction of the old Macdonald Physics Building of McGill University, of a hitherto unknown set of 35 letters, plus two postcards, sent by Rutherford in Manchester to his friend and colleague Eve in Montreal. (The collection includes two further letters written in Rutherford's Cambridge period, but these are omitted for reasons stated in the Postscript at the end of this article.) The three previous articles were devoted to the periods 1907-8 (Part I), 1909-11 (Part II) and 1912-14 (Part III).¹

As in Parts I-III, the letters *from* Rutherford are interleaved with summaries of Eve's letters *to* Rutherford in the same period. Unlike the Rutherford letters, those of Eve are part of the Cambridge University Collection, have long been in the public domain, and are listed in the *Rutherford Correspondence Catalog*.² The summaries of Eve's letters in this and the previous articles are published by permission of the Syndics of Cambridge University Library.

The present article includes six letters from Rutherford to Eve, and five from Eve to Rutherford, written between January and December 1915. There follow summaries of three letters from Eve written between May 1916 and September 1917, but no letters in the other direction have survived. Strictly speak-

ing, these three letters are not part of a coherent correspondence but are included because they throw interesting light on Eve's military career; furthermore, they act as a bridge between the 1915 correspondence and the final pair of letters in this series, written in April 1919: Eve's letter congratulating Rutherford on the latter's appointment to the Cavendish Chair of Physics at Cambridge and, at the same time, expressing both hope and apprehension for his own return to academic life at McGill. Rutherford's reply, written nine days later, expresses his own hopes for the new, and final, phase of his career in which "... our work is ... to see the younger ones are given a free hand to develop. I quite agree that sterility of ideas is in general an aftermath of war conditions but it will probably soon pass." This modest statement was written just weeks before Rutherford published a series of articles announcing (*inter alia*) the achievement of artificial disintegration of the atom, an event of incalculable importance for the future of science and of the world.³

Examples of the correspondence in this article are given in Figure 2 (part of letter E-34, 4 July 1915) and Figure 4 (letter R-37, 13 April 1919). The latter is published by permission of Cambridge University Library.

Ernest Rutherford, 1915-19

When World War I broke out in August 1914, Rutherford and his wife and daughter were in Australia, where he gave several public lectures and attended the meeting of the

British Association in September. At the end of the B.A. meeting Rutherford did not return immediately to Britain but went on to visit his home country, New Zealand, for several weeks and thence to Vancouver, Montreal and New York. He arrived back in Manchester only in January 1915, a few days before writing the first letter in the present article on January 12.

Rutherford's attitude towards the War was ambivalent. He was certainly not neutral: the comments in practically every letter in this article are alone sufficient proof of his support of the Allied cause. If further proof were needed, his disapproval of Bertram Boltwood's mild pro-German stance may be cited.⁴ Most of all, Rutherford threw his time and scientific talents wholeheartedly behind the British war effort, especially in the Board of Invention and Research where his main task was to devise a method of detecting and locating submarines (see under *Science and the War*, 1914-19 in this Introduction). At the same time, Rutherford could not be described as a militarist. His leisurely return from Australia on the outbreak of hostilities, while many of the participants in the British Association meeting hurried back immediately, may be regarded as an indication of his attitude. Rutherford's obituary of Moseley (see *Science and the War*, 1914-19) as well as the letters in this article clearly show that he did not approve of scientific talent being wasted in the trenches. For example, in letter R-36 (11 Dec. 1915) he wrote to Eve, with reference to the latter's decision to go in for active military service: "I appreciate your patriotism, but I think you have now reached that position of seniority where you could probably do better work training men than leading them in active service. If I recall rightly, I am relatively an infant compared with you."

Perhaps the best illustration of Rutherford's attitude to the War is the oft-told, but unverified, story that he apologized for his late arrival (or absence: the story varies) at a meeting of an Allied anti-submarine panel in London, because he wished to complete some experiments in Manchester in which he believed he had demonstrated, for the first time, artificial splitting of the atomic nucleus:

"If this were true, its ultimate importance is far greater than that of the war." Rutherford was quite right!

The story above illustrates the fact that Rutherford continued to undertake research on radioactivity and related phenomena whenever he could spare the time from his "official" war research. Rutherford produced seven publications in 1915, although four of them were reports or summaries of public review lectures given in London and Washington (see Note 3 of letter R-34). In the three years 1916-18 he published only 4 papers, although (as indicated) he continued to do 'basic' research whenever possible, but publication of the results was deferred until 1919. The topics of Rutherford's non-military research were: the β and γ -ray spectra of the radioactive elements; the relationship between betas and gammas (e.g., the production of secondary betas by the absorption of γ -rays); the properties of the new Coolidge X-ray tube and the comparison of X-ray and γ -ray spectra; and the interaction of fast-moving α -particles with atoms of light elements.³ The latter topic was not begun until July 1917 (by which time Rutherford's involvement in anti-submarine work was at an end) and was actually a continuation of the 1914 investigation of Marsden in which he observed long-range hydrogen nuclei projected by α -particles passing through hydrogen gas.⁵

Of the above subjects of investigation only the properties of the Coolidge X-ray tube and a comparison of X and γ -rays are discussed in the correspondence in this article. Critical summaries of Rutherford's non-military scientific work during the period covered by this article are given in a series of short articles in Volume II of the *Collected Papers of Lord Rutherford*.⁶ Particularly relevant are the articles by Wood⁷ and Feather.⁸

No photograph of Rutherford taken in the period 1915-19 is available, but Figure 5 shows Rutherford and Eve at a somewhat later date, believed to be about 1927. The identity of the lady in the photograph is unknown.

My Dear Eve... The Letters of Ernest Rutherford to Arthur Stewart Eve



Figure 1. Stewart Eve, his wife Elizabeth, daughters Joan and Cicely and son Richard, at Glenmere, 1924.
(Courtesy of Mrs C. Grinling.)

Arthur Stewart Eve, 1915-19

The Eve of this article is a military officer rather than a university professor, although in the early letters he makes a valiant attempt to combine the two careers, as Commander of the McGill Company of the Canadian Officers' Training Corps. By July 1915 (letter E-34) Eve writes that he has to wear uniform all the time, "and 'amen' to Physics for the present." At this stage Eve predicts that (contrary to his personal wishes) he will not be sent overseas but will remain in Montreal to train companies in succession as long as the war lasts. In fact, by the end of 1915 he is promoted to the rank of Major, Second in Command of the 148th Regiment and "I may be in England about April [1916] & in France or the Balkans in the summer. It is a great wrench to leave my family, but needs must when the Kaiser drives." The next-but-one letter (E-37, October 1916) is, in fact, written in England where "we start seriously at our English training and we are of course absolutely in the dark as to where we move and when we go ... we hope to go to France as a unit, & not broken up for reinforcements" (Figure 3). For Eve personally, however, this is not to be. In September 1917 (letter E-38) he writes as Director of the Admiralty Experimental Station at Parkeston Quay (Harwich) in succession to Sir William Henry Bragg (Bragg *Senior*) who has been appointed Scientific Advisor to the Admiralty. Eve has accepted the switch from active military service (albeit not at the front line) to scientific work with some reluctance but he is forced to accept the fact that, at 55 years of age, he is considered too old for service in France. Finally, in April 1919 (letter E-39) he is ready to return to academic life in Canada although "it is very puzzling to know whether Canada or England is the better for us as a whole."

Objective accounts of Eve's life in this period are virtually non-existent. In his biography of Rutherford, Eve scarcely mentions his own wartime activities. At best, we may turn to the obituaries of Eve written in 1948-49, those of Norman Shaw⁹ and J.S. Foster.¹⁰ Both agree that "... as in all his dealings with men, Eve was firm, fair, and always had very much at heart the best interests of

those under his command."¹¹ Figure 1 shows Eve and his family at a somewhat late date (1924) than the period of this article.

Science and the War, 1914-19

The letters in this article were all written during the First World War, the majority in 1915. It is not surprising, therefore, that some aspect of the War features in practically every letter. Rutherford, especially, comments on the military situation, the bombardment of towns on Britain's east coast by German warships and airships, the sinking of the passenger liner *Lusitania*, German military losses, conditions on the front in France and Flanders, newspaper criticism of the British Secretary for War (Lord Kitchener) and so on. Eve, on the other hand, does not comment on specific events (except for the use of asphyxiating gas on the battlefield) but writes of his personal military career and of the recruitment and training of volunteer soldiers in Montreal.

Since this correspondence is between two scientists, the role of science is a recurrent theme. Thus, on June 10, 1915 (letter E-33), Eve wrote, with respect to the Canadian Government's attitude towards inventions, "... at present they pigeon-hole the lot at Ottawa." Furthermore, it is clear that—at least in the early months of the conflict—neither the British nor the Canadian governments and military authorities envisaged any special role for scientists. A scientist of military age, no matter what his qualifications, was expected to serve in the armed forces on the same basis as anyone else. Both Rutherford and Eve recorded that their respective departments of physics were severely depleted and, furthermore, outstanding young men were permanently lost to science. The best known of these was Henry Moseley, without doubt a potential Nobel Laureate, killed in Gallipoli on August 10, 1915. Another such casualty, also in Gallipoli, was Robert Bragg, son of William Henry Bragg and younger brother of William Lawrence Bragg.

In his biography of Rutherford, Eve records that, in July 1915, "a friend wrote to Rutherford suggesting that Moseley would be

much better employed [rather than as a Brigade Signalling Officer] if he were set to solve some scientific problem presented by the war." Eve states that Rutherford wrote at once to Sir Richard Glazebrook (Director of the National Physical Laboratory) asking whether suitable scientific work could be found which would justify Moseley's recall from the war front, but it was too late: Moseley was killed soon after Rutherford took this initiative.¹² It is interesting to note that, in re-telling this episode, Wilson identifies the "friend" who wrote to Rutherford, suggesting Moseley's release from active military duty, as Eve himself.¹³ If so, Eve's letter has been lost, since it is not part of the Cambridge collection, nor is there any reference to the suggestion in a letter written by Rutherford to Bertram Boltwood on 14 September 1915, in which he announces the deaths of both Moseley and Robert Bragg.¹⁴ Rutherford's obituary of Moseley in *Nature*¹⁵ is an admirable example of level-headed thinking at a time of unbridled jingoism or, as Wilson comments: "This was brave stuff in a society where young women could give white feathers to non-uniformed men in the streets and where there could be a public outcry against men such as Schuster because of their Germanic names."¹⁶

It is not entirely true, however, that no attempt was made to harness science to the war effort. Rutherford noted on June 15, 1915 (letter R-35) that his colleague Chaim Wiegmann had been asked to develop the manufacture of explosive materials by a fermentation process. Indeed, Weizmann's contribution to the war—and to the subsequent history of the Middle East through the 1917 Balfour Declaration—are well-documented. Weizmann himself attributed his involvement to a circular from the British War Office, at the onset of the War, inviting scientists to report discoveries of potential military value (see Note 7 of letter R-35).

On the British side, the most important agent for the utilization of science was the Admiralty Board of Invention and Research (BIR). The Board was created in July 1915 by A.J. Balfour, who succeeded Winston Churchill as First Lord of the Admiralty in May 1915. The President of the Board was

Lord Fisher, a highly controversial naval officer, and the central committee included J.J. Thomson, whose influence as President of the Royal Society was largely responsible for the creation of the BIR. The panel of scientific experts recruited to assist the Board included Rutherford, Bragg Senior and other leading scientists such as Sir William Crookes and Sir Oliver Lodge. Rutherford's main work related to the detection and location of submarines. In due course (1917) Eve was transferred from military duties to the BIR, as Director of the Admiralty Experimental Station at Parkeston Quay (Harwich), a move which he accepted with some trepidation: see letter E-38 (9 September 1917).

While the BIR is certainly referred to in the correspondence in this article, it cannot be said that it plays a major role. This is because of the absence of letters—at least, of surviving letters—from Rutherford to Eve in the period between December 1915 and April 1919. The single letter from Eve to Rutherford written in May 1916 (E-36) and Eve's letter to Lady Rutherford in October 1916 (E-37) were both concerned with the writer's military, rather than scientific, duties.

Eve's biography of Rutherford reveals very little of Rutherford's scientific activities during the War, or indeed of wartime science in general. The whole period 1914-19 is covered in a few pages.¹⁷

On the other hand, Wilson devotes a whole chapter to "Rutherford at War" in which the work, and the difficulties, of the Board of Invention and Research are described in detail.¹⁸ Wilson sums up the BIR as follows:

The ... BIR was an ill-fated, short-lived body, brought into existence by mixed and irreconcilable objectives. Yet it was an important initiative, the first conscious attempt to harness the power of scientific investigation to the needs of a nation at war, it planted the seed from which many more important organizations sprang. It must be said, however, that the short history of the BIR is one of the most disgraceful episodes in the history of

the Royal Navy, and fully justified the charges made by modern American naval historians of the technological backwardness of the navy, caused largely by the social snobbery which so seriously afflicted the senior service in the years leading up to, and including, the First World War.”¹⁹

The failure of the BIR to achieve its principal objective—the elimination of the German submarine menace—cannot be blamed on Rutherford and the other scientists involved. They worked hard and intelligently in spite of incessant bureaucratic meddling and political intrigue. Perhaps, however, it would be kindest to conclude that the failure of World War I scientists to solve the problem of detecting and locating submarines was basically a failure of early 20th century technology to achieve the sophistication of the computer age.

Highlights of the Correspondence

Among the topics discussed in this article, the following are of particular interest:

- Nomination of Eve for the Fellowship of the Royal Society of London (letter E-31).
- Seemann’s measurements of X-ray spectra (letter R-32).
- Properties of the Coolidge X-ray tube (letters R-32, E-33, R-35).
- Loss of the German cruiser *Blücher* (letter R-32).
- German shelling and air-raids on towns on the east coast of England (letter R-32).
- Bragg *Senior*’s move from Leeds to University College, London and the resulting vacancy in Leeds (letters R-33, R-34).
- Stephen Leacock’s fictional interview with General Friedrich von Bernhardt, author of *Germany and the Next War* (letter R-33).
- Comparison of the penetrating powers and frequencies of γ -rays from radium C and X-rays (letters R-33, R-34).
- Setting up of facilities for radium treatment at the Manchester Royal Infirmary (letter R-33).
- Sinking of the ocean liner *Lusitania* with the loss of over 1100 lives, mostly U.S. citizens (letter R-33).
- Meeting of the Royal Society of Canada in Ottawa, May 1915 (letter E-32).
- Use of poison gases on the battlefield (letters E-32, R-35).
- Military training at McGill University (letter E-33).
- Rutherford’s Friday evening discourse at the Royal Institution, London, June 1915 (letter R-34).
- Andrade’s estimate of the viscosity of mud on the battlefield in France and Belgium (letter R-34).
- Air-raids on Southend-on-Sea (England) and Karlsruhe (Germany) (letter R-34).
- Estimates of German military losses (letter R-34).
- The deaths in Gallipoli of Robert Bragg and Henry Moseley (letter R-34 and Introduction).
- Birth of the Eves’ third child (letters E-33, R-35).
- Suggestion by the London *Times* that Lord Kitchener (Secretary for War) be replaced (letter R-35).
- Chaim Weizmann’s role in the mass production of acetone, an essential solvent in the manufacture of cordite (letter R-35).
- Eve’s role in the training of the McGill military contingent (letter E-34).
- Louis King’s work on the absorption of light from stars in interstellar space (letter E-34).
- The Board of Invention and Research (letters R-36, E-38).
- *Sound ranging* on the battlefield (letter E-37).
- Rutherford’s appointment to the Cavendish Chair of Physics at Cambridge University (letters E-39, R-37).
- A McGill dinner in London (England) in honour of Sir Auckland Geddes, the newly appointed Principal (letters E-39, R-37).
- The interaction of fast-moving α -particles with the nuclei of light atoms (letter R-37).

Introduction Notes

1. Montague Cohen, "My Dear Eve ... The Letters of Ernest Rutherford to Arthur Eve, 1907-1908," *Fontanus* 1 (1988), 3-37; "My Dear Eve ... The Letters of Ernest Rutherford to Arthur Eve, Part II, 1909-1911" and "Part III, 1912-1914", *Fontanus*, 2 (1989) 111-138 and 4 (1991), 69-108.
2. Lawrence Badash, *Rutherford Correspondence Catalog* (New York; American Institute of Physics, 1974).
3. Ernest Rutherford, "Collision of alpha particles with light atoms," Parts I-IV, *Phil. Mag.* Ser. 6, 37 (1919), 537-61, 562-71, 571-80 and 581-87. (The report of artificial disintegration is in Part IV, "An anomalous effect in nitrogen.")
4. David Wilson, *Rutherford. Simple Genius* (Cambridge, Mass., MIT Press, 1983.) Wilson notes (pp. 344-5) that "Rutherford's relationship with Boltwood cooled considerably during the war, as Boltwood continued to argue the German point of view." In a letter to Rutherford dated 8 December 1914, Boltwood wrote: "You may feel grieved, but I don't think you can be justly disappointed to learn that I am considered here to be PRO-GERMAN. No, I haven't grown any horns or hoofs or changed in any particular ... I don't think any less of the Germans or the English than I did before, my attitude on their relative merits ... has not altered, and I cannot be persuaded that everything the Germans have done is all wrong and everything the English have done is all right, or the contrary." (Lawrence Badash, *Rutherford and Boltwood. Letters on Radioactivity* [New Haven: Yale Univ. Press, 1969], 299.)
5. E. Marsden, "The passage of alpha particles through hydrogen." *Phil. Mag.*, Ser. 6, 27 (1914), 824-30. E. Marsden and W.C. Lantsberry, "The passage of alpha particles through hydrogen. II." *Phil. Mag.* Ser. 6, 30 (1915), 240-43.
6. James Chadwick (Ed.), *The Collected Papers of Lord Rutherford, Vol. II: Manchester* (London, George Allen and Unwin, 1963).
7. Norman Feather, "Rutherford at Manchester: an epoc in Physics," in Chadwick (ref. 6 above), 15-33.
8. A.B. Wood, "Some Reminiscences of Rutherford during his time in Manchester," in Chadwick (ref. 6 above), 307-11.
9. A. Norman Shaw, "Arthur Stewart Eve (1862-1948)," *Proc. Roy. Soc. Canada*, Ser. 3, 42 (1948), 87-93.
10. J.S. Foster, "Arthur Stewart Eve (1862-1948)," *Obituary Notices of Fellows of the Royal Society*, 6 (Nov. 1949), 397-407.
11. J.S. Foster, *ibid.*, 402.
12. Arthur S. Eve, *Rutherford. Being the Life and Letters of the Rt. Hon. Lord Rutherford, O.M.* (Cambridge, Cambridge University Press, 1939), 247.
13. D. Wilson, *Rutherford. Simple Genius*, 343-44.
14. L. Badash, *Rutherford and Boltwood*, 311-12.
15. Ernest Rutherford, "Henry Gwyn Jeffreys Moseley," *Nature*, 96 (9 Sept. 1915), 33-34.
16. D. Wilson, *Rutherford. Simple Genius*, 344.
17. A.S. Eve, *Rutherford*, 247-56.
18. There is some confusion as to the correct name of the Board. Both Eve and Wilson, in their biographies, refer to the "Board of Inventions [plural] and Research" but other publications give "Invention" in the singular. The official report in the *London Times* of 11 November 1915 uses the singular and this form is adopted in the present article.
19. D. Wilson, *Rutherford. Simple Genius*, 345.

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TABLE I
The Rutherford-Eve Correspondence
Part IV: 1915-1919

Rutherford to Eve		Eve to Rutherford	
R-31	12 January 1915	E-31	12 January 1915
R-32	25 January 1915		
R-33	8 May 1915	E-32	30 May 1915
		E-33	10 June 1915
R-34	19 June 1915		
R-35	22 June 1915	E-34	4 July 1915
		E-35	29 November 1915
R-36	11 December 1915		
		E-36	24 May 1916
		E-37	25 October 1916*
		E-38	9 September 1917
		E-39	4 April 1919
R-37	13 April 1919		
Postscript			
(R-38)	29 December 1920. Not included)		
(R-39)	4 May 1926. Not included)		
R-40	6 May 1933		

* This letter was addressed to Lady Rutherford

R-31 Rutherford to Eve

The Physical Laboratories
The University
Manchester
Jan. 12th., 1915

My dear Eve,

I received your letter and draft this morning and enclose herewith formal receipt.¹

We spent a day in New York where the weather was rather bad. Boltwood² came down and spent a great part of the day with us, and we got away from New York in fine

weather; we had four calm but cold days, then two days' gale, and arrived in Liverpool after eight days' journey. We got home safely and found everything in good order.

We saw a couple of cruisers off Sandyhook and another off Cape Clear; but otherwise no signs of war.³ As far as I can see, Manchester is much as usual, recruiting is going strong. They have raised 63000 men in the city.

I find everything going very quietly in the University. Our students are about three to four hundred down, due to enlistment, and this will no doubt increase; but the first year

entries are about the same as usual. Our classes in Physics are rather down, but not very seriously. We shall get along all right with the remaining staff.

We have all pretty well got rid of our colds, and Eileen is leaving this week for boarding school. We had a very pleasant time in Montreal, and are much indebted to you for looking after us so well.

Give my love to Joan and Dick and tell them I hope they will make good use of their presents.

I will answer your letter later re a possible man.⁴ I am pretty busy just now starting up.

Yours very sincerely,
E. Rutherford

R-31 Notes

1. The letter from Eve is no longer extant. Except, perhaps, for the question of "a possible man" (see note 4 below), it was probably only a brief note enclosing the \$62.50 half-yearly interest (due January 1st) on the mortgage granted by Rutherford to Eve in 1911 for the purchase of a plot of land near Montreal (see, for example, note 4 of letter E-16). Since his last letter to Eve, dated June 15, 1914 (letter R-30), Rutherford and his wife and daughter Eileen had made a leisurely round-the-world journey, encompassing the meeting of the British Association in Australia in September, a prolonged visit to New Zealand which included a civic reception and a public lecture as well as time with relations and friends, and a transit of North America, including Montreal where he apparently stayed with the Eves and gave a lecture at McGill. (See note 1 of letter E-31 below; also Wilson, *Rutherford. Simple Genius*, 341-43.)

2. Bertram Boltwood was Professor of Radiochemistry at Yale University and an important collaborator and correspondent of Rutherford. (See Badash, *Rutherford and Boltwood*, also note 6 of letter R-9 and note 2 of letter R-10).

3. Sandy Hook is a small peninsula on the coast of New Jersey, immediately south of New York City. Cape Clear is on Clear Island, off the south coast of Ireland.

4. The reference to Eve's enquiry "re a possible man" is obscure, especially since Rutherford did *not* return to the subject in a later letter, at least those in the present series. We may assume that the staff of the Macdonald Physics Building at McGill had been depleted because of the war (there was no conscription in Canada at this time but many young men volunteered for the armed forces; see also Note 4 of letter E-31 below) and Eve was seeking a replacement from England. However, as Rutherford clearly implies in this letter, the Manchester department was itself depleted.

E-31 Eve to Rutherford

McGill University
Montreal
The Macdonald Physics Building
12 Jan. 1915

This letter crossed in the mail with Rutherford's letter (R-31) of the same date. It begins by wishing the Rutherfords a safe homecoming since "war has certainly increased to some extent the risks of travel." Eve also notes that he has heard "great appreciation from many quarters of that excellent lecture you gave us."¹

Eve states that he is forwarding a duplicate list of his papers and "I shall greatly appreciate the double honour of being proposed by the Royal Society [of London], and of being proposed by you."²

The letter notes that Barnes and McIntosh have returned from B.C. and "found the contract for the new University buildings there all held up, so that it is extremely doubtful what will happen."³ Meanwhile at McGill "we are full steam ahead with war, and with all sorts of drills, musketry, bayonet fighting. Also there is to be trench making and drills on snowshoes."⁴

The letter concludes by reporting that "Margaret, wife of Willie Gordon (C.B.'s brother) died suddenly on New Year's Eve, leaving 4 children, the youngest girl only 2½, a sad thing."⁵

E-31 Notes

1. A joint meeting of the McGill Physical and

Chemical Societies was convened at short notice on December 23, 1914. Rutherford lectured on "The Spectra of X rays and Gamma Rays." The Chairman was Howard T. Barnes. The minutes of the Physical Society indicate that the lecture took the form of a review of the mechanisms of radiation emission by the atom.

2. Since the question of Eve's election to a Fellowship of the Royal Society of London was not mentioned previously in this correspondence, we must assume that the matter was discussed during Rutherford's recent stay in Montreal. The proposal was successful but the formal election of Eve to the rank of FRS was delayed until 1917. He had earlier (1910) been elected a Fellow of the Royal Society of Canada.

3. Howard Barnes, the Director of the Macdonald Physics Building at McGill, had formally resigned in order to take up (on September 1, 1915) the post of Professor of Physics at the new University of British Columbia in Vancouver. However, as Eve's letter indicates, Barnes found that the promised facilities at B.C. were far behind schedule. He therefore withdrew his resignation and remained at McGill until 1918, when a serious breakdown obliged him to resign (see also Note 5 of letter E-29 and Note 1 of letter R-30). A. Douglas McIntosh was Professor of Physical Chemistry at McGill. He had also resigned from McGill in order to move to B.C. as Professor of Chemistry; in his case the resignation stood in spite of the delay in providing facilities and he duly moved in May (?) 1915.

4. This is the first reference in this correspondence to the military activities of the students and staff at McGill University, although it may be assumed that Eve had informed Rutherford of these activities, and in particular of his own role in the McGill Contingent of the Canadian Officers' Training Corps, during the latter's recent stay in Montreal. For further details see the Introduction to this article, under "Arthur Stewart Eve, 1915-19."

5. Charles Blair Gordon (1867-1937), referred to by Eve as 'C.B.', was Eve's brother-in-law. Gordon's wife was Edith Annie Brooks, elder

sister of Eve's wife, Elizabeth, and of Harriet Pitcher, Rutherford's research student at McGill in 1900-1902. At the time Gordon was President of the Dominion Textile Company and a Director of several other companies including the Bank of Montreal. Later in 1915 he was appointed Vice-Chairman of the Imperial Munitions Board in Canada. In 1917-18 he was Director-General of war supplies for Great Britain (headquartered in Washington, D.C.). Gordon was knighted in 1917.

R-32 Rutherford to Eve

17 Wilmslow Road
Withington, Manchester
Jan. 25th, 1915

My dear Eve,

I have received your last letter and thank you for the list of papers enclosed.

There is nothing much to report here since my last letter. Eileen has gone to boarding school and the house is at present in the hands of decorators and carpenters for substantial changes.

You will be interested to hear that I have seen the recent numbers of the *Phys. Zeit.* and *Annalen*, owing to the kindness of Bohr, who gets them forwarded to him from Copenhagen.¹ Several obituary notices have appeared of scientific men, and a number are to follow, but there are none that I know well. One of the most interesting papers to me was a note by Seeman of Wurtzburg, showing a beautiful photograph of the X-ray spectrum of platinum. It is absolutely filled with fine lines from 2° to 12° including the strong lines found by Bragg and Moseley. He has used a remarkably perfect crystal of rock salt and a very penetrating X ray bulb.²

I am ordering to-day a Coolidge tube from Garry Cox in London, and am interested to see what can be done with it.³

Marsden leaves for New Zealand this week.⁴

We have just heard this morning of the defeat of the German raiding squadron, and the loss of the *Blucher*.⁵ I think everybody in

this country will feel that they have got a little back for the Scarborough and Zeppelin raids.⁶

Give my love to the youngsters and kind regards to your wife and sisters-in-law. Tell Mr. Gordon⁷ that I have much appreciated the cigars he presented to me on Christmas Eve. I was sorry to hear of the untimely death of his sister-in-law.

Yours sincerely,
E. Rutherford

P.S. I have heard from J.J.T. [Professor J.J. Thomson] that his boy has been at the front since November and had just had his first experiences of three days in the trenches. J.J. informs me that the big elementary laboratory for Medical students is used as a camping place for troops, and that there are in all 26,000 men at Cambridge.

R-32 Notes

1. Direct correspondence between Britain and Germany was impossible in wartime, but indirect communication via a neutral country was still practical if a suitable intermediary was available. At the time Niels Bohr was a lecturer in Rutherford's department in Manchester, having been granted two years' leave (1914-16) by the University of Copenhagen. (See Poul Dam, *Niels Bohr. Atomic Theorist, Inspirator, Rallying Point* [Royal Danish Ministry of Foreign Affairs, Copenhagen, 1985]; also the Introduction to Part III of this article, under *The Nuclear Atom*, 1904-14). It was presumably not difficult for Bohr to communicate with his colleagues in Denmark, who in turn received journals from Germany.

2. H. Seemann, *Das Röntgenspektrum des Platins. Physikalische Zeitschrift*, 15 (1914), 794-97. (Rutherford's spelling of both the name Seemann and the city, Würzburg, were in error.) The X-ray spectrum, i.e. the range of frequencies emitted by an X-ray tube, comprises two components: a *continuous* (or white) spectrum containing every frequency up to a maximum proportional to the peak kilovoltage applied between the anode and cathode of the tube; and a characteristic spectrum comprising a number of discrete fre-

quencies *characteristic* of the element in the target (anode) in which the rays are generated. The measurement of the latter spectrum had recently become possible with the demonstration of X-ray diffraction by von Laue in 1912 and the development of the theoretical basis of the phenomenon by W.L. and W. H. Bragg in 1912-13 (see Note 3 of letter R-20). The angles mentioned by Rutherford are those by which a narrow beam of X-rays are deviated (diffracted) by a crystal (in this case rock salt, i.e. sodium chloride) placed in the path of the beam; these angles can be translated into X-ray wavelengths by means of Bragg's Law ($2d \sin \theta = n\lambda$). Rutherford speaks of a "very penetrating X ray bulb" but it is interesting to note that Seemann does not quote the voltage applied across the X ray tube, because it was not measured. This voltage had to be at least 78 kV to produce all the so-called K-lines of the characteristic spectrum of platinum, although the longer wavelength (lower frequency) L-series of lines of platinum are produced at a relatively low kilovoltage, in the range 7-14 kV. It is the L-series that gives rise to the reflections at larger angles, according to Bragg's Law, and Moseley's Law, in turn, relates the X-ray frequencies to the atomic number of the target element. The papers by Bragg and Moseley referred to by Rutherford are as follows: W.H. Bragg, "The reflection of X-rays by crystals," Part II, *Proc. Roy. Soc. A*, 89 (March 1914), 246-48. (Part I of this paper, with W.L. Bragg, was published in July 1913 but did not include data relating to platinum); H.G.J. Moseley, "The high-frequency spectra of the elements," Part II, *Phil. Mag. Ser. 6*, 27 (April 1914), 703-13. (Again, Part I of the paper, published in Dec. 1913, included data only for relatively light elements. It may be added that, while Moseley carried out the Part I investigation in Manchester, for Part II he worked in the Electrical Laboratory at Oxford under Professor T.S. Townsend.)

3. In the first 18 years after their discovery by Röntgen in 1895, X-rays were produced exclusively in a gas discharge (Crooke's) tube. This comprised a glass bulb into which two metal electrodes were sealed. The gas in the tube was evacuated to a low pressure but sufficient residual gas remained to allow an elec-

trical discharge to occur when a high voltage (thousands of volts) was applied between the two electrodes. As a result the positive electrode (anode) was bombarded by negatively charged particles (electrons) moving at high speed; the rapid deceleration of these electrons in the metal anode resulted in the production of X-rays. Unfortunately the gas X-ray tube had several disadvantages: its behaviour was erratic and changed with time as the gas pressure in the tube altered with use; it was impossible to control the quantity (intensity) of the X-rays produced independently of their quality (penetrating power); and the output of X-rays was low, necessitating rather long exposures.

William Coolidge (1873-1976) was a physicist at the Research Laboratories of the General Electric Company in Schenectady, New York. In December 1913 Coolidge described a new type of X-ray tube based on a totally different principle. (W.D. Coolidge, "A powerful Röntgen ray tube with a pure electron discharge," *Physical Review*, 2nd ser., 2 [Dec. 1913], 409-30; a condensed version of this paper was published by Coolidge, under the same title, in the January 1914 issue of the *American Journal of Roentgenology*, 1 [1914], 115-24.) The gas pressure in a Coolidge tube is reduced to the lowest value achievable by vacuum technology and the negative electrode (cathode) is replaced by a tungsten filament which is heated by an electric current derived from a low voltage supply independent of the high voltage applied between the cathode (filament) and the anode. When the filament temperature is high enough – several thousand degrees Celsius – electrons are given off from the filament by the process of *thermionic emission*. These electrons move through the vacuum in the tube under the attraction of the positive high voltage and produce X-rays in the tungsten anode ("target"). A metal ring surrounding the filament serves to focus the electron stream on a very small area of the target.

The Coolidge tube is far superior to the gas tube in terms of constancy, reliability, controllability and output of X-rays. Following its invention, the Coolidge tube gradually replaced the gas X-ray tube but it was many

years before this process was complete and before the mechanism of X-ray production was fully understood. Rutherford, for example, cautiously waited a year before ordering one of the new tubes.

4. Ernest Marsden was Lecturer in Physics and John Harling Fellow at Manchester University. In 1914 he was appointed Professor of Physics at Victoria University College in Wellington, New Zealand, and was now leaving England to take up the new post. (See also Note 2 of letter R-25.)

5. On January 24, 1915 four German battle-cruisers, several light cruisers and a number of destroyers were sighted in the North Sea, apparently making for the east coast of Britain. The German ships were attacked by a British flotilla; the cruiser *Blücher* was sunk (with the loss of over 700 lives) and two other battle-cruisers severely damaged. The British denied a German claim that a British battle-cruiser was also sunk during the fight (see also Note 6 below).

6. On December 16, 1914 a number of German cruisers shelled three towns, Hartlepool, Whitby and Scarborough, on the north-east (Yorkshire) coast of England. The raid caused over 100 deaths and several hundred non-fatal casualties, all civilians. In addition there was extensive damage in the three towns. The British press and public condemned the raid as an "outrage." Shortly afterwards there were several reports of raids by Zeppelin airships. For example, on January 19, 1915 a raid on Yarmouth, on the east coast of England, killed two persons. On January 21 an editorial in *The Times* questioned the objective of these raids since they caused comparatively little material damage. The writer concluded that the purpose of the raids was to restore the tarnished prestige of Zeppelin in Germany and, at the same time, to instill a feeling of apprehension in Britain.

7. Mr. Gordon: see Note 5 of letter E-31.

R-33 Rutherford to Eve

17 Wilmslow Road
Withington, Manchester
May 8th., 1915

My Dear Eve... The Letters of Ernest Rutherford to Arthur Stewart Eve

Dear Eve,

I got your note this morning and am sorry to hear of the death of your mother. This was my first intimation. I can quite appreciate that it will make a big difference to your home visits.¹

I have no objection to your use of my name as a reference for the London Chair. As a matter of fact, I am an Advising Member of the London University Committee, and have received all the letters of application. I may tell you privately that the post was initially offered to Bragg, and he declined the proposal mainly on account of laboratory deficiencies. Later, he was approached again by the University College people, and they promised conditions so satisfactory that I think he will accept it. After his refusal, the post was advertised, and I suppose Bragg will not come in with the others. The meeting to settle the matter is on May 25th., and I think it probable that Bragg will be appointed.² In that case, Leeds will be vacant, and I have already mentioned privately to Bragg your claims for consideration. I presume you would be very glad to get a good position of that kind in England.³

I was interested to hear of your change of residence, and hope the property at Côte des Neiges is not too much of a drain on your funds in the meantime.⁴

As Barnes is staying another year I presume nothing will be done for some time to fill his post.

I received the other day an illustrated War number of the McGill paper. It was well got up, and I was much amused in reading Leacock's interview with Bernhardt—a very typical production.⁵

I am hard at work here analyzing the radiation from a Coolidge tube with steady potentials, and have got some interesting results. As far as I can see, it will be impossible for us to obtain X rays as penetrating as the γ -rays from radium C from an X ray tube, unless we could use uranium as an anti-cathode and potentials as high as a million or two volts. I am not quite clear of the reason of this, but I think it is in some way due to the increase of mass of the electron with speed.⁶

Things are very flourishing in the Radium Department of the Infirmary here where they are using nearly a gram of radium for medical purposes. One of my men is in charge as physicist.⁷

We have heard that the heavy Canadian losses have resulted in increasing volunteering in Canada. They seem to behave exceedingly well, and have stood very heavy losses. We have just heard this morning of the torpedoing of the Lusitania.⁸ It will be interesting to see what America has to say, for no doubt there will be a number of American losses. In view of their previous announcements, I do not see how America can avoid doing something drastic unless they are going to allow themselves to be terrorised by the Germans. It looks to me as if the neutral world will have to combine to stop her outrages on their ships, for apparently they would just as soon sink a Danish, Swedish, or American ship as an English one. There is much talk of Italy joining in, but I will only believe it after she has crossed the frontier. I believe that Italy is known in diplomatic quarters as the "hyena," because she wants her meat killed first.

Give my kind regards to the Pitchers and the Gordons, and to Barnes, Gray and King. Has King heard anything about the Adams Prize? I have made some enquiries but have heard nothing here.⁹

Give my love to Dick and Joan, who, I hope, have not completely forgotten me. Eileen is back again at school, where she is counting the days till her next holidays. The school suits her health very well, for she gained twelve pounds last term, and lost three on her holidays. Apart from a relaxed throat, which I have now got rid of, I am feeling fairly fit, and have been hard at work.

With remembrances to Mrs. Eve,

Yours very sincerely,
E. Rutherford

R-33 Notes

1. Eve's letter announcing the death of his mother has not survived. In a letter dated January 15, 1914 (see Note 8 of letter E-27), Eve's mother expressed the desire to move

from Southport to Hull in order to be near her other son Frank, but it is not known whether she actually made the transfer. It seems that Eve visited England regularly (once a year?) primarily in order to see his mother.

2. The post referred to is that of Quain Professor of Physics at University College, London. Rutherford clearly implies that Eve has applied for the post, or at least is considering an application, although there is no confirmation of this in Eve's letters in the present series. In the event (as Rutherford predicts), W.H. Bragg was appointed and took up the post in the autumn of 1915. His main reason for accepting the post was "to be nearer the centre of things where he hoped he could be of use in getting science and scientists employed to help the war effort." (G.M. Caroe (née Bragg), *William Henry Bragg, 1862-1942. Man and Scientist* [Cambridge Univ. Press, 1978], 80). In a letter dated March 26, 1915 to Professor Arthur Smithells, an influential member of the Leeds University Council, Bragg explained his motives for the move, including the need to use science for the economic well-being of the country after the war, an objective which he felt he could promote better in London than in Leeds. (Caroe, *ibid.*, pp. 138-40.)

3. Bragg's probable departure would leave a vacancy in Leeds University and Rutherford's reference to "your claims" implies that Eve has already expressed an interest in that post as well as the University College post. In the event, the Leeds chair was not filled at all until 1919, when Eve apparently applied for the post but withdrew when he found the pension provisions unsatisfactory: see letter E-39 below. The decision to postpone the appointment to the Cavendish Chair—as the Senior Chair in Physics at Leeds is known—until after the war was made in June 1915 by the Cavendish Chair Committee. Meanwhile, an Assistant Lecturer and Demonstrator in Physics, A. O. Allen, was appointed Acting Head of the department. In August 1919, out of a field of 13 candidates, R. Whiddington, a Lecturer in Physics at Cambridge and Fellow of St. John's College was appointed to the Cavendish Chair. Whiddington's candidature was supported by J. J. Thomson. His subse-

quent research interests at Leeds included X-ray spectra, applications of thermionic valves and the interaction of electron beams with hydrogen, helium and other gases. As for Allen, in 1916 he was promoted to Lecturer in Optics, a position he held until his retirement in 1930. (I am grateful to Professor A. A. Watson, Chairman of the Department of Physics at the University of Leeds, his colleague Dr. P. Rhodes and Mrs. Mary D. Forster, of the Leeds University Archives, for help in providing this information.)

4. The "property at Côte des Neiges" was the land originally purchased by Rutherford in 1906 or 1907 and later (1911) sold to Eve (see Note 5 of letter R-10). Rutherford had granted Eve a mortgage of \$2500 at 5%, hence the half-yearly payments of \$62.50 featured regularly in this correspondence, but Eve apparently made no attempt to build on the land and eventually (1925?) sold it to his brother-in-law G. Blair Gordon (see Note 4 of letter E-11). Eve's latest move was to Westmount, an affluent and, at the time, almost exclusively anglophone community close to downtown Montreal and McGill University. According to an advertisement inserted in the *Montreal Gazette* on February 4, 1915 by Fitz-James E. Browne, a Real Estate Auctioneer, the house was sold to Eve by auction the previous day, the price being \$10,100.

5. In 1912 a Cavalry Officer in the German army, General Friedrich von Bernhardi, published a book titled *Deutschland und der nächste Krieg* (Germany and the Next War.) The purpose of the book, as frankly stated in the preface and chapter headings, was to alert the German people to the dangers of settling major disputes by negotiation. "Public opinion ... did not understand the dangers of our political situation, and the sacrifices which a boldly-outlined policy would have demanded." War was a "biological necessity" and a "moral obligation"; Germany had "the duty of self-assertion" and "the right of conquest." The book was an immediate success and was reprinted many times. An English translation was published (London: Edward Arnold) and became an instant "best-seller." The "popular edition" (1914) was reprinted at least 18 times, reviewed in the *London Times Literary*

Supplement (27 Aug. 1914) and was even the basis of a long letter in the *Times* (25 Sept. 1914) warning the United States of the folly of remaining neutral in the war.

The McGill Daily was founded in 1911 and was one of the first daily newspapers produced by and for university students. In March 1915 the *Daily* issued a 58-page "Special War Contingent Supplement" which included a humorous article by Stephen Leacock titled "Side Lights on the Supermen. An Interview with General Bernhardt." At the time Leacock (1869-1944) was Professor of Political Economy at McGill and was well-known both for his scholarly works and his humorous books, the best of which were published in the period 1910-14.

In the *Daily* article, Leacock describes how, late one night, he is visited in his room at College by General von Bernhardt. The Prussian General wants to discuss "Germany and the Next War," a copy of which is lying on Leacock's table. Bernhardt complains that "My book is misunderstood. You English readers have failed to grasp its intentions. It is not meant as a book of strategy. It is what you call a work of humour. The book is to laugh. It is one big joke." The General quotes, as examples of humour, passages dealing with Germany's historical mission, a nation's moral obligations and the rules of war. However, the book is not *all* humour—there are also facts, such as the inevitable breakup of the British Empire in the event of war. The visitor is exasperated by Leacock's inability—or unwillingness—to distinguish the humorous from the factual passages and, in a fit of rage, collapses onto the spike of his helmet lying on the sofa. The General deflates like a punctured balloon, and vanishes. Then Leacock wakes up.

6. Rutherford was right in equating the γ -rays from radium C with X-rays generated at "a million or two" volts, but it is unnecessary to use uranium as the "anti-cathode" (anode). Any heavy metal will serve, provided that the voltage across the X-ray tube is high enough. (In practice tungsten is used as the target in most X-ray tubes, but this is because tungsten has several important physical properties such as hardness and a very high melting

point.) The penetrating power of both X- and γ -rays depends on the energy of their constituent photons (which behave like particles of zero mass) and this, in turn, depends on the energy balance in the process giving rise to the radiation: rapid deceleration of moving electrons (\rightarrow X-rays) or changes in energy states (including the conversion of mass into energy) within the atomic nucleus (\rightarrow γ -rays and other kinds of emission). Evidently Rutherford underestimated the energy involved in a nuclear transformation giving rise to a photon of γ -radiation. The basic problem was that the mechanisms of X-ray production in the electron orbits of the atom, and of γ -ray production in the nucleus, were not properly understood at this stage. Indeed, in his lecture at the Royal Institution in June 1915, subsequently published in July 1915 (see Note 3 of letter R-34 below for details), Rutherford stated: "There appears to be no doubt that the penetrating γ -rays have their origin in some sort of disturbance in the rings of electrons nearest to the nucleus, but do not represent, as some have supposed, the vibrations of the nucleus itself." (See also Note 3 of letter R-33 below.)

7. The following information has been kindly supplied by Dr. W.J. Meredith, Chief Physicist at the Christie Hospital and Holt Radium Institute, Manchester (1936-72) and by the present Chief Physicist, Ms. Pamela M. Nuttall:

"The Infirmary" was, and is, the Manchester Royal Infirmary. The radium was bought mainly as a result of the initiative of Alderman Edward Holt (later Sir Edward Holt) who, in February 1914 initiated a fund for the purchase of radium for the treatment of cancer in Manchester hospitals. He himself offered £2000 and this sum was doubled by other donations within a week. In all over £30,000 was collected. At first accommodation for the treatment was provided in a basement of the Infirmary, and the Radium Laboratories were formally opened at the end of 1914. The task of organizing the laboratories fell to Ernest Marsden, until he left for New Zealand in January 1915. Better premises were provided later when the name *Holt Radium Institute* was coined. At the same time the Manchester Home for Incurables, later renamed the

Christie Cancer Pavilion and, later still, the Christie Hospital, was accommodated in a large house in the Infirmary grounds. It was only in 1931 that the *Christie Hospital and Holt Radium Institute* came together in a newly-built hospital in Withington, the suburb of Manchester in which the Rutherfords lived.

The “physicist in charge” referred to by Rutherford was Henry Lupton, B.Sc., who had previously been employed in the Physical Laboratories of Manchester University. It seems that Lupton acted as Advisory Custodian of the radium, but he could not be described as an early “Medical Physicist” since he had no role in planning the treatments. The latter were carried out by surgeons entirely on an *ad hoc* basis since the principles of radium dosimetry were as yet unknown. Much of the radium stock was in solution, from which ‘emanation,’ i.e. radon gas, could be extracted and compressed into hollow metal ‘needles’ for ‘interstitial’ application in which the radioactive sources were implanted directly into tissue. (The advantage of radon for this type of treatment is that it has a short half-life, 3.8 days, so that the sources become inactive and can be left in the tissue permanently—unlike radium—thereby avoiding the need for a second surgical procedure to remove the needles.) Alternatively, radium was loaded into tubes for ‘intracavitary’ treatments (for example, tubes inserted into the uterus) or for the construction of surface ‘moulds’ for the treatment of skin or superficial cancer.

8. The British ocean liner *Lusitania* (Cunard line), on a voyage from New York to Liverpool, was torpedoed off the Irish coast on May 7, 1915. The ship sank within 40 minutes, with the loss of 1134 lives, while 772 passengers and crew survived. (At first 1502 fatalities and 658 survivors were reported, but these numbers were subsequently corrected.) About four-fifths of the passengers were U.S. citizens. A few days before the event, several American newspapers carried advertisements, issued by the Imperial German Embassy in Washington, that vessels flying the flag of Great Britain or its allies were liable to destruction in the waters adjacent to the British Isles. At the same time many intended passengers of the *Lusitania* received telegrams

signed by “John Smith” or “George Jones.” The one sent to a prominent American passenger, A.G. Vanderbilt, read “Have it on definite authority *Lusitania* is to be torpedoed. You had better cancel passage immediately.” It seems, however, that very few of the intended passengers heeded the warning and cancelled their passages. (Mr. Vanderbilt was one of the casualties.) *The Lusitania* incident had a profound effect on American public opinion, although two more years would pass before the U.S. abandoned its neutrality and declared war on Germany.

9. Pitcher: see Note 11, letter R-1; Gordon: see Note 5, letter E-31; Barnes: see Note 3, letter E-31 and Note 1, letter E-21; Gray: see Note 7, letter R-20; King: see Note 7, letter R-29; Adams Prize: see Note 7, letter R-24, also letter E-32 below.

E-32 Eve to Rutherford

490 Mountain Avenue
Westmount,
Montreal
30 May 1915

Eve begins by thanking Rutherford for his letter (R-33) and for the message of sympathy with respect to the death of Eve’s mother. Eve also encloses the semi-annual mortgage interest due on June 1st.

The letter goes on to mention the “excellent meeting of the Royal Society of Canada in Ottawa” in which there were 40 papers “of a high order” in the Physics section. Eve mentions specifically a paper by McLennan concerning “a new lamp with which he stimulates zinc or cadmium vapour & then with a low potential he gets the single line spectrum or fundamental “note” of the vapour.”¹

Next, some news about colleagues at McGill: “King did not get the Adams Prize, it was not quite close enough to the subject prescribed ... However he is walking away gaily and is not discouraged. He has been made Associate Prof and given a small rise—about the only one.² McIntosh has gone to Vancouver. Barnes holds off for a year, with nothing decided as to what he will do a year

hence. I think that Leeds would suit him nicely, also Bragg's house!"³

In reply to Rutherford's expression of concern with regard to the financial implications of his new residence, Eve replies that he can manage both the new house and the interest payments due to Rutherford because "I came into a bit extra since my mother died." He adds the surprising news that "We are expecting a new arrival about 3-10 June" —only a week ahead.

The remainder of the letter is concerned with the War: "Boyle was at Ottawa. He had heard from Kovarik that Geiger was sent home from the trenches with rheumatism, and that he (Geiger) took a rosy view of the Germans' chances.⁴ I am glad to see that England is realizing the magnitude of the task." Eve states that "Our McGill Company sailed last week, and another one is forming. A large number have gone with other regiments." Eve's personal role involves "... a good fortnight's camp at Niagara-on-the-Lake & I hope to go soon to qualify as a Major, although they will only make me a Captain for it! ... Since the "Lusitania" and poison gases I have been wanting to go for the Germans personally."⁵

E-32 Notes

1. J.C. McLennan, Professor of Physics at the University of Toronto, and his colleagues presented 8 of the 40 papers in Section III of the May 1915 meeting of the Royal Society of Canada. The work quoted by Eve was: J.C. McLennan and E. Edwards, "On the absorption spectra of mercury, cadmium, zinc and other metallic vapors," *Proc. Roy. Soc. Canada*, Ser. 3, 9, Section III (1915), 167-77.

2. See Note 9 of letter R-33.

3. See Note 3 of letter E-31, also Note 3 of letter R-33.

4. R.W. Boyle was a staff member of the McGill Physics Laboratory during Rutherford's final year (see Figure 1 in Part II of this article.) He remained at McGill after Rutherford's departure but moved to the University of Alberta in 1912. In a letter to Rutherford dated 12 September, 1912

(Cambridge Univ. Collection), Boyle wrote: "The equipment of apparatus for physics gave me quite a surprise. I did not expect to find it so good for such a young institution." Alois F. Kovarik was an American physicist who had worked with Rutherford in Manchester in 1910-11 and was now a professor in the University of Minneapolis. The meeting of the two men at Ottawa refers to the Royal Society of Canada conference (see Note 1 above). During Kovarik's period in Manchester he had collaborated with Hans Geiger (see Note 5 of letter R-9) and they had published a joint paper on the ionization produced by beta particles. It is not surprising, therefore, that Geiger wrote to Kovarik and this was still possible because the United States was neutral in the war at the time. However, it is possible that Rutherford knew about Geiger before Eve's letter arrived, since Kovarik wrote to Rutherford as follows (the letter is undated but appears to have been written early in 1915): "It may interest you to learn something about Geiger as I believe you have not heard from or about him since the war started. He has written me ... from Erlangen where he was then in a hospital with rheumatism. He fought at Nancy and Verdun having been called out the second day of mobilization." (Cambridge Univ. Collection.)

5. *Eve's personal role*: see Note 4 of letter E-31. *Lusitania*: see Note 8 of letter R-33. *Poison gases*: on April 17, 1915, the German Army issued an official telegram stating that, east of Ypres (Flanders) the British used shells and bombs emitting asphyxiating gases. This was denied by the British. The official British communiqué of April 23 admitted that a German attack had forced a French retreat near Ypres. The statement continued: "The attack was preceded by heavy bombardment, the enemy making use of a large number of appliances for the production of asphyxiating gases. The quantity produced indicates long and deliberate preparations for the employment of devices contrary to the terms of the Hague Convention to which the enemy subscribed. The false statements made by the Germans a week ago to the effect that we were using such gases is now explained. It was obviously an effort to diminish neutral criticism in advance."

E-33 Eve to Rutherford

McGill University
Montreal
The MacDonald Physics Building
10 June 1915

This letter begins with important news: "On Sunday, 6th, my wife presented us with a fine little girl baby, 10 lb & more, and I am thankful to say that so far both are doing very well."¹

Next, news about military training at McGill: "We are starting an auxiliary battalion at McGill and training men who want to be ready for later call, & we had 300 on Tuesday & there are to be 600 tonight ... We hope to find it a valuable recruiting ground for city & overseas regiments as they are called upon."²

Eve announces that we (presumably a McGill group) are starting a scientific committee to advise the government on inventions. He complains that "at present they pigeon-hole the lot at Ottawa."³ He notes that "people here are becoming unreasonably pessimistic, as they were optimistic some time ago."

Next, news about two colleagues at McGill: "Gray has just had 6 weeks training as an Artillery N.C.O. at Kingston & he is probably going overseas as range and direction finder ... McGill keeps his place open & pays him the difference between his full salary & his military pay."⁴ Eve reports also that "the other Gray" will probably accept a Professorship of Electrical Engineering at Cornell at a salary of \$3500. "Quite a loss to us."⁵

Except for a reference to Peterson's K.C.M.G.,⁶ the rest of the letter is concerned with the problem of the relationship between the current and the applied voltage in a Coolidge X-ray tube. Eve writes: "We have a Coolidge now and I am hoping to experiment with it soon. I wonder if there is a "space charge" which cuts down the effective voltage." He quotes (with rough sketches) his own experiments, reported in a letter to *Nature*, with an internally silvered carbon lamp. "Instead of Richardson's curve [sketch] going to infinity, I got Langmuir's, thus [sketch] with a rather abrupt transition ... Is it possible that even in the high vacuum of the

Coolidge there is a volume charge which back up against the applied potential?"

E-33 Notes

1. The new arrival, Cicely (foretold in letter E-32), was the Eves' third and last child.
2. On 16 June, 1915 the *Montreal Star* reported that over a thousand men had joined the McGill C.O.T.C. (Canadian Officers' Training Corp.) At a meeting of officers, including Captain Eve, it was decided that only 50 more recruits would be taken in. See also the Introduction to this article, under "Arthur Stewart Eve, 1915-19."
3. The lack of appreciation by Government and Military of the potential contribution of Science to the war effort was a constant complaint of scientists at this stage of the war, both in Britain and in Canada. This problem is discussed in the Introduction to this article, under "Science and the War, 1914-19."
4. J.A. Gray was a Lecturer in Physics at McGill.
5. Alexander M. Gray was an Assistant Professor of Electrical Engineering at McGill.
6. William Peterson was the Principal of McGill University: see Note 7 of letter R-9. On June 4, 1915 the *Montreal Gazette* reported that 11 Canadians were included in the British Birthday Honours List. Peterson was made a Knight Commander of the Order of St. Michael and St. George (K.C.M.G.).
7. See Note 3 of letter R-32 above for a discussion of the Coolidge X-ray tube. Eve was concerned with the effect of varying the voltage between the anode and the filament (cathode) of the tube, in particular the effect on the thermionic current, i.e. the stream of negative electrons emitted by the hot filament and attracted to the positively-charged anode. It seems that he would not risk experimenting with his newly-acquired Coolidge tube and instead used a modified carbon filament lamp with the inside of the glass bulb silvered (and connected to the outside by a wire) so as to form an anode. Unfortunately it is impossible to assess Eve's experiment properly, since his short letter in *Nature* is lacking in essential

detail; A.S. Eve, "The Thermionic Current," *Nature*, (April 15, 1915), 174.

Eve's letter speaks of a voltage which was varied from 100 to 165 volts, but it is unclear whether this was applied across the filament (in order to vary its temperature) or between the filament and the anode. The anode was connected to earth via a telephone receiver, which transformed fluctuations in the thermionic current into a noise of variable loudness. The most plausible interpretation is that the voltage was across the filament in which case there would be an effective anode-to-filament voltage of about half the filament voltage. Eve reports that the noise in the telephone receiver increased significantly as the voltage was raised from 100 to 140 volts, but suddenly ceased at 142 volts and remained silent up to 165 volts. He interprets this result as indicating that the thermionic current obeys Richardson's law (i.e. an exponential increase with filament temperature) only up to a certain value. Thereafter the curve of thermionic current vs filament temperature flattens out, i.e. the current becomes saturated. Eve was right in his tentative conclusion: there is a space charge in the high vacuum of a Coolidge tube and this limits the current between the filament and the anode unless the anode voltage is high enough to dissipate the space charge. Unfortunately Eve's experiment was faulty in that, unlike Langmuir, he used only one variable (the filament temperature) instead of two independent variables (filament temperature and anode voltage).

Owen W. Richardson was a graduate student at Cambridge when he read his landmark paper on thermionic emission to the Cambridge Philosophical Society on 25 Nov. 1901: O.W. Richardson, "On the negative radiation from hot platinum," *Proc. Camb. Phil. Soc.*, 12 (1902): 286-95. (See also Note 6 of letter E-26.) Irving Langmuir was a scientist at the G.E.C. Research Laboratories in Schenectady, New York—the laboratory where Coolidge developed the modern X-ray tube. I. Langmuir, "The effect of space charge and residual gases on thermionic currents in high vacuum," *Physical Review*, Ser. 2, 2 (1913): 450-86.

R-34 Rutherford to Eve

17 Wilmslow Road
Withington, Manchester
June 19th., 1915

Dear Eve,

I have received your letter and enclose herewith a formal receipt for the Bank draft.

I was interested to hear your news about the Royal Society and McLennan's paper,¹ but was sorry to hear that King had not got the Adams Prize.² I had an idea that they would be rather frightened at the volume of experimental work on points so unsettling to the normal mathematical physicist.

I gave my lecture at the R.I. a fortnight ago, and had a good audience, including J.J.T. in the gallery. I did not show many experiments, but had plenty of diagrams. I think an account of the lecture will soon appear in "Nature", but I forward you herewith an abstract which has appeared in "Engineering".³

I have little to report except that we have been very busy with the Examinations, which are now over. I am expecting Zeleny to come up and stay with me for a few days next week.⁴ My wife has been very busy visiting the Canadian and New Zealand wounded in Manchester, of which she is in general charge. She discovered five Canadians in a hospital who were put down in the Times as "died of wounds". There are a good number of Canadians here at present, and I have seen several of them. One of them from B.C. named Flewin, was a graduate of McGill, I think in Civil Engineering, and was there in my last year.⁵ He was a very pleasant fellow, but I think he has now sufficiently recovered to go to a convalescent home.

Most of my Second Year Honours students have gone to work in putting up chemical plant for War contracts. They receive, I think, 25/- a week.⁶ J. Barnes, who is with me, is thinking of doing some X ray work for the Canadian hospitals before he has to return to his work in Bryn Mawr.⁷ I got a letter from Andrade recently; his business is to supply ammunition to one of the heavy gun batteries in France.⁸ He says he received great kudos

from his Mess for discovering a supply of strawberries in a village destroyed by the Germans. Things in England go on much as usual, and we have had a most extraordinary spell of sunny weather—about a month on end. It is interesting to see how the Germans have been disturbed by the raid on Karlsruhe. I expect part of their annoyance is quite genuine, for the Germans have always reported their raids on Southend and English villages as on fortified places.⁹

I am trying to get some research done during the next month, and if I am wanted, will help the Engineering Department in testing aeroplane apparatus. The process of knocking out Germans at the rate of 300,000 a month goes on merrily, and we may be able to do something worth while in two months' time.¹⁰ It looks as if the Germans had very strongly fortified their positions opposite to us in France, and are concentrating their artillery against us. I got a note from Geiger's father the other day, saying that he was at the front again but was all right when he wrote.¹¹

I have not heard anything definite for some time about Leeds, and do not know what they are likely to do. It is possible that they may think of appointing young Bragg to succeed his father, but, of course, he is not available just now.¹²

With kind regards to your wife and Joan and Dick,

Yours very sincerely,
E. Rutherford

R-34 Notes

1. See letter E-32, especially Note 1.
2. Adams Prize: see letter E-32, also Note 7, letter R-24.
3. Rutherford gave the traditional Friday evening discourse at the Royal Institution of Great Britain (R.I.) in London on June 4, 1915. The audience included Rutherford's mentor, Sir Joseph J. Thomson, (J.J.T.), Cavendish Professor of Physics at Cambridge. The lecture was published in full in *Nature*, 95 (July 1, 1915), 494-98, under the title "Radiation from Exploding Atoms." This lecture, together with Rutherford's two lectures

in April 1914 to the U.S. National Academy of Sciences (see Note 3 of letter R-26), provides an excellent summary of what was known in 1914-15, and equally what was not known, about α , β , γ and X radiations and their relationships. For example, Rutherford stated that "...the highest frequency of the radiation emitted by radium C is only about twice that obtainable by a hard X-ray tube excited by 100,000 volts. It thus appears that there is a definite limit to the frequency of the radiation obtainable from a given atom, however high the speed of the disturbing electron." In fact, the most energetic γ -rays emitted by radium have a photon energy (2.198 MeV) almost 22 times that of the most energetic X-rays generated at 100,000 volts (0.1 MeV) and hence (since frequency is proportional to photon energy) a frequency 22 times higher. The discrepancy arises from the fact that X-rays are generated in the electron orbits of the atom, external to the nucleus, whereas γ -rays arise within the nucleus itself.

4. John Zeleny was Professor of Physics at the University of Minnesota at Minneapolis. He had known Rutherford since the 1890s when they were both research students in the Cavendish Laboratory. Zeleny's field of interest was ionization in gases rather than radioactivity (the two fields overlap to some extent) but nevertheless the two men had maintained a regular correspondence on scientific and other matters (see Badash: *Rutherford Correspondence Catalog*).

5. I am unable to trace any student named Flewin in the McGill records for Rutherford's last year, 1906-07, or earlier. However, Walter R. Flewin was listed as a first-year student in Applied Science in 1908-9 and as a second-year student in this field in 1910-11. He does not appear in the 'lists' for 1909-10, 1911-12 and thereafter, and there is no record of his graduation. If, therefore, this is the Flewin who talked with Rutherford, it seems that he exaggerated his academic achievements for the latter's benefit.

6. 25/- means 25 shillings or £1.25, about \$6.25 at the time.

7. J. Barnes is not to be confused with Howard Barnes, the Director of the

Macdonald Physics Laboratory at McGill. James Barnes was a visiting (American?) research student at Manchester and, in 1915, published four papers (two as co-author with Rutherford) on X-ray spectra and the efficiency of X-ray production (see the Bibliography in Birks, *Rutherford at Manchester*.) Bryn Mawr College, in Pennsylvania, was founded in 1885 for the education of young Quaker women, although it soon became non-denominational. It was the first women's college in the U.S. to develop graduate instruction leading to the doctorate for women, and remains today the only predominantly women's college (male students are now admitted) with extensive graduate programs. Barnes was presumably an instructor at Bryn Mawr—the Faculty included both sexes.

8. Edward Neville da Costa Andrade (1889-1971) was an English physicist who, after obtaining a Ph.D. in Heidelberg, spent a year as a graduate student at Manchester under Rutherford (1913-14). On the outbreak of war in 1914 he became an officer (eventually a captain) in the Royal Garrison Artillery. The *Rutherford Correspondence Catalog* lists seven letters from Andrade to Rutherford in 1915 (in the Cambridge collection), all highly readable accounts of life with the British Expeditionary Force in France and Belgium. The “strawberry” incident mentioned by Rutherford was related by Andrade in a letter dated June 15, 1915. An earlier letter, dated February 21, 1915, contains the following interesting description of the conditions under which he was serving: “The mud is beyond words and covered with a layer of water in most places: its viscosity is about 10^8 c.g.s. [centimetre-gram-second] units.” *Viscosity* is the property of a substance—a kind of internal friction—that determines how easily it flows under pressure. Andrade's statement should not be interpreted in strictly numerical terms—he was in no position to measure the viscosity of mud—but rather as a physicist's way of telling another physicist that the conditions were horrendous. (On the same cgs scale, the viscosity of water is about 0.01, of motor oil about 2 and glycerine about 10.)

9. On May 10, 1915, there was an airship

(Zeppelin) raid on Southend-on-Sea, a town on the east coast of England. According to the *London Times*, nearly 100 bombs were dropped indiscriminately over an area of five square miles, killing a woman and causing damage to the extent of about £20,000. However, the official communiqué from German Army Headquarters in Berlin referred to the raid “on the fortified place of Southend, at the estuary of the Thames.” A second raid on Southend took place on May 27. The French air raids on Karlsruhe, a town in the Rhine valley near the French border, took place on June 15 and 18, 1915, causing 17 and 84 casualties respectively. The official German communiqué described Karlsruhe as “an open town ... far from the theatre of operations ... not in any way fortified.” On June 18 the newspaper *Deutsche Tageszeitung*, commenting on the first raid, said that “Germany's answer to this foul attack must be ruthless reprisals not only on military cities and fortresses as the Germans have done so far, but on civilians.” The writer suggested that the ideal target for this purpose was the West End of London. Up to this stage of the combat neither side had been willing to admit that its strategy included, or should include, the killing of civilians.

10. I cannot give a precise reference for Rutherford's statement that German losses were 300,000 a month. However, unofficial estimates put the figure, if anything, even higher. For example, on March 8, 1915 the *London Times* carried an estimate of German casualties based on the official casualty lists published daily by the German general staff. The *Times* article concluded that in the first seven months of the war the German infantry losses alone amounted to over 3 million men. If the cavalry and artillery regiments were taken into account it was “impossible to estimate less than 3 million.” A 1912 estimate of the total strength of the German army, including untrained personnel, was nearly 10 m. It is difficult to reconcile the figure of 3 m. German losses in the first 7 months of World War I with more recent estimates of about 5.4 m. German casualties, including 1.8 m. dead, for all 51 months of the war: see, for example, the *Cambridge Encyclopedia* (Cambridge Univ. Press, 1990). It is impossible to guess what

My Dear Eve... The Letters of Ernest Rutherford to Arthur Stewart Eve

Rutherford had in mind with his suggestion of doing "something worth while in two months' time."

11. Since direct correspondence between Germany and England was not permitted, the note from Geiger's father presumably came through a neutral go-between, such as Bohr in Denmark. The previous news of Hans Geiger (see letter E-32, including Note 4) was that he was in hospital but evidently that episode was now over.

12. In his letter of 30 May, 1915 (letter E-32), Eve had stated that the Leeds position "would suit him [Barnes] nicely" but there is no indication that either Barnes or Eve himself was an active candidate (see, however, Note 3 of letter R-33). Meanwhile the younger Bragg (William Lawrence) had become a Fellow of Trinity College, Cambridge and, after a period in a military troop (the 'King Edward's Horse') attached to the University, had received a commission in the Army and was posted to the Leicestershire Royal Horse Artillery. Hence Rutherford's statement that "he [Bragg Junior] is not available just now." In the autumn of 1915 Bragg was sent to France by the War Office "to take over the French method of locating enemy guns by sound, and to start sound-ranging for the British Forces." (Caroe, *William Henry Bragg*, 79; see Note 12 of letter R-33.)

It may be added that Robert C. Bragg, the younger brother of William Lawrence, was an undergraduate at Cambridge at the outbreak of war in August 1914. He, too, joined the 'King Edward's Horse' and, in the summer of 1915, was sent to Gallipoli with the Expeditionary Force. Like Rutherford's brilliant research student, Henry Moseley (see Note 5 of letter R-20), Robert Bragg was killed on active duty in Gallipoli at the age of 24. (Caroe, *ibid.*, 80-81.)

R-35 Rutherford to Eve

17 Wilmslow Road
Withington, Manchester
June 22nd., 1915

My dear Eve,

Congratulations to you and Mrs. Eve on the

latest heavy weight addition to your family.¹ My wife and I are delighted to hear that all is going well. I judge that your state was not quite normal when you wrote to me, for you addressed me as Sir Edward Rutherford for the first time!²

I think I told you in my last letter that I was glad to see that Peterson has got his K.C.M.G.³ As you know, I tried to stir some of the people up about the matter when I was there at Christmas, and I hope that it helped.

Re the Coolidge tube, I have no doubt that for very heavy discharges there will be the regular volume distribution of electrons, and that the current will reach a maximum independently of the temperature of the wire.⁴ I have not tried to examine this question, as I do not want to smash my bulb.

I was interested to hear about Gray and the military movements in McGill.⁵ I think the outbreak of pessimism you refer to was largely the result of the Times and Daily Mail's attempt to throw out Kitchener and force conscription.⁶ I think it was a great pity that both of the papers were not stopped for a week or two, for they did a great deal of harm not only in this country but amongst the Allies.

One of our chemists, Weizmann, is likely to leave us during the war to help in starting factories for the manufacture of explosive materials by a method which he has worked out.⁷ I should not be surprised if one of the factories were started in Canada, for they will want them all over the world.

We are thinking of going for our holidays in August to Llanfairfechan in North Wales, and will join my colleague, the Hicksons, for a change.⁸ I have only spent one summer at the seaside since my arrival in England. Of course if there were any special work for me to do I shall stay in Manchester; but there seems to be very little chance that they are going to make any definite use of scientific people as a whole.⁹

With kind regards,
Yours very sincerely,
E. Rutherford

R-35 Notes

1. The Eves' third child, Cicely, born on June 6, 1915, weighed "10 lb & more": see letter E-33.

2. The mistake was evidently on the envelope, which has not survived. The letter itself (E-33) began, as usual, "My dear Rutherford."

3. See Note 6 of letter E-33.

4. The Coolidge X-ray tube, and its advantages over the gas discharge X-ray tube, were discussed in Note 3 of letter R-32 above, while the specific problem of the dependence of the current flowing across the tube on the temperature of the filament was discussed in Note 7 of letter E-33 (Eve's experiment with a carbon filament lamp.) Rutherford's conclusion that "the current will reach a maximum independently of the temperature of the wire" was mistaken. In fact, the tube current (and hence, the intensity of the X-radiation emitted, which is proportional to the tube current) depends on both the temperature of "the wire," i.e. the filament, and the voltage applied between the filament and the anode (target). For a given filament temperature (which, in a Coolidge tube, depends on the independent current flowing through the filament) the tube current (the flow of electrons from the filament to the anode) increases at first as the anode voltage increases but eventually reaches a maximum value (the *saturation* value) which does not change (or changes only slightly) as the anode voltage is further increased. In other words, the number of electrons reaching the anode cannot be greater than the number leaving the filament by the process of thermionic emission. However, an increase in the filament temperature results in higher thermionic emission and therefore a higher saturation current. A modern Coolidge tube is always operated with an anode voltage sufficient to attain saturation.

5. Gray: see Note 4 of letter E-33. Military movements in McGill: see Note 2 of letter E-33.

6. The *Times*' and *Daily Mail*'s "attempt to throw out Kitchener" must be viewed in the light of the worsening military situation. In World War I the small town of Ypres in

Flanders was the scene of three major battles. The first, in Oct.-Nov. 1914, resulted in the halting of a German offensive and the Germans were prevented from reaching the Channel ports. However, Ypres itself remained dominated on three sides by German-occupied heights. The second Battle of Ypres, in April-May 1915, forced the Allies to retreat. This was the battle in which the German forces used poison gases for the first time, as mentioned in letter E-32 above (see Note 5 of that letter.) The third battle, in 1917, resulted in minimal gains and appalling casualties.

On May 19, 1915, Lord Kitchener (the Secretary for War) made a statement in the House of Lords in which he deprecated the German gas attacks at Ypres and called for 300,000 recruits to form new armies. Two days later the London *Times* carried an Editorial which stated: "Our armies in the field have notoriously been deficient in the men and high explosive shells which they need to beat the Germans ... They need reinforcements; they need shells—and shells of the right kind. Neither have been provided in adequate quantities, for the simple reason that LORD KITCHENER'S orders were given too late, plain warnings were disregarded, the nation was lulled into an utterly false security by misleading official reports; and the consequence is that hundreds and thousands of British lives have been sacrificed in an unequal contest ... We are strongly of the opinion that ... LORD KITCHENER must be relieved of the business of supplying our troops at the front and at home with munitions and other necessities of war."

On the same day as the *Times* Editorial, May 21, the *Daily Mail* carried a leading article entitled "Lord Kitchener's tragic blunder." The next day there were unusual scenes on the floor of the London Stock Exchange, in which copies of the *Daily Mail* were burnt and other newspapers, including the *Times*, were denounced. The attacks on Lord Kitchener and his policies were described as "unpatriotic" and "ill-timed." Telegrams of support were sent to Kitchener and the Prime Minister, Mr. Asquith. A letter in *The Spectator* called for support for Asquith and

Kitchener but admitted that they did not anticipate the demand for high explosive shells. In the light of subsequent developments in the War, Rutherford's comments were unjustified. In fact, in 1916 both Kitchener and Asquith were replaced by David Lloyd George.

7. Chaim Weizmann (1874-1952) was a Russian chemist who emigrated to Britain (via Berlin and Geneva) in 1904. In 1915 he was a Reader [Associate Professor] in Biochemistry at the University of Manchester. In 1910-11 he became interested in the chemistry of fermentation, since he wanted to produce isoamyl alcohol, which is a by-product of alcoholic fermentation, in large quantities as a step towards the production of synthetic rubber. In his autobiography, *Trial and Error*, (New York: Harper & Brothers, 1949), 171-75, Weizmann relates how, in August 1914, he responded to a circular from the War Office, inviting scientists to report discoveries of potential military value. Weizmann promptly offered his fermentation process and, as a result, the process was taken up by Nobel, a major manufacturer of explosives in Ayrshire, Scotland. Furthermore, Weizmann was summoned to the British Admiralty, where the head of the powder department explained that there was a serious shortage of acetone, which was an essential solvent in the manufacture of cordite; without this solvent it would be necessary to make far-reaching changes in the naval guns. For a few months Weizmann continued teaching in Manchester whilst simultaneously constructing a pilot plant in London. (In the autobiography, Weizmann dates this part of his career as the spring of 1916, but Rutherford's letter, whose date of June 1915 is beyond dispute, indicates that Weizmann's memory may have been at fault and the actual period was the spring of 1915. This would also fit the date, August 1914, stated above as Weizmann's initial response to the War Office circular.)

Weizmann goes on to relate how, after a few months, he left Manchester and began working full-time for the Admiralty, under Mr. Winston Churchill. Churchill's first words, on meeting Weizmann, were: "Well, Dr. Weizmann, we need thirty thousand tons of

acetone. Can you make it?" Weizmann replied: "So far I have succeeded in making a few hundred cubic centimeters of acetone at a time by the fermentation process. I do my work in a laboratory. I am not a technician, I am only a research chemist. But, if I were somehow able to produce a ton of acetone, I would be able to multiply that by any factor you chose. Once the bacteriology of the process is established, it is only a question of brewing...." Weizmann comments: "Thus began a task which was to tax all my energies for the next two years, and which was to have consequences which I did not then foresee." (*Trial and Error*, 173). Eventually distilleries throughout the British Isles were converted to the production of acetone, but the supply of the raw material, maize [corn], was insufficient and production was shifted to Canada and America. In Canada the process was particularly successful under the direction of Weizmann's former pupil, Herbert Speakman, who later became Professor of Biochemistry at the University of Toronto (*ibid.*, 174).

In 1917 Churchill was replaced at the Admiralty by Arthur James (later Lord) Balfour, whom Weizmann had met earlier (1906) in Manchester. Weizmann had been a life-long Zionist and his relationship with Balfour, and with Lloyd George (who became Prime Minister in 1917), paved the way to the Balfour Declaration of 1917, which in turn led to the establishment of the State of Israel in 1948, although Weizmann vigorously denied that the Declaration "was a reward given me by the Government ... for my services to England." (*ibid.*, 150.). Weizmann subsequently became the first President of Israel. It may be added that, according to his autobiography, Weizmann's relationship with Rutherford was that of colleagues who were on close, amiable terms. They clearly enjoyed friendly banter and "leg pulling" (*ibid.*, 119.)

8. I am unable to identify "the Hicksons." There was presumably a Hickson in another department of Manchester University but no one of that name is listed in the Physics Department.

9. See "Science and the War, 1914-19" in the Introduction to this article.

distribution. But limitations of
space are wholly unthinkable.

I wish the war was going better
it looks like a long hard slog.

I am not to go overseas
but remain at the Depot here in
Imperial & train a 4th, 5th & 6th
company in succession as long
as the war lasts. I shall try &
lecture, too if they will let me.

I get about £1 a day
& save it.

The children are very well.
We all send good wishes to
you & Lady Rutherford & to Sir F.F.S.
Yours ever loving
Abba

490 Mountain Avenue
Westmount
Montreal.

4.7.15.

My dear Rutherford,

Forgive me for calling
you Sir Edward, & mentioning
"The Importance of being Ernest"

I'm better in 4 weeks now & scales
10 3/4 lb., my wife is doing well
but is very tired, & the nurse left
yesterday. We have a cool
summer, quite pleasant.

I am a Captain in Genl.
pay just now & command
until I know or not when

Figure 2. First and last pages of a letter from Eve to Rutherford (E 34).

E-34 Eve to Rutherford (Figure 2)

490 Mountain Avenue
Westmount
Montreal
4.7.15

Eve opens this letter with an apology for addressing Rutherford in the previous letter (E-33) as Sir Edward, and "overlooking 'The Importance of being Ernest.'"¹ He notes that the baby is 4 weeks old and scales 10 3/4 lb.

The main subject of this short letter is Eve's role in training the McGill military contingent. He is "a Captain in Govt. pay just now & onward until I know not when." McGill has already sent two companies overseas and now Eve must "raise, equip & train the Third Universities Company for overseas." He adds that he now has to wear uniform all the time, "and 'amen' to Physics for the present." However, "what will happen on 1st October I don't know, as both the Govt. and the University may claim all my time, but for the present the extra work is congenial & the pay *very acceptable* ... I get about £1 a day and earn it." Eve predicts that he will not be sent overseas but will remain in Montreal to train companies in succession as long as the war lasts. But "I wish the war was going better, it looks like a long hard plug."

A subsidiary subject of this letter is the "interesting and important letter" that Eve's colleague Louis King is just sending off to *Nature*:² "From astronomers' data on the absorption of light from stars in interstellar space & from Rayleigh's scattering law he finds 4000 molecules of say Hydrogen(?) in interstellar space per cm³. That makes the invisible matter 100,000 times as much as the visible matter of the stars, which is certainly a curious thing. If the number of stars is limited as some astronomers hold, then space must be limited, if there is random distribution. But limitations of space are wholly unthinkable."³

E-34 Notes

1. The mistake was presumably on the envelope, which has not survived. *The Importance of Being Ernest* is an allusion to the popular

comedy by Oscar Wilde, first produced in 1899.

2. L.V. King, "The density of molecules in interstellar space," *Nature*, 95 (Aug. 26, 1915), 701-03.

3. The "limitation of space" is no longer as "unthinkable" as Eve supposes, if the "curvature" of space postulated in modern cosmology is taken into account. Modern theory also agrees with the notion that 'invisible' matter is the larger component of the universe.

E-35 Eve to Rutherford

490 Mountain Avenue
Westmount P.Q.
29.11.15

The main purpose of this short letter is to enclose the "usual draft," i.e. the half-yearly mortgage interest owed by Eve to Rutherford.

However, there is some important personal news: Eve announces that he has passed his medical and, on December 6th, "as a Major, Second in Command, [will] help Major Alan Magee raise the 148th Regt. So I may be in England about April & in France or the Balkans in the summer. It is a great wrench to leave my family, but needs must when the Kaiser drives." Eve adds that his 4th Universities company has just sailed, "a very good one."

E-36 Rutherford to Eve

17 Wilmslow Road
Withington, Manchester
December 11th., 1915

My dear Eve,

I have received your note this morning, and also the draft, the formal receipt of which I enclose.

I was very interested to hear of your decision to go in for active service. I appreciate your patriotism, but I think you have now reached that position of seniority when you could probably do better work training men than leading them in active service. If I recall rightly, I am relatively an infant compared with you. However, you are in the best posi-

tion to judge; but I would not be in a hurry to make a final decision.¹

Our term's lectures have just come to an end, and I have been exceedingly busy with my work for the B.I.R., and have had very little time to think of anything else. I have made several trips to Scotland for experimental work, and we have made some progress.²

We are expecting Eileen back from school next week. She has not yet got rid of homesickness, and is very keen to be back for her holidays.

Most of the people in my laboratory have been attested, but some of them I want to keep for my own work, including Kay, my faithful steward, who is helping me in all my experiments.³

Give my love to Joan and Dick, and please expend for me a dollar apiece in buying them a Christmas present from me. I enclose herewith a postal order for that amount. I presume the infant has not yet reached the stage of appreciating Christmas!

With kind regards to Mrs. Eve and yourself, and wishing you all a happy Christmas and a prosperous New Year.

Yours very sincerely,
E. Rutherford

R-36 Notes

1. Eve's "decision to go in for active service" refers to his letter of November 29, 1915 (letter E-35) in which he predicts that he may be in England in April [1916] and in France or the Balkans in the summer. Rutherford was right about their relative ages: Eve was born in 1862, Rutherford in 1871. Eve was therefore 52 years of age at this time.

2. The Board of Invention and Research was created in the spring of 1915 for the purpose of mobilizing and utilizing Britain's scientific and inventive talent in the war effort. Rutherford was a member of the anti-submarine committee of the Board. For further details, see the Introduction to this article, under "Science and the War, 1914-19."

3. Rutherford appears to be using the verb *attest* in the sense of *testify* or *certify*. He is say-

ing that most of the (greatly reduced) number of scientists remaining in the Manchester Department of Physics are fully qualified and no longer in the status of graduate students. As such they are entitled to work on problems of their own choosing, not necessarily related to Rutherford's special interests. However, Rutherford wants some of them, at least, to remain in the broad field of radiation physics. Of the 19 papers published in the 3 years 1916-19 by members of the Manchester Physics Department (excluding the 11 papers published by Rutherford, either alone or with a co-author), 7 can be considered as falling within Rutherford's special area of interest while 12 are outside that area, although not necessarily totally removed from it: for example, optical spectroscopy is related to the structure of atoms and molecules. (See the Bibliography in J.B. Birks [ed.], *Rutherford in Manchester* (1962); also Table II in the Introduction to Part III of this article.)

E-36 Eve to Rutherford

148th Overseas Battalion
24 May 1916

Eve opens this short letter by thanking Rutherford for his "kind & thoughtful letter" which presumably (since the letter has not survived) questioned whether Eve can still afford the half-yearly mortgage interest payments now that he is a full-time army officer. Eve, however, assures Rutherford that "at present our financial position is sound & we can pay the interest all right." However, there follows a list of other problems: "We have been trying to sell our house or our lot, but there are no bidders, and I do not suppose that there will be for 2 or 3 years. Also we could not let our house furnished or unfurnished." In addition, the Eves cannot get a cook or a general [servant] and the governess has sprained her ankle. In the circumstances the Eves have decided to shut up their house: his wife and children will go (for a month at least) to Mempremagog, to a "charming farmhouse 6 miles from Magog, at Mrs. Shuttlemouth's," while the 148th Battalion will go to Valcartier Camp for a few weeks before going to England.¹ "I expect to be in England in August, but that is guessing."



My Dear Eve... The Letters of Ernest Rutherford to Arthur Stewart Eve

Figure 3. Eve at Whitley Camp for Canadian soldiers, 1917. (Courtesy of Mrs C. Grinling.)

E-36 Notes

1. *Magog* is a small town in the Eastern Townships region of Quebec, about 120 km east of Montreal. It is located on the northern tip of Lake Memphremagog. *Valcartier* was, and is, a Canadian Armed Forces base about 30 km west of Quebec City.

E-37 Eve to Lady Rutherford

180 Woodstock Road
Oxford
25.10.16

This letter, addressed to Lady Rutherford, was written five months after E-36. As Eve had predicted in that letter, the 148th Battalion was sent to England during the summer or early autumn of 1916. Mrs. Elizabeth [Betty] Eve joined her husband in England, presumably after his arrival [this is unclear], but it seems that Lady Rutherford had invited Mrs. Eve and her children to become house-guests in Manchester even before Eve himself received his overseas posting. In this letter Eve thanks Lady Rutherford for "your kind invitation for Betty to stay with you to meet me. But neither port, boat or date were known to us, and on landing we were rapidly moved to Witley and thence to Bramshall Camp.¹ Then the whole battalion was ordered six days leave in which I now revel. On return to camp we start seriously at our English training and we are of course absolutely in the dark as to where we move and when we go we hope to go to France as a unit, & not broken up for reinforcements."

The letter then states that his wife has taken a furnished house in Oxford and that both children are at school in that city,² "so that they are all comfortably settled for the winter, & probably for the spring."

Eve states that H.L. Cooke is coming over at Bragg's suggestion for scientific work of a military type.³

Apart from the usual salutations, the letter ends as follows: "The life suits me well & is full of interest, but I am ready to turn into a professor again when the Kaiser gets tired, a lengthy process."

E-37 Notes

1. *Witley* is a small town in Surrey, in the south of England. However, it is probable that Eve's spelling was in error and he meant *Whitley*. There are actually three Whitley's in England but the most likely candidate is the one near Liverpool, assuming this was the port of arrival. This would make sense as a staging point for Bramshall, about 50 km north of Birmingham.

2. The Eves had *three* children, but the youngest, Cicely, was only 16 months old at this time.

3. Hereward Lester Cooke was a graduate in physics at McGill and subsequently a demonstrator in Physics. In 1903 he was awarded an 1851 Exhibition Scholarship which enabled him to spend three years as a graduate student at Cambridge. The "scientific work of a military type" was sound ranging in France, i.e. the location of enemy heavy guns by means of a number of microphones distributed in a fan-shaped area. The responses of the microphones to the sound of the gun were recorded on a moving film and time differences in the arrival of the sound enabled the gun position to be fixed within a few feet. The technical head of the sound ranging team was Major W.L. Bragg, i.e. Bragg Junior, and the team included several scientists from Manchester such as Darwin and Andrade, as well as Cooke from Canada. (See Eve, *Rutherford*, 250-1.) Cooke later became a Professor of Physics at Princeton.

E-38 Eve to Rutherford

B.I.R. [Board of Invention and Research]
Parkeston Quay
9.9.17

This letter was written almost 11 months after Eve's previous letter (E-37). The absence of any explanation for the gap indicates that there were probably intervening letters, since lost.

Eve states that he has been at Parkeston for about two weeks, but "You & Bragg have covered so much of the available ground, that I am coming in rather late with my little spade,

and the next steps are not easy to find. I am reading and picking up all I can ... In addition to making various experiments I am going to put together the B.I.R. reports so that anyone wanting to know previous work, successes & failures, may be able to get it quickly with references. This should save a good lot of trouble, and will also make me acquainted with the present state of affairs. The main problem seems to be to hear the faint hum of distant engines above all the strong racket of your own ship in motion."¹

Eve follows with a statement of his own predicament: "I am not yet quite clear if I was right to give up military work for the B.I.R. work. There seemed no prospect of my going to France, as they only want subalterns, and I am over age for that, and there would not have been enough income for my family. Officers who have not been to France are not thought much of for training or teaching so I was not keen on continuing at that work indefinitely. After all the S.M. [submarine] problem is the key to the whole position."²

The letter also contains some personal business: "My wife is now family paymaster and was under the impression that interest to you 62⁵⁰ was paid yearly and not half yearly. We know that you were paid June 1916 and June 1917 but I cannot find that you were paid in December 1917 Please look this up, and I will send you a cheque without delay & with my apologies." Eve adds that his family is settling down in Oxford, "where schools are good and air raids come not."

E-38 Notes

1. Shortly before this letter was written Major Eve had been appointed Director of the Admiralty Experimental Station at Harwich (on the east coast of England), in succession to Sir W.H. Bragg (*Bragg Senior*) who was now Scientific Advisor to the Admiralty. (See also "Science and the War, 1914-19" in the Introduction to this article.)

2. A *subaltern* is an army officer of junior rank, i.e. below the rank of captain. At the time of this letter Eve was almost 55 years of age and had reached the rank of colonel. There is certainly a note of frustration in Eve's

complaint that he is considered too old for active service, but he must have known this to be the case from the beginning of the war. It seems that, on the outbreak of war or soon afterwards, Eve wrote to the Marlborough College Battalion of the Officers' Training Corps in England, enclosing a letter for the War Office. Eve had taught at Marlborough College before coming to McGill in 1903, and had commanded the Marlborough Cadets Corps. The O.T.C. Commanding Officer, A.H. Wall, replied on September 10, 1914: "There is not the slightest chance of your being called upon except perhaps to assist to train recruits. The old members of the O.T.C. have come forward in their hundreds and thousands and there are not enough places for them to fill. No master officers [i.e. teachers who were officers in the O.T.C.] have been called out though all have volunteered ... Personally I think that the Germans will get all they want in a few days—our strategy has been hard to follow but it is going to succeed." (Eve Correspondence Collection in McGill University Archives.)

E-39 Eve to Rutherford

G.W. [Great Western] Hotel
Paddington
4.4.19.

This letter, the last in the present series, was written almost 19 months after the previous letter (E-38) and 5 months after the Armistice in November 1918. There were probably intervening letters that have not survived.

The letter opens with felicitations to Rutherford on his appointment to the Cavendish Chair of Physics at Cambridge University: "Accept my ardent congratulations on your appointment to so illustrious a Chair! In this case both Man and Chair can be congratulated without stint, and each brings fame and a fair future to the other."¹

Eve relates that, the previous night, he attended "a great McGill dinner in honour of Sir A. Geddes as Principal."² The chief speakers were Borden,³ Milner,⁴ Bonar Law⁵ and Geddes and "the room was full of generals

(e.g. Turner, Burkett) & colonels (e.g. Adams,⁶ Tory,⁷ Adami,⁸ etc.)”

Eve states that he has seen Smithells but “found pension fund lacking at Leeds, so I said that they had better look elsewhere, as far as I was concerned, but it is very hard to know whom to recommend.”⁹

Eve indicates that “we shall get away at the end of this month”—presumably back to Canada—but “it is very puzzling to know whether Canada or England is the better for us as a whole.” He adds that he expects to see McGill “go ahead with rather a swoop.” He adds that he himself feels good for hard work and teaching and organisation, but “I fear for originality in research work as I get nearer to GO. Even young men seem rather sterile for ideas, just at present.”¹⁰

The letter ends on a peaceful note.: “I am a man of leisure for the first time since the war began, and I am browsing a book, & getting up to date as far as possible.”

E-39 Notes

1. The Cavendish Chair of Physics at Cambridge University was (and is) one of the most prestigious appointments in the world of science. The Chair was founded in 1871, when the Cavendish family endowed the Cavendish Laboratory as a memorial to Henry Cavendish (1731-1810), the physicist/ chemist who ascertained that water is a compound of two gases. The Cavendish Professor is also the Director of the Laboratory. The vacancy occurred through the retirement of Sir Joseph J. Thomson, Rutherford’s mentor who had held the post since 1884. Previous occupants were James Clerk-Maxwell (1871-79), who supervised the building of the laboratories, and Lord Rayleigh (John William Strutt, 1879-84). Rutherford remained at the Cavendish Laboratory until his death in 1937.

2. Sir Auckland Geddes was a Professor of Anatomy at McGill when the war began in 1914. He immediately resigned, joined the Army and served in France. In 1916 he was recalled to the War Office, appointed Director of Recruiting and subsequently Minister of National Service. In April 1919 he was appointed Principal of McGill in succession to

Sir William Peterson, who had held the post since 1895. However, Geddes never actually carried out his duties as Principal. In May 1919 the President of the Board of Trade in Britain, Sir Albert Stanley, resigned for reasons of ill-health and Geddes was asked to take charge of the department on a temporary basis. McGill agreed to postpone Geddes’ appointment for 12 months, until the autumn of 1920, and meanwhile Frank Dawson Adams, Dean of the Faculty of Applied Science, served as Acting Principal (see Note 8 below.) However, in 1920 Geddes was appointed British Ambassador to the United States and resigned the Principalship.

3. Sir Robert Laird Borden was Prime Minister of Canada from 1911 to 1920. He represented Canada in the Imperial War Cabinet (1917) and in the Imperial War Conference (1918). Borden received an Honorary LL.D. from McGill in 1913.

4. The *Milner* mentioned by Eve was probably Sir Alfred Milner, the Secretary of State for War since 1918 and a Member of the War Cabinet, 1916-18. He had no direct link with McGill University.

5. Andrew Bonar Law was Leader of the House of Commons (1916-21) and a member of the War Cabinet (1916-19) at the time of the dinner. He had previously held the post of Chancellor of the Exchequer, 1916-18 and would later (1922-23) serve as British Prime Minister. Bonar Law had no direct link with McGill University.

6. Lieut.-Colonel Frank Dawson Adams was Deputy Director of Educational Services of the Canadian Forces Overseas (the Khaki University of Canada), 1918-19. He was Dean of Applied Science and Vice-Principal of McGill, 1920-24, and (as stated in Note 3 above) served as Acting Principal in 1919-20. He was also Professor of Geology at McGill and had collaborated with Eve in early investigations on radioactivity (see Note 3 of letter R-3, also letter E-2.)

7. Colonel Henry Marshall Tory was Director of Educational Services of the Canadian Forces Overseas (the Khaki University of Canada), 1917-19. He was Professor of Mathematics at McGill, 1897-1908 and then became Principal

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of the new University of Alberta at Edmonton, a position he maintained throughout the war (see letter E-3).

8. John George Adami was a Colonel in the Canadian Army Medical Corps. He was Professor of Pathology and Bacteriology at McGill, 1892-1919. In 1919 he published *The Story of the Canadian Army Medical Corps*. (See also Note 4 of letter R-19.)

9. Professor Arthur Smithells was an influential member of the Leeds University Council (see Note 2 of letter R-33 above). An appointment to the Leeds Chair of Physics was, in fact, made soon after this letter: see Note 3 of letter R-33.

10. Eve was right in stating that scientists who had been away from science (by which he meant "pure" science as distinct from science applied to the solution of military problems) were devoid of new ideas. That was only natural. However, this did not apply to Rutherford, who had continued his work on radioactivity, albeit at a much reduced pace, throughout the war years and was ready to make a giant leap forward with artificial radioactivity, prediction of the neutron and other advances: see Note 4 of letter R-37 below.

R-37 Rutherford to Eve (Figure 4)*

17 Wilmslow Road
Withington, Manchester
April 13/19 [1919]

My dear Eve,

I appreciate your very kind letter of congratulations and good wishes over the Cavendish Post & it will hearten me up to tackle the job with vigour.¹ I found it rather difficult to make a decision but hope I have done the right thing in the interests of Physics & secondarily of myself. I shall remain here till the end of the session but hope to take up residence in the [...]** to survey the land before the beginning of term. We have or rather my wife and Eileen have already been house hunting but it is not an easy job to get anything suitable except at extravagant prices. We are considering at the moment Routh's [?] old house—Newnham Cottage but it will be rather expensive to get it into decent shape.²

I was interested to see you have got Auckland Geddes as Principal of McGill.³ His price is high but I suppose it is regarded as a dividend in the capital he is to take in. It certainly seems an appointment that will give McGill a jump in the public eye both here & in Canada.

I suppose we all tend to go slow in ideas as we yet older & our work is then to see the younger ones are given a free hand to develop. I quite agree that sterility of ideas is in general an aftermath of war conditions but it will probably soon pass.⁴

We go for a week in the country nearly this week for a little change which I need badly.

With kind regards to Mrs. Eve & Dick & Joan.

Yours sincerely,
E. Rutherford

* This letter is written by hand and is difficult to decipher.

** Illegible word

R-37 Notes

1. See Note 1 of letter E-39.

2. The Rutherfords did, in fact, purchase Newnham Cottage on Queen's Road and lived there until Rutherford's death in 1937. I am unable to identify Routh.

3. See Note 2 of letter E-39.

4. Rutherford was right in saying that the sterility of ideas "will soon pass." This was certainly true in the Cavendish Laboratory, which soon became a hive of activity under Rutherford's direction. Indeed, in his own case, there was no period in which he was devoid of ideas. On the contrary, throughout the war Rutherford devoted whatever time could be spared from his specifically military investigations to experiments on the interaction of fast-moving α -particles with the nuclei of light atoms such as hydrogen, oxygen and nitrogen. This work was carried out alone, with the help only the laboratory steward William Kay, and led to the first evidence of artificial disintegration of the atom. The results were not published until 1919, when

April 13/19

My dear Eve

I appreciate your very kind letter of congratulation & good wishes on the Cavendish Post. It will certainly set me up to tackle the job with vigour. I found it rather difficult to make a decision but I hope I have done the right thing in the interests of Physics & secondary of myself. I shall remain here till the end of the session but hope to take up residence in the house to survey the land before the beginning of term. We have a rather nice wife & Eileen have already been house-hunting but it is not an easy job to get anything suitable

except at extravagant prices. We are considering at the moment Rutherford's old house - Newnham College - but it will be rather expensive to get it in into decent shape.

I was interested to see you have got Auckland felled as Principal of Welfill. His price is high but I suppose it is regarded as a dividend on the capital he is to make in.

It certainly seems an appointment that will give Welfill a good in the public eye better there & in Canada.

I suppose we all tend to go slow in ideas as we get older & our work is then to see the younger ones are given a free hand to do what I quite agree that Sturtevant's ideas is in general an aftermath of our conditions but it will probably soon pass.

We go for a week in the country nearly this week for a little change which I need badly.

I have had my wife & Eileen & I have been to see the house

Figure 4. Letter from Rutherford to Eve (R 37)

four consecutive papers appeared: E. Rutherford, "Collision of alpha particles with light atoms," *Phil. Mag.*, Ser. 6, 37 (1919), 537-61, 562-71, 571-80 and 581-87.

Postscript

The final letter in this article, and indeed the series of articles, was written by Rutherford in April 1919, just before he left Manchester to take up a new post in the Cavendish Laboratory. This is an appropriate endpoint for a correspondence that spans the whole of Rutherford's Manchester career, from 1907 to 1919. However, the collection which provides the theme of this series includes two further letters from Rutherford to Eve which have not been published. Letters R-38 and R-39 are dated 29 December 1920 and 4 May 1926 respectively, but unfortunately there are no linking letters from Eve, in spite of the fact that the Rutherford Correspondence Catalog lists nine letters from Eve after E-39, the last contribution from Eve included in this article. Letters R-38 and R-39 cannot therefore be considered as part of a coherent correspondence.

In letter R-38 Rutherford comments on a number of physicists who have presumably applied for a post in the McGill Physics Department, now directed by Eve since Barnes resigned in 1919. Rutherford adds: "I keep going pretty well and enjoy life. My experiments go slowly but I hope to straighten things out gradually."

In the second post-1919 letter, R-39, Rutherford acknowledges the receipt of a 'magnum opus' written by Louis King but "after a hasty glance through it, I handed it on to R.H. Fowler [Rutherford's son-in-law]."

There is, however, a third post-1919 letter which is not included in the 'recently discovered' group, since it has long been part of the McGill University Archives and, indeed, is listed in the Rutherford Correspondence Catalog. This letter was sent by Rutherford to Eve in May 1933 after Eve had informed him of the untimely death of his sister-in-law Harriet Pitcher, née Brooks. (Eve's letter has not survived.) Since Harriet Brooks was an early collaborator of Rutherford and features

a number of times in the present series of articles, Rutherford's letter is reproduced in full below. As indicated in the letter, Rutherford contributed an obituary of Brooks in *Nature* shortly after writing the letter.¹ Very recently a full-length biography of Harriet Brooks has been published.²

R-40 Rutherford to Eve

Newham Cottage
Queen's Road
Cambridge
May 6, 1933

My Dear Eve

It was very good of you to write me news about Harriet Pitcher. I had not heard of her illness and a few days before your letter, Mary had spoken of writing to her. It is a very sad business. The last time she came to see us about two years ago, one could not but recognize the obvious loss of vitality but this was quite understandable after her family calamities.³ I have the happiest remembrances of our friendship in the old days at McGill and the renewal of these during our occasional visits to Montreal. She was a woman of great personal charm as well as of marked intellectual interests. I am afraid her domestic life was not without serious trials which she bore with astonishing fortitude. My wife and I held her in great affection and her premature death is a grievous blow to us. I shall see whether I can compose a short statement of her scientific contributions for 'Nature' in the next few weeks.⁴

I am enclosing a note for Pitcher of whose address I am uncertain. I hope we shall have an opportunity of seeing Pitcher again. Fowler has just returned from California and the children are all well and flourishing. I am sure you know of our deep sympathy with you and Elizabeth in this great breaking of family ties. With best wishes to you all.

Yours ever,
Rutherford

Postscript and R-40 Notes

1. Ernest Rutherford, "Harriet Brooks (Mrs.

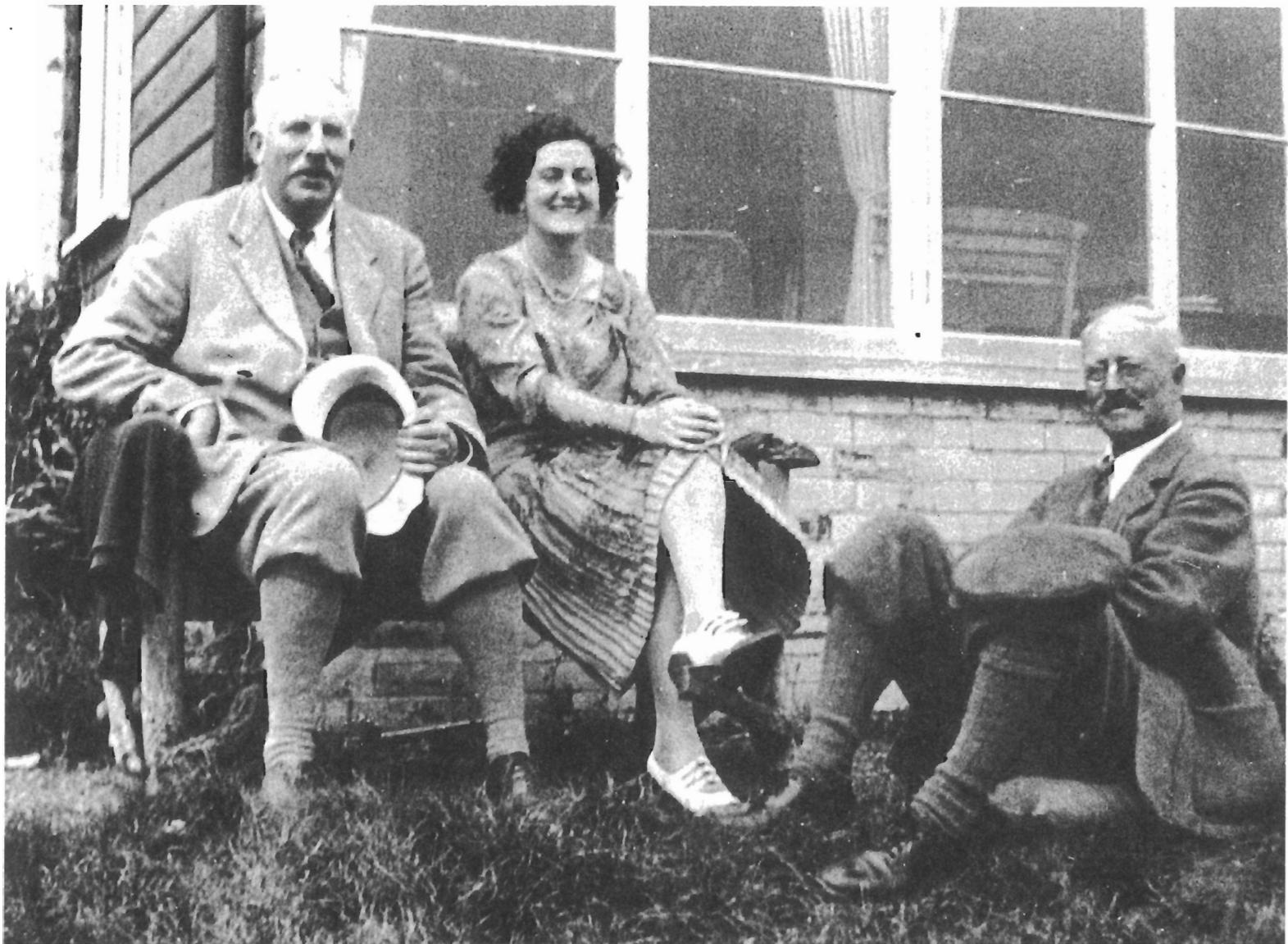


Figure 5. Rutherford, and Eve, ca 1927. The identity of the lady is unknown. (Courtesy of Mrs C. Grinling and Peter Fowler.)

Frank Pitcher)," *Nature*, 131 (17 June 1933), 865.

2. Marelene F. Rayner-Canham and Geoffrey W. Rayner-Canham, *Harriet Brooks. Pioneer Nuclear Scientist* (McGill-Queen's University Press, 1992).

3. Two of Harriet Pitcher's three children died in their teens.

4. See note 1 above.

Acknowledgements

I am grateful to Prof. Ferdinand Terroux, the first Curator of the Rutherford Museum at McGill University, for drawing my attention to the existence of the letters discussed in this article; to Mr. A. E. B. Owen, Keeper of Manuscripts at Cambridge University Library, for supplying the photocopies of the letters from Eve to Rutherford; to the Syndics of Cambridge University Library for permission to quote from these letters; and to the staff of the McGill University Archives and Libraries, in particular Mrs. Phebe Chartrand, for assistance in searching for obscure facts and explanations. Finally I must thank Mrs Cicely Grinling (née Eve) and Professor Peter Fowler (grandson of Ernest Rutherford) for supplying photographs and useful information. However, they have not seen the text of this article: any mistakes and omissions are my responsibility alone.

A Samaritan Manuscript in McGill University

by Reinhard Pummer

The Samaritans are a religio-ethnic group that developed out of Judaism in the last centuries before the turn of the era. Their sacred centre is Mount Gerizim near Nablus, ancient Shechem, and not Jerusalem. When their sanctuary on the mountain was destroyed by the Hasmonean John Hyrcanus in the second century B.C.E., Judaism and Samaritanism separated and pursued their own ways. Today the Samaritans number 550 individuals.

The only part of the Bible that is recognized by the Samaritans is the Pentateuch or the Five Books of Moses. Because it is central to their faith it is copied in every generation many times. Unfortunately, numerous manuscripts have perished; others were sold by the Samaritans to European scholars and collectors. The proceeds from the sales were used to improve their often bleak economic situation.

The McGill Samaritan Pentateuch was bought by the University in 1921. It was written in 1911 and remained in the possession of the Samaritans until 1913 when it was sold for the first time to outsiders.

The manuscript is a very well written and preserved copy of the whole Pentateuch. It is interesting not only with regard to the Samaritan version of the text, but also in palaeographical and codicological respects. Moreover, the information contained in the colophon and an Arabic note at the end of the volume adds to our knowledge of Samaritan scribes and the history of Samaritan manuscripts.

Les Samaritains forment une secte ethno-religieuse issue du judaïsme dans les derniers siècles avant le tournant de notre ère. Leur lieu saint est le mont Garizim près de Nablus, l'ancien Sichem, et non pas Jérusalem. Lorsque leur temple du mont Garizim fut détruit par Jean Hyrcan, grand prêtre asmonéen au II^e siècle av. J.-C., Judéens et Samaritains se scindèrent. Les Samaritains ne sont plus aujourd'hui que cinq cent cinquante environ.

Le seul livre de la bible reconnu par les Samaritains est le Pentateuque ou les cinq livres de Moïse. Étant donné qu'il est au cœur de leur foi, il est recopié maintes fois par chaque génération. Malheureusement, de nombreux manuscrits ont disparus; d'autres ont été vendus par les Samaritains à des érudits et des collectionneurs européens. Les produits de ces ventes servaient à améliorer leur situation économique souvent précaire.

Le Pentateuque samaritain de McGill a été acheté par l'Université en 1921. Il a été écrit en 1911 et est resté en la possession des Samaritains jusqu'en 1913 lorsqu'il a été vendu pour la première fois à des gens de l'extérieur.

Le manuscrit est une copie admirablement bien écrite et préservée de l'ancien Pentateuque. Il est intéressant non seulement sous l'angle de la version samaritaine du texte, mais également d'un point de vue paléographique et codicologique. Par ailleurs, les renseignements que contient le colophon et une note en arabe à la fin du volume renouvellent nos connaissances sur les scribes samaritains et sur l'histoire des manuscrits samaritains.

* * * * *

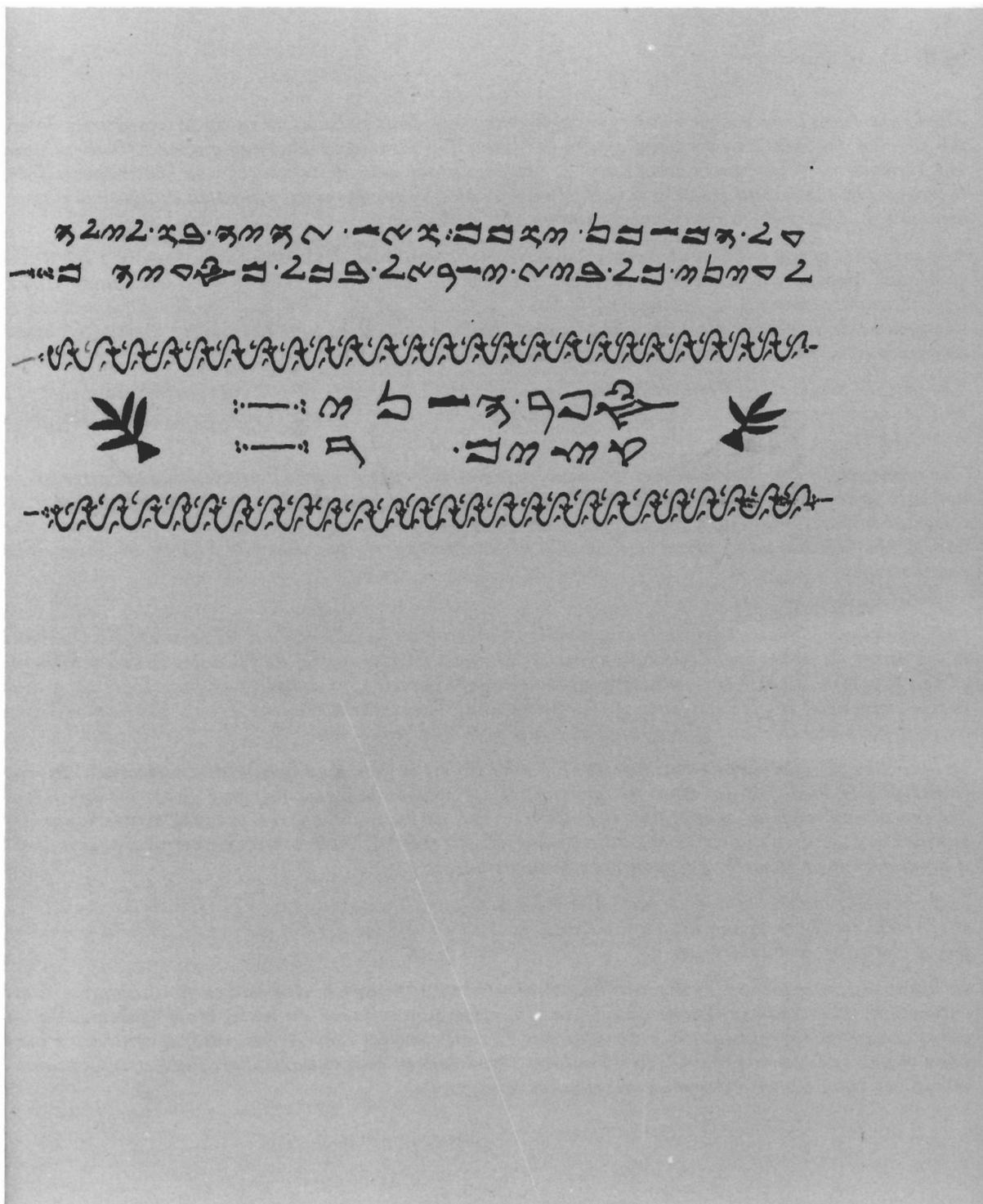


Figure 1. The end of the book of Exodus (40:38). Between the decorative lines: "Second book. 200 sections (*qisem*)."

A Samaritan Manuscript

The Samaritans are well known from several accounts in the New Testament, especially the parable of the Good Samaritan in Luke 10:25-37. What is not as widely known is the fact that there are still Samaritans alive in our time. They are a very small religio-ethnic community who live in two cities in Israel, Nablus and Holon. Nablus, ancient Shechem, is located by their holy mountain, Mount Gerizim, which has always been the focus of their faith. Holon is located south of Tel Aviv where Samaritans have settled in modern times. They number approximately 550 individuals in all; half of them live in Nablus, half in Holon.

The matrix from which Samaritanism developed is Judaism. The gradual development of a group of Yahweh worshipers in Samaria who did not accept Jerusalem as the centre, ended in a final break with Judaism in the late 2nd cent. B.C.E. when the Hasmonean priest-king John Hyrcanus (134-104 B.C.E.) destroyed their sanctuary on Mt. Gerizim as the Jewish historian Flavius Josephus (1st cent. C.E.) reports.¹ From then on Samaritans and Jews went their separate ways.

In Graeco-Roman times the Samaritans may have numbered as many as two hundred thousand, the majority of them living in Palestine and others in the diaspora in Egypt, Greece, Rome and other cities and countries. However, persecutions by Byzantine and Muslim rulers reduced their numbers drastically, until there were only 130 to 150 individuals left in the 19th cent. Many observers predicted their imminent disappearance. But the opposite has happened. A number of Samaritan men married Jewish women who agreed to live as Samaritans, and the size of the community gradually rose and is still on the increase.

The Bible of the Samaritans consists only of the Pentateuch or the Five Books of Moses or the Torah. While the Samaritans and the Jewish Pentateuch are essentially the same they do differ from each other. However, only a small number of passages reflect specific Samaritan beliefs; the majority of the differ-

ences concern textual matters that have no bearing on the contents.

In their synagogue in Nablus the Samaritans preserve a Torah scroll that, according to their beliefs, was written by Abisha, the great grandson of Aaron, in the thirteenth year of the entry of the Israelites into the Holy Land. However, modern research has shown that the oldest biblical manuscripts of the Samaritans do not antedate the 10th/11th centuries of the Christian era.

Their great veneration for the Bible has prompted the Samaritans to copy its text in each generation numerous times, either in the form of a scroll or in that of a codex. Unfortunately, many of the old manuscripts are no longer extant. Those that are available for study are of interest not only under the aspect of the biblical text, but also because they contain data that help to reconstruct Samaritan history. For considerable spans of time our information about the Samaritans is very incomplete. It is therefore necessary to draw on all available sources that can shed light on the social and religious development of the community. Pentateuch manuscripts contain colophons, deeds of sale and frequently additional notes that allow us to learn a great amount about Samaritan scribal traditions, the history and fortunes or, more often misfortunes, of individuals and families, and sometimes even about the economic situation of the group.

For many centuries the Samaritans had to endure hardships at the hands of their overlords. As a consequence they often lived under extremely destitute conditions. One way in which they tried to alleviate their poverty was to sell manuscripts, ancient as well as modern, to Europeans and eventually to North Americans. A small number of such manuscripts have found their way into Canadian libraries.

The Royal Ontario Museum in Toronto holds three from the 18th cent. and the Thomas Fisher Rare Book Library of the University of Toronto possesses one from 1911. The manuscripts in the Royal Ontario Museum contain the text of the pentateuchal books of Leviticus, Numbers, and

A Samaritan Manuscript

Deuteronomy respectively; the manuscript in the University of Toronto is a scroll of the whole Samaritan Pentateuch. They were acquired in Nablus in 1910 and 1912.² An additional manuscript, so far not listed in any of the surveys of manuscripts in European and North American libraries,³ is the property of McGill University Library.⁴ It is a complete Pentateuch codex in excellent condition. A handwritten note in pencil on the rear paste-down records that the manuscript was "bought from the Samaritan High Priest in 1913 in London." Neither the name of the seller nor that of the buyer is given.

In 1897, Isaac b. Salamah⁵ went to France and England to secure help for the impoverished community. He was only moderately successful in his fund raising, but he found a keen interest in Samaritan manuscripts among European scholars. Thus, in 1903, three priests were sent to London to offer manuscripts for sale;⁶ besides Isaac b. Amram b. Salamah, Ozzi b. Jacob and Abisha b. Pinhas were chosen.⁷ A fourth member of the delegation was Jacob esh-Shelabi who had been to London in 1854/55 and has left a description of the plight of the Samaritans in the 19th cent.⁸ Among the buyers in 1903 were M. Gaster, D. S. Sassoon, the British Museum, and others.⁹

According to the handwritten note in the McGill manuscript, the year in which it was bought was 1913. Although no delegation went to Europe in that year, some elders of the community do remember that Isaac b. Amram undertook a journey on his own to London and Paris in 1913.¹⁰ The same note further states that the manuscript was bought "from the Samaritan High Priest." Neither Isaac b. Amram nor the other two priests who were in London were high priests at the time of their visits. However, Isaac introduced himself as the most senior priest and caused some who met him to call him "High Priest." This led to serious tensions between him and Jacob b. Aaron, who in fact was the high priest at the time.¹¹

In a letter to the eminent English orientalist and scholar of Samaritanism, A. E. Cowley (1861-1931), written after Isaac's return from his first journey to Europe, Jacob b. Aaron bit-

terly complains about his cousin. According to Jacob, Isaac wrote in newspapers that he was the Samaritan high priest, that he had authored many works, was unique in his generation in his wisdom and knowledge, and that no one like him could be found among the Samaritans. But, says Jacob, everyone in the community knows that these claims are all lies and that, in fact, Isaac is notorious for his mendacity.¹² On November 28, 1902, Jacob b. Aaron wrote another letter about Isaac, this time in French; it was directed to M. Benveniste, director of the Boys School in Jerusalem. Again, Jacob protested against Isaac's claim to be the Samaritan high priest.¹³ Only in 1916 did Isaac b. Amram finally take over the office.¹⁴

The second time that the McGill manuscript was offered for sale was by Maggs Bros. of London in their catalogue no. 404, *Illuminated Manuscripts and Miniatures, European and Oriental*, in 1921. McGill University bought it on September 15, 1921, for £21, the price listed in the catalogue.¹⁵ The latter described it as a "Samaritan manuscript of excessive rarity, written on Syrian white paper, in black, in the original ancient Samaritan characters. Small folio, original Samaritan binding of leather with flap. XIXth Century."¹⁶ The contents of the handwritten note are also repeated in the catalogue's description.

The size of the pages of the manuscript is 24.5 × 37.0 cm; the widths of the margins are 7.5 cm at the top, 5.0 cm at the bottom, 6.0 – 6.5 on the outer side, and 2.3 cm by the spine. It consists of 23 quires of 10 leaves each,¹⁷ except for the last quire which has only 4 plus 2 leaves. The whole manuscript consists therefore of 226 folios. The green threads with which it is sewn, are held in place by two pieces of wood on the top and bottom of the spine. The binding is an Islamic flap binding.¹⁸ There is no foliation, nor are there any catchwords.

As is usual in Samaritan manuscripts, guiding lines were impressed on the paper; horizontal lines on which to "hang" the letters, vertical lines to delineate the width of the text, to mark off the first letter of each line, and, in certain places, to mark columns. There are

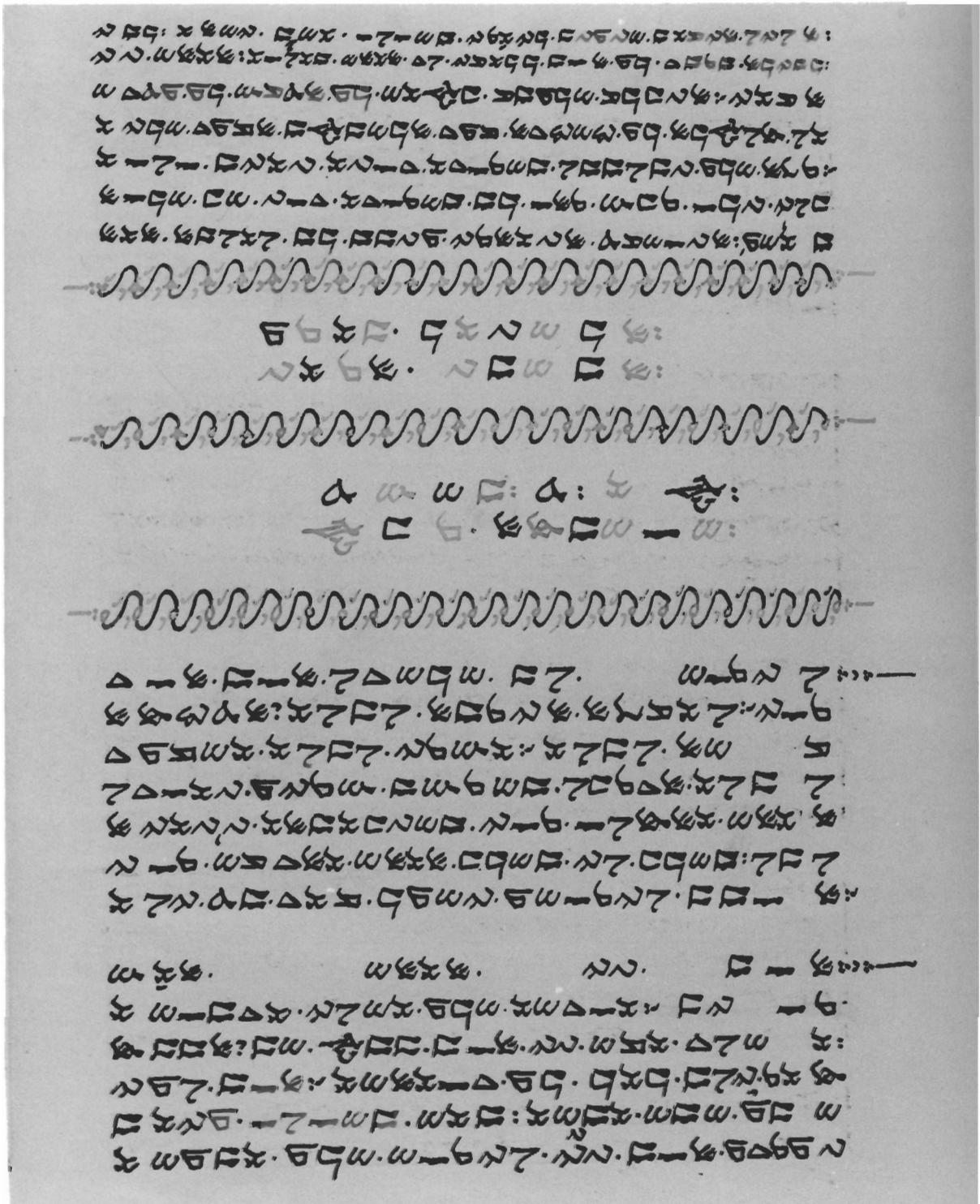


Figure 3. Deuteronomy 34:8-12. Between the first two decorative lines: "Fifth book. 160 sections (qissem)." Below the second and above the third decorative line: "A complete Torah; blessed be its giver." Bottom of the page: Colophon.

30 lines per page, without exception throughout the whole manuscript. The method used for lining was obviously that of the *mastara*, or ruling-board in Arabic. Ruling-boards were produced by threading cords "into grooves, forming ridges corresponding to the horizontal and the vertical bounding lines."¹⁹ By placing the leaves of the manuscript on the board and rubbing along the cords, impressions were left that served as lines. The technique is still used in modern times by the Samaritans of Nablus, with the ruling-boards made of cardboard.²⁰ As to the size of the letters, there are 12 to 16 letters per 10 cm; they are larger in the beginning and decrease from Gen. 20 on. The writing is majuscule throughout the whole text, including the remarks at the end of the books.

The paper is fine white paper except for a number of folios for which rougher paper was used.²¹

Corrections such as erasures and insertions of letters and words occur in several places. Very few diacritical marks were used.

The manuscript contains no *tashqil* or cryptogram.²² Its excellent state shows that it was never used for recitation or study. On the other hand, from an Arabic note at the end it becomes clear that it was not written for the purpose of selling it to non-Samaritans.²³

Folio 1r is glued to the inside front cover, i.e., we have before us a "first folio pastedown." The Samaritans developed a technique "whereby the first sheet and the last sheet of the manuscript were used as pastedowns" and served thus as doublures and end papers.²⁴

Fols. 1v – 61r contain the text of Genesis, 62v – 105v Exodus, 106v – 138v Leviticus, 139v – 189r Numbers, and 189v – 225r Deuteronomy. Fol. 225v contains a note in Arabic.²⁵ Fol. 226 is blank.

The end of the sections of the Samaritan Pentateuch, called *qissem*, is indicated by the sign ---:;<:; the sections are separated by a blank line and their number is listed after each book except for the book of Numbers: Genesis 250, Exodus 200, Leviticus 130, and Deuteronomy 160 (Figures 1, 2 and 3). They

correspond to the usual numbers. The notes on the number of the *qissem* are preceded by the number of the respective book, e.g. ספר הראשון, "the first book," after Genesis. Decorative lines are placed before and after these notes; red ink is used for the lines and the annotations after Exodus (Figure 1), Leviticus and Deuteronomy (Figure 3). There are two branch-like drawings at the end of Exodus.²⁶ After the number of *qissem* for Deuteronomy follows כרוך נותינה - תורה חמיה "a complete Torah; blessed be its giver" (Figure 3).

In numerous places words or letters are arranged in such a way that the same words or letters appear one under the other (Figure 2). This arrangement came to function as a decorative device and is used not only in the Pentateuch but in many other Samaritan manuscripts, including liturgical ones. But it is possible that once, i.e. prior to the 13th cent. C.E., it had a Massoretic function which may go back to antiquity and was later forgotten.²⁷ Exod. 15:1 – 21 (Song of the Sea), Num. 23:7²⁸ – 10; 18 – 25; 24:3 – 10 (*sic*); 15 – 25 (*sic*) (oracles of Balaam), and Deut. 32:1 – 43 (the האזינך) are written in two columns.

On fol. 225r (Figure 3), after the record of *qissem* and the above cited statement about the complete Torah, the scribe identified himself and gave the date on which he finished his work. The text, transliterated into square Hebrew characters, reads as follows:

הרה הכלול מן מכתב אהרותה קדישתה: כיום
השני פי חשע ועשרים מן שהר צפר שנת אלף
ושלש מאות וחשע ועשרים לממלכת בני הגר:-
ואני עבדה מסכינה עכר העוזיו בן הנסלח לו
יעקב בן צדקה בן יוסף דמכני דנפתה:- אורה
אח יהרה: ושלום יהרה על אדונן משה בן עמרם הנאמן:
אמן: והיא מליו שלשים ארואן כתבתי מרואה לאלה:

This is the end of the writing of the Holy Torah, on Monday, the twenty ninth of the month Šafar of the year thousand three hundred and twenty nine of the rule of the sons of Hagar.

I am the poor servant Abd Ha'Aziz b. Jacob (may he be forgiven)

b. Ṣadaqah b. Joseph of the Danfi family.

I thank Yahweh; the peace of Yahweh be on our lord Moses b. Amram, the faithful.

Amen. This is the thirtieth Torah which I have written. Thanks be to God.

The date of completion, 29 Ṣafar 1329 A.H., corresponds to March 1, 1911, which was, though, a Wednesday and not a Monday; this is not unusual since, for various reasons,²⁹ Islamic dates cannot always be precisely equated with Gregorian dates.

The scribe, Abd Ha'Aziz b. Jacob b. Ṣadaqah b. Joseph of the Danfi family, is known from several other manuscripts that he copied. As he states at the end of the colophon, the McGill manuscript was his 30th copy of the Pentateuch.³⁰ In 1331 A.H., i.e. between December 11, 1912 and November 29, 1913 C.E. he wrote his 36th Torah which is now in the John Rylands University Library of Manchester, England (Ryl Sam 35). Since he died before he could complete it, Abisha b. Pinḥas, copyist, hymn writer and high priest from 1943 to 1960 (b. 1880), finished it at the end of Rabī' I 1336 A.H.,³¹ i.e. before January 14, 1918.

Instead of signing his name as Abd Ha'Aziz b. Jacob, the same copyist sometimes simply wrote "Aziz b. Jacob." So, e.g., in the Torah manuscripts Ryl Sam 49, completed in 1315 A.H., i.e. 1897/98 C.E., and Ryl Sam 92, completed at the end of 1318 A.H., i.e. in February/March 1901 C.E. Furthermore, Abd Ha'Aziz b. Jacob is the copyist of Ryl Sam 107, finished on Thursday, 20 Rajab 1322 A.H., i.e. September 30, 1904 C.E., and that of BL Or 10814, finished on 23 Muḥarram 1328 A.H., i.e. February 4, 1910 C.E.;³² both are Pentateuch manuscripts. He also copied Leeds University Sam. 1,3.³³ Other manuscripts copied by him are now held by the Bibliothèque Nationale in Paris; they are liturgical texts.³⁴ In one of them, BN Sam. 50,³⁵ the designs are reminiscent of the two figures after the book of Exodus in the McGill Pentateuch.³⁶

Other forms of Abd Ha'Aziz b. Jacob's name are Aziz b. Jacob b. Shelabi b. Joseph

b. Murjan (Ab Sakhwah)³⁷ and Aziz b. Jacob b. Shelabi.³⁸

In the census list of Samaritan males from the year 1908, Aziz b. Jacob is listed as no. 14, born in 1294 A.H., i.e. between January 16, 1877 and January 4, 1878; in 1908 he was thus 31 years old. On the basis of MS sam N22 from the year 1335 A.H., i.e. 1916/17 C.E.,³⁹ it can be calculated that he must have died before or at the age of 42.⁴⁰ Despite his short life he was an accomplished copyist who left behind many manuscripts.

Fol. 225v contains a note in Arabic which was written by Hilmi b. Jacob Halabi. It states that Hilmi b. Jacob gave this Torah to Ghazzal, son of the late Khadr, the levitical priest, although it had not been written by himself but by his brother Aziz b. Jacob. Hilmi b. Jacob Halabi is no. 15 in the male census list of 1908; his birthdate was 1296 A.H. A number of Arabic manuscripts copied by him are in the library of the late high priest Amram b. Isaac in Nablus,⁴¹ one in the Freie Universität Berlin,⁴² and one in the Library of Congress.⁴³ The Samaritan manuscript 234 in the John Rylands University Library of Manchester contains a long colophon in Arabic where Hilmi b. Jacob, Shelabi,⁴⁴ of the Danfi family, notes that he finished the work, a chronicle, on 4 Ramaḍān 1326 A.H., i.e. September 30, 1908 C.E.⁴⁵

In the Paris MS Sam. 53 which contains prayers for the six Sabbaths preceding Pentecost,⁴⁶ Hilmi Halabi Samari noted on fol. 18r that he finished his work on 29 Dhūl-Qa'da (I) (1)314 A.H., i.e. May 1, 1897 C.E., for his brother Aziz Halabi, the scribe of the McGill Pentateuch; on fol. 52r Aziz b. Jacob b. Halabi ad-Dananfi records the completion of the work on 17 Muḥarram 1317 A.H., i.e. May 28, 1899.⁴⁷ The manuscript is thus a joint work of the two brothers.

Finally, the person who received the manuscript, Ghazal, son of the late Khadr, Levitical priest, was also a well known Samaritan copyist; the Samaritan equivalent of his name is Ṭabiah b. Pinḥas.⁴⁸ He was born in 1885, as can be calculated from the male census list of 1908, where he is no. 9; his occupation is given as "copyist."⁴⁹

The note which records the transfer is undated and does not disclose what Hilmi b. Jacob Halabi received for the manuscript. From Ghazal b. Khadr the Pentateuch must have passed to a European buyer in 1913, two years after Aziz b. Jacob b. Sadaqah had completed it. It then came into the possession of Maggs Bros. in London and, in 1921, it was acquired by McGill University.

The McGill Samaritan Pentateuch manuscript is not only exquisitely executed, but also adds to our store of information about Samaritan personalities of the late 19th and early 20th century. Moreover, it is the only complete manuscript of a codex of the Samaritan Bible in a Canadian library as far as is known at the present time. As opposed to the scroll in Toronto, the manuscript was initially not copied for the purpose of selling it to Western buyers but for members of the Samaritan community. And it remained in the possession of Samaritans until poverty forced them to part with it.

* * * * *

Notes

1. *Jewish Antiquities* 13:255-256 // *Jewish War* 1:63. Cf. also the most recent excavations on the main peak of Mt. Gerizim, I. Magen, "Mount Gerizim – A Temple City," *Qadmoniot* 91-92 (1990), 70-96 (Hebrew).
2. Cf. R. Pummer, "Samaritan Manuscripts in Toronto," *Revue de l'Université d'Ottawa* 46 (1976), 345-363.
3. It is not included in J.D. Pearson, *Oriental Manuscripts in Europe and North America: A Survey* (Bibliotheca Asiatica, 7; Zug, Switzerland: Inter Documentation Company AG, 1971), nor in J.-P. Rothschild's most useful guide to collections and catalogues entitled "Samaritan Manuscripts," in A.D. Crown, ed. *The Samaritans* (Tübingen: J.C.B. Mohr [Paul Siebeck], 1989), 771-794.
4. I am grateful to Mr. Brad Hill, formerly of Ottawa, now curator of Hebrew books and manuscripts in the British Library in London, for bringing the manuscript to my attention.
5. The spelling of Samaritan names follows that of A.D. Crown in his "An Index of Scribes, Witnesses, Owners and Others Mentioned in Samaritan Manuscripts, with a Key to the Principal Families Therein" (= "Studies in Samaritan Scribal Practices and Manuscript History: IV") in *Bulletin of the John Rylands University Library of Manchester* [BJRUL] 68 (1986), 317-370.
6. A list of manuscripts which the Samaritan delegation was to bring with them is contained in a letter of Isaac b. Amram to A. E. Cowley; the letter is now in the Bodleian Library in Oxford (MS Sam. E 19,2); the text was re printed in A. B. – *The Samaritan News* 421-422 (15.10.1986), 40
7. See A.-B. – *The Samaritan News* 148 (14.11.1975), 2.
8. E. T. Rogers, ed. *Notices of the Modern Samaritans, Illustrated by Incidents in the Life of Jacob esh-Shelaby*. London: Sampson Low and Son, 1855. On Jacob esh-Shelaby see also J. Mills, *Three Months' Residence at Nablus, and an Account of the Modern Samaritans* (London: John Murray, 1864), 182-183; J. A.

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Montgomery, *The Samaritans* (Philadelphia, 1907; repr.: New York: Ktav, 1968), 10-11, 140-141 and the photograph between pp. 140 and 141; and Y. Shavit, Y. Goldstein, H. Be'er, eds. *Personalities in Eretz-Israel 1799-1948: A Biographical Dictionary* (Tel Aviv: Am Oved, 1983), 256-257 (Hebrew) [quoted in the following as *Personalities*].

9. I want to thank Mr. Benjamim Tsedaka for providing information on the Samaritan delegation in 1903; Mr. Tsedaka, together with his brother Yefet, is director of the "Institute for Samaritan Studies" in Holon and editor of the bi-weekly periodical *A. B. – The Samaritan News*.

10. Oral information from B. Tsedaka, November 1, 1991.

11. Cf. *Personalities*, 256.

12. The letter is now in the Bodleian Library in Oxford (MS Sam. E 19,1); its text is re-printed in *A. B. – The Samaritan News* 421-422 (15.10.1986), 39-40.

13. The letter is now in the John Rylands University Library of Manchester (Ryl Sam 346, formerly Gaster 2105 A,2 [the original] and 3 [a copy]); cf. E. Robertson, *Catalogue of the Samaritan Manuscripts in the John Rylands Library of Manchester II* (Manchester: John Rylands Library, 1962), cols. 261-262.

14. Always the oldest member of the priestly family becomes high priest.

15. I am indebted to Dr. R. Virr, curator of manuscripts, McGill University, for this information.

16. The date was obviously not based on a reading of the colophon as will be seen below.

17. Quires of 5 sheets (10 leaves) are usual in the Orient, see M. Bet-Arié, *Hebrew Codicology* (Jerusalem: the Israel Academy of Sciences and Humanities, 1981), 44.

18. For a thorough description of this kind of binding, including an illustration, see A. D. Crown, "Studies in Samaritan Scribal Practices and Manuscript History: V. Samaritan Bindings: A Chronological Survey with Reference to Nag Hammadi Techniques" *BJRUL* 69 (1987), especially pp. 449 (Plate 3),

460-463, and 476.

19. Beit-Arié, *Hebrew Codicology*, 80.

20. Cf. Beit-Arié, *Hebrew Codicology* 80 and Pl. 18, the photograph of a ruling-board made by Joseph b. H̄isda. Cf. Also A. D. Crown, "Studies in Samaritan Scribal Practices and Manuscript History: II. The Rate of Writing Samaritan Manuscripts and Scribal Output" *BJRUL* 66 (1983-84), 109-110.

21. On paper in Samaritan manuscripts see A. D. Crown, "The Morphology of Paper in Samaritan Manuscripts: A Diachronic Profile," in *BJRUL* 71 (1980) 71-93; on p. 89 he points out that Samaritan scribes often mixed paper from different batches.

22. A *tashqil* gives the name of the scribe and the date of the manuscript within the text, i.e., the scribe leaves a small space between the letters that he uses to create the information, and the running text; his name and the date of the manuscript can be found by reading the isolated letters from top to bottom (see Pummer, "Samaritan Manuscripts" 349).

23. For the note see page 168.

24. See Crown, "Studies" II, p. 481.

25. See page 168.

26. Cf. Figure I. See page 168 for similar drawings in the manuscript Paris, BN Sam. 50.

27. This is A. D. Crown's conclusion in his article "Studies in Samaritan Scribal Practices and Manuscript History: III. Columnar Writing and the Samaritan Massorah" *BJRUL* 67 (1984-85); see particularly pp. 355 and 379-380.

28. מחרם instead of מארם.

29. See A. Grohman, *Arabische Chronologie* (Handbuch der Orientalistik. Erste Abteilung: Der Nahe und der Mittlere Osten. Ergänzungsband II. Erster Halbband. Leiden/Köln: E.J. Brill, 1966), 39. Cf. also S. Powels, *Der Kalender der Samaritaner anhand des Kitāb hisāb as-sinān und anderer Handschriften* (Studia Samaritana, 3; Berlin – New York: Walter de Gruyter, 1977), 38-42, and

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M. Baillet, "Samaritans" (*Supplément au Dictionnaire de la Bible*, Fasc. 63-64A [1990]), 894.

30. In 1328 A.H., i.e. 1910 C.E., he copied, this time in cursive Samaritan script, the Samaritan Targum, i.e. the Aramaic translation of the Pentateuch, (MS Sassoon 390); see D. S. Sassoon, *Obel Dawid. Descriptive Catalogue of the Hebrew and Samaritan Manuscripts in the Sassoon Library, London* (London: Oxford University Press, 1932), 584-585.

31. See Robertson, *Catalogue II*, col. 10.

32. Cf. Tafel VI,1 in Z. Shunnar, *Katalog Samaritanischer Handschriften* Vol. 1 (Berlin: Richard Seitz, 1974).

33. See A. D. Crown, "Studies" IV, no. 237; the dates of the Leeds manuscripts are unknown to me.

34. In some cases only a section was copied by him, not the complete manuscript.

35. It is dated 23 Jumādā I [1]312, i.e. November 22, 1894.

36. For illustrations see Plates XXX and XXXI in J.-P. Rothschild, *Catalogue des manuscrits samaritains* (Paris: Bibliothèque Nationale, 1985). The other manuscripts are: Sam. 61 (15 Rabi^c 'I?] [1] 316 A.H., i.e. August 3, 1898 C.E.), and part of Sam. 53 (17 Muharram 1317 A.H., i.e. May 28, 1899 C.E.). Rothschild lists in his "Index des copistes et des rédacteurs d'actes de vente" on p. 159 also "Sam. 55, f. 52: 1317 H./1899," but this seems to be a misprint.

37. MSS sam 1 and sam 3 in the Oriental Institute of the Academy of Sciences of the USSR in Leningrad/St. Petersburg; for a description see Shunnar, *Katalog*, 161-162 (sam 1) and p. 160 (sam 3); the dates of completion of both manuscripts is 1896.

38. BL Or 10723 (see Shunnar, *Katalog*, 69-70 and Tafel XIII,4) and possibly MS sam N22 in the house of the high priest in Nablus (Shunnar, *Katalog*, 116; the title AL-KĀHIN must be an error). Whereas the former is not dated, the latter is dated 1335 A.H., i.e. 1916/17 C.E.

39. See above n. 38. If this particular manuscript was not copied by him, Ryl Sam 35 has to be used to calculate Aziz b. Jacob's death. The cryptogram of this his 36th Torah is dated 1331 A.H. If he died shortly after finishing Ryl Sam 35, he may even have died in his late thirties. The cryptogram extends from fol. 250r (Deut. 16:18) to fol. 261r (Deut. 27:8). Aziz b. Jacob's hand ends at the foot of fol. 264v; from 265r to the end the hand is that of Abisha b. Pinhas. Abisha may not have completed what was left until some time after Aziz b. Jacob's death, i.e. Aziz b. Jacob may have been 41 or 42 years old when he died. In a long poem at the end of the manuscript Abisha notes that the scribe "died in the fullness of time before finishing it" (Robertson, *Catalogue II*, col. 10), and that he bought it, completed it and bound it in leather; ten years later, i.e. in 1928, he vocalized it at the request of Moses Gaster.

40. His father Jacob died in 1312 A.H., i.e. 1894/95 C.E.; see the genealogical table of the Danfi family in Cowley, *Samaritan Liturgy*, XLVII.

41. They are Nablus 158, 159, 160, and 167. For a description see Shunnar, *Katalog*, 145-146, 147.

42. In the Seminar für Semitistik und Arabistik – MS Sam. 26; cf. Shunnar, *Katalog*, 183 with Tafel XVIII, 1.

43. Cf. Shunnar, *Katalog*, 201: addition to LC Sam. MS 9.

44. Shelabi and Halabi are different forms of the same name.

45. Robertson, *Catalogue II*, col. 165.

46. The text is printed in A. E. Cowley, *Samaritan Liturgy* (Oxford: Clarendon, 1909), 284-334.

47. See Rothschild, *Catalogue*, 106.

48. Cf. Crown, "Studies" IV, no. 252.

49. See Robertson, *Catalogue II*, cols. 275-276. For some of his works see Crown, "Studies" IV, no. 252; the following are to be added to that list: BL Or 10443 (1906 C.E.) (cf. Shunnar, *Katalog*, 55 and Tafel X, 4), BL Or 10877 (1909 C.E.) (Shunnar, *Katalog*, 75-76

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*and Tafel XIV, 4), BL Or 12293 (1913 C.E.) (Shunnar, Katalog, 90-91 and Tafel XV, 9), BL Or 10861 (1911 C.E.) (Shunnar, Katalog, 94-95; the author of the work was his father Pinhas [Khadr] b. Isaac who wrote it in 1292 A.H., i.e. 1875 C.E.), and Sassoon 378 (1905 C.E.) (cf. Sassoon, *Obel Dawid*, 587) and 396 (1911 C.E.) (cf. Sassoon, *Obel Dawid*, 588).*

McGill's Second Kierkegaard Collection

by Alastair McKinnon

This account describes a new kind of collection consisting of the text of Kierkegaard's Samlede Værker and the software to display, search and analyse that text or any other created in similar format. It describes the creation of this text and summarizes some of the author's studies, this being a way of describing this collection and helping the reader to imagine some of the things which can be done with these tools.

Cet article décrit un nouveau type de collection qui comporte le texte de Samlede Værker de Kierkegaard et le logiciel qui permet de l'afficher, de la parcourir et de l'analyser ainsi que tout autre texte créé de la même façon. Il décrit la création du texte et résume certaines des études de l'auteur d'une manière qui décrit cette collection et aide le lecteur à imaginer certaines des prouesses que l'on peut réaliser avec ces instruments.

McGill University has the rare distinction of having two quite separate and different Kierkegaard collections. The first is the Kierkegaard-Malantschuk Collection housed in the Department of Rare Books and Special Collections of the McGill University Libraries. It is a traditional collection of approximately 1,500 volumes mostly from the nineteenth century, contains a complete set of the lifetime editions of Kierkegaard's works and was acquired from the estate of the late Dr. Gregor Malantschuk, widely acknowledged as one of the world's greatest Kierkegaard scholars. This collection was the focus of a conference held at McGill in June 1980 to mark its acquisition, has been thoroughly documented in a complete catalogue published by the library in 1984 and is to be discussed in a forthcoming monograph describing some of its more important items and placing it in the context of Dr. Malantschuk's remarkable life and career. The second collection is quite new and different but Malantschuk was a man of great vision and immediately recognized its promise for Kierkegaard scholarship and, especially, for the kind of "concept analysis" in which he was particularly interested. Indeed, I have been assured, the existence of this work was the chief reason he decided that his own collection should come to McGill. There is then

no doubt that it can and should be described as "McGill's second Kierkegaard collection."¹

This collection is intended primarily to foster the aims of traditional humanist scholarship but superficially is so different from traditional ones that it seems best to begin by describing it. Briefly, it consists of "PC and compatible" computer versions of the 35 works in Kierkegaard's *Samlede Værker* (Collected Works), page correlation files for each of these volumes, display and analysis software and many supplementary files to facilitate the analysis and modelling of individual concepts, books, the entire corpus, etc.² In a word, it is a computer version of these texts which can be "read" and analysed in many new and different ways. As such it would seem to be of particular interest to Kierkegaard scholars but I stress as strongly as possible that while the software is an integral part of this collection it can also be used separately, that all of it is now freely available to any member of the university for use on any similarly formatted text and that versions of all the necessary software for use with text in ASCII or free format can be provided.³ Punch cards are long gone and text can now be scanned and even proof-read by machine. There is then no longer any reason why any interested person at this university should not

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ENTEN-ELLER‡
Et Livs-Fragment
UDGIVET AF
VICTOR EREMITA‡
Første Deel‡
indeholdende A.'s Papirer‡
Er da Fornuften alene døbt,
ere Lidenskaberne Hedninger?
                                Young.‡
γ
γγγ                                Forord‡
γDet er maaskee dog stundom faldet Dig ind, kjære Læser, at tvivle
en Smule om Rigtigheden at den bekjendte filosofiske Sætning,
at det Udvortes er det Indvortes, det Indvortes det Udvortes.‡
Du har maaskee selv gjemt en Hemmelighed, om hvilken
Du følte, at den, i sin Glæde eller i sin Smerte, var Dig for kjær til
at Du kunde indvie Andre i den.‡ Dit Liv har maaskee bragt Dig i
Berøring med Mennesker, om hvilke Du ahnede, at noget Saadant
var Tilfælde, uden at dog Din Magt eller Din Besnærelse var istand
til at bringe det Forborgne til Aabenbarelse.‡ Maaskee passer intet af
Tilfældene paa Dig og Dit Liv, og dog er Du ikke ukjendt med
hiin Tvivl; den har nu og da som en flygtig Skikkelse svævet Din
Tanke forbi.‡ En saadan Tvivl kommer og gaaer, og Ingen veed,
Work EE1 Page 009 Line 13 Code M Column 01      Replace      E : 003 15

```

Figure 1. Dump of first screen of EE1.

undertake studies such as those described in this account on the author or authors of his choice. Indeed, one of the main aims of this account is to encourage him to do so.

Many readers would perhaps be puzzled at the suggestion that they might some day read books from a computer screen but a few brief comments on the "screen dump" of the opening pages of EE1⁴ shown in figure 1 should at least give them a much better idea of the nature of this collection and some of its possibilities. The first is the copyright line which appears on the top line of the first screen but, of course, is not treated as part of the text. The next nine lines are from the title page (p. 5) of the third "base" edition.⁵ The remaining text lines are the first 13 from p. 9, counting the title ("Forord") as the first line of this page. The cursor is not shown but it was in fact on the last line (the one beginning "*Tanke forbi*...") thus making it the "current" one. The last line in this figure is the "status" line and shows that the text displayed is EE1 and that the line

on which the cursor now rests is line 13 of page 9 of the printed text.⁶ The "M" following "Code" indicates that this line is Main text rather than Title, Footnote, Quotation, etc. "E: 003 15" in the bottom right corner means that the counterpart of this line will be found in the then current English translation of this work on page 3, line 15.⁷ The cent sign (¢) is used as a "sentence terminator" and inserted at all points in the text where it might be needed. One "left angle" (∧) marks the beginning of a paragraph and two or more the "level" or "nesting"⁸ of the text beginning at that point. Thus the first two allow the computer to identify whole sentences and paragraphs and the last to divide texts at any number of specified levels, these three in order to facilitate the analysis of concepts, books, etc. About all of this, much more later.

I know of course that many humanists are or at least profess to be deeply sceptical of the value of any results produced with the aid of a computer and fear that some may even take

the above very brief account of a computer display as evidence that one ought not to take the time and effort required to understand such things. For the moment I will only say that I believe and hope that I understand these misgivings, that I began my own work with very modest aims and expectations but that I have been continually surprised as various new possibilities have opened before me. I hope that something of this sense is conveyed in the following brief account of some of the many projects which, almost fortuitously, have together resulted in the present collection.

THE PSEUDONYMS PROJECT

Thirteen of Kierkegaard's works were written under one or more of his many pseudonyms and he attached great importance to this fact. In "A First and Last Declaration,"⁹ appended at the last moment to what he then expected to be his last work, he pointed out that they contradicted one another, that anyone could make him look like a fool by citing one against the other, asked that anyone quoting from a pseudonymous work would "kin-

dly" do him the favour of naming the pseudonym in question and predicted that every future misunderstanding of his works would be due ultimately to a failure to take these warnings seriously. History has made him a good prophet and in 1964 I received a grant from the Canada Council to determine which of his most important pseudonyms were "closest to" or most like the acknowledged Kierkegaard. To answer this question we did a "pair-word" test based upon the theories of the late Professor Gustav Herdan using relatively large samples from eight pseudonymous and eight acknowledged works together making approximately 1,000 pages. That test showed, for example, that the ratio of observed to expected "pair words" for Anti-Climacus was 1.0087 and that for Johannes Climacus 0.8682, a result consistent with Kierkegaard's own later account of their relation¹⁰ and my own earlier intuitive judgement that these two represented a "developing asymptotic approximation" to their creator.¹¹ Though flawed by an error¹² which no one else seems to have detected, this work was taken seriously and since that time most Kierkegaard scholars have been careful to dis-

FRYGT OG BÆVEN

DANSK		ENG.		FRAN.		DEUT.	
3.udg.	2.udg.						
s.	s. l. s. l.	p. l. p. l.		p. l. p. l.		s. z. s. z.	
8	6 - 6	21 - 21		1 - 1		2 - 2	
9	67 1 - 68 11	22 1 - 22 34		1 1 - 2 29		3 1 - 4 13	
10	68 12 - 69 24	22 35 - 24 6		3 5 - 5 11		4 14 - 5 28	
11	69 25 - 70 25	24 7 - 25 3		5 12 - 6 25		5 29 - 6 31	
13	71 1 - 72 7	26 1 - 26 34		7 1 - 8 23		7 1 - 8 10	
14	73 1 - 74 6	27 1 - 28 4		8 24 - 10 24		8 11 - 9 23	
15	74 7 - 76 15	28 5 - 29 6		10 25 - 12 23		9 24 - 11 4	
16	76 16 - 77 22	29 7 - 29 35		12 24 - 14 15		11 5 - 12 9	
17	78 1 - 79 8	30 1 - 30 33		15 1 - 16 27		12 10 - 13 16	
18	79 9 - 80 15	30 34 - 32 6		16 28 - 19 5		13 17 - 14 30	

Figure 2. Excerpt from *The Kierkegaard Indices*, vol. I.

McGill's Second Kierkegaard Collection

	T.	Dan. 3. udg.		Dan. 2. udg.		Eng.		Fr.		Deut.	
		s.	l.	s.	l.	p.	l.	p.	l.	s.	z.
Fortvivelse (Forts.)											
Alsaa Fortvivelse om Syndernes Forladelse er Forargelse.	SD	173	31	264	11	255	24	115	7	126	17
til det Offensive. Synd er Fortvivelse; her kjæmpes eviterende.	SD	174	8	264	27	256	6	115	26	127	3
Saa kom Fortvivelse over sin Synd; her kjæmpes endnu	SD	174	8	264	27	256	6	115	26	127	3
Fortvivelse om Syndernes Forladelse er en bestemt Position	SD	174	13	265	3	256	11	115	32	127	9
for den Tilstand, hvori der slet ingen Fortvivelse er: i at forholde	SD	180	10	272	2	262	26	122	4	134	5
Men Angst og Frygt og Fortvivelse hjælper ikke heller til Noget.	IC	72	28	86	18	69	40	176	30	65	34
forvirrende har talt om Tvivl, hvor man skulde tale om Fortvivelse.	IC	85	17	102	10	83	18	185	12	76	13
„Fortvivelse“ viser derimod strax til Rette, ved at	IC	85	19	102	12	83	20	185	15	76	16
talt om „Tvivl“ istedetfor at tale om „Fortvivelse“, saaledes har man	IC	85	22	102	15	83	23	185	19	76	20
Alt uendelig ligegyldigt — men see, denne Sorg var Fortvivelse.	EOT	15	26	298	8	263	35	34	17	8	8
hvis dog ikke til Dig; til hvem, o Fortvivelse, hvis Du virkelig	TAF	31	7	317	7	9	7	7	7	21	8
straffende forfølger, da, trættet indtil Fortvivelse, at finde Hvile	TAF	46	26	334	31	23	28	25	3	37	31
der dog kun fører enten dybere i Fortvivelse eller til Afsind,	TAF	47	8	335	18	24	13	25	25	38	19
som maaskee indtil Fortvivelse kæmper i Haabloshed,	TS	119	29	421	22	102	10	136	27	115	26
at ikke Forbilledet skal ængste os til Fortvivelse, bringe det i	DS	184	31	499	3	171	7	205	12	187	4
til at gaae Glip af Saligheden, eller til Fortvivelse, altsaa til at	DS	213	25	533	14	202	1	236	19	221	18
jeg maatte enten styrte mig i Fortvivelse og Sandselighed,	SFV	89	39	561	18	18	14	65	27	31	10
som vilde bringe de Fleste til Fortvivelse; thi det er	SFV	109	23	584	2	47	17	84	10	54	1
efter i Fortvivelse at have brudt med Verden og hvad Verdens	SFV	112	18	587	13	52	2	86	34	57	19
han endnu engang sit Onske „o, Fortvivelse, det opfyldes ikke,	O	275	13	316	13	244	13	141	35	285	27
Fortvivelse, det opfyldes ikke, Fortvivelse, man lever kun	O	275	13	316	13	244	13	141	35	285	27
der, indtil Fortvivelse smerteligt, skiller En fra	O	322	21	370	9	286	1	178	19	333	4

Figure 3. Excerpt from *The Kierkegaard Indices*, vol. II.

ukjendelig [21]	Ukjerligt [1]	Ukrudtet [1]
BI 1 169 9	KG 12 283 24	TTL 6 284 25
T 4 266 *	ukjerligt [15]	Ukrudts [1]
G 5 181 18	KG 12 17 32 173 4 210 11 212 15 212 23	LA 14 57 26
TTL 6 309 11 312 13 312 24	244 29 245 15 267 6 280 17 283 23	ukrydret [1]
SV1 7 28 26	284 29 301 9 324 27	EE2 3 129 26
AE2 10 277 4	IC 16 180 36	ukrænkede [1]
LT 11 17 33	O 19 123 21	BI 1 191 21
HLF 11 157 26 194 6	ukjær [1]	ukrænket [4]
LE 11 227 1	EE2 3 145 35	BI 1 69 14
KG 12 16 39 41 29	ukjærlig [2]	EE2 3 33 21 102 1
CT 13 60 16	BI 1 307 28	SV1 7 18 16
IC 16 128 8 234 4 234 7	EE2 3 15 26	ukunstneriske [1]
DS 17 227 27	uklar [8]	EE1 2 269 15
Ukjendelige [11]	EE1 2 343 3	ukyndig [4]
LA 14 98 6 98 28 99 *	EE2 3 47 6 303 13 303 37	BI 1 104 31 137 25
IC 16 128 *	BA 6 227 37	G 5 130 34
ukjendelige [7]	TTL 6 268 18 293 22	SV1 7 33 29
AE1 9 20 2	KG 12 344 11	Ukyndige [4]
KG 12 71 22 296 26	Uklare [2]	BI 1 158 *

Figure 4. Excerpt from *The Kierkegaard Indices*, vol. III.

McGill's Second Kierkegaard Collection

Total	LP	BI	EE1	EE2	T	FB	G	F	PS	BA	TTL	SV	AE	LA	OTA	KG	CT	KK	SFV	LF	TSA	SD	YTS	IC	EOT	GU	TAF	FV	TS	DS	B21	Ø	HCD	BFF	
Religjøsitet (3)	225									1	25	157	17						16		2										1	1		5	
Ret	564	12	46	25	81	27	16	19	5	2	7	4	37	57	6	50	38	30	4	7	1	7	18	2	20		1		6	16	7	11		2	
Revolutions-Tiden (2)	26														26																				
Sandhed	1508	12	52	47	108	118	4	9	5	12	20	14	43	220	10	202	109	48	6	37	16	25	14	27	147	1	5	4	4	18	54	18	91	2	6
Schelling (5)	18		1		1						12			4																					
Schlegel (6)	44		42								1		1																						
Schleiermacher (4)	40		36							2		1																							
Skepals	56	1	9		13					6	3	1	18	5																					1
Socrates (16)	1399	1	967			11	1	1	123	24		43	157	6		2		12			5	45		1									7	3	
Sophisten (18)	213		139	5	3		2	1	4	12		16	10	1				2				1											8		
Speculation (2)	174	1	15		2					1	7	2	140									1	2		3										
Spinoza (4)	13		2	1						7			3																						
Sprog (language)	155	1	6	15	4	11	3	7	3	3	1	3	28	13	1	14	9	11				6		7			1	1	2				3		
Sprogbrug (usage)	43		2		3		2		1	4	6		1	2			15	2															4	1	
Stoicisme (4)	10	1	2		1					2			1									2											1		
Subjectivitet (6)	243		62	5		2				10		2	154	1										5											
System (2)	246	3	20	2	4		10	1	19	4	8		17	125	2				13				5	1							1			11	
Tanke-Existentia (conceptual existence)	7											1	6																						
Tankebestemmelse (4) (thought-determination)	14									1				5		1		1	1			1		4											
Tankebevægelse (3) (line of thought)	7		3	2									2																						
Tautologi (7)	22		3	4	1		1		1	4	1		1	6																					
Teleologi (6)	73		3	1	26		9			1	1		3	17					2			9	1												
Thales	3											2		1																					
Theaetetus (3)	4		2						2																										
Theisme (2)	2	1	1																																
Thrasymachus	14		14																																

Figure 5. Sample page from "Kierkegaard's Remarks on Philosophy."

tinguish at least between the pseudonymous and acknowledged works.¹³ The situation was not without its own peculiar irony. As I remarked at the end of one of my reports, "Of course, it is ludicrous that anyone should have to use a computer to show that Kierkegaard understood the structure of his authorship but, as he often remarked, where illusions are deep-seated and wide-spread, a certain kind of deceit is sometimes necessary."¹⁴

THE KIERKEGAARD INDICES

Before I had completed the pseudonyms project I realized that the text of Kierkegaard's *Samlede Værker* already created should be used as the basis for a concordance to these works and applied to the Canada Council for funds to create the remaining 5,000 pages of text and to pay for the necessary programming. In fact this projected work finally appeared as volume II of *The Kierkegaard Indices*, the history of which is described below.¹⁵

Though I have always used the current Danish third as our "base" edition I realized that some Danish scholars preferred the second. I also recognized that Danish is not widely known outside that country, that this concordance should therefore also provide references to the current English, French and German translations and that this would require the creation of extensive page correlation files. However, once these had been created, it was immediately obvious that they would also be valuable to others and, wanting some computer typesetting experience before undertaking the concordance, we published these tables under the title *Kierkegaard In Translation: En Traduction: In Übersetzung* as volume I of the series. Figure 2 shows the first ten lines of these tables for FB. The last of these lines shows that the counterpart of all of p. 18 in the Danish third edition runs from p. 79, l. 9 to p. 80, l. 15 in the Danish second edition, from p. 30, l. 34 to p. 32, l. 6 in the English translation, etc. Thus, for example, the user of the English translation can readily

McGill's Second Kierkegaard Collection

Title code	Corrected mean date of composition	Classification	Gud	Christus	Jesus	Jesus Christus	Herre Jesus Christus	Gud-Mennesket	Hellige-Aand	Guden	Guder	All terms
LP	1 July 1838		0.02	0.01			0.01					0.04
BI	Dec 1840		0.05	0.02							0.04	0.11
EE1	1 Apr 1842	p	0.03								0.02	0.05
EE2	1 Apr 1842	p	0.17	0.01								0.18
G	June 1843	p	0.13								0.01	0.14
FB	1 July 1843	p	0.27							0.01		0.28
T	Oct 1843	a	0.59	0.01	0.01							0.61
BA	Apr 1844	p	0.08	0.02								0.10
PS	May 1844	p	0.05							0.53		0.58
F	1 June 1844	p	0.04									0.04
SV	Dec 1844	p	0.14							0.01	0.04	0.19
TTL	1 Jan 1845	a	0.42									0.42
BFF	1842-1851		0.08							0.01	0.02	0.11
AE	July 1845	p	0.23	0.02						0.03		0.28
LA	Jan 1846	a	0.03							0.02		0.05
OTA	Aug 1846	a	0.49	0.08								0.57
KK	Feb 1847	p	0.03									0.03
KG	May 1847	a	0.42	0.06								0.48
TSA	Oct 1847	lp	0.33	0.24		0.01	0.01	0.01				0.60
CT	Nov 1847	a	0.84	0.07			0.01					0.92
SD	Feb 1848	lp	0.56	0.12				0.02				0.72
IC	Aug 1848	lp	0.34	0.44	0.01	0.04	0.02	0.10	0.01		0.01	0.95
SFV	Sept 1848		0.29	0.02								0.31
LF	Mar 1849	a	1.22									1.22
FV	Mar 1849		0.24									0.24
YTS	1 Sept 1849	a	0.76	0.14		0.02	0.08					1.00
TAF	Dec 1849	a	0.34	0.13		0.06	0.04					0.57
EOT	Nov 1850	a	0.30	0.50								0.80
GU	May 1851	a	1.04									1.04
TS	July 1851	a	0.54	0.11	0.01				0.06	0.01		0.73
DS	Nov 1851	a	0.43	0.06		0.01	0.01					0.51
B21	Mar 1855	l	0.25	0.09		0.03	0.01					0.38
Ø	May 1855	l	0.40	0.12		0.01	0.01	0.01				0.55
HCD	5 June 1855	l	0.20	0.66		0.07						0.93

Figure 6. Relative frequencies of key theological terms.

calculate that the word translated as "impotence" on p. 31, l. 23 will appear on p. 18, l. 21 of the Danish third edition and, turning to this point in the text, find that it is actually *Afmagt*. The original computer version of these tables is the basis of all such "secondary" references in the concordance and, with the later addition of comparable information for the Danish first edition, of all such references now available on request in the bottom right corner of the computer screen.

It was also clear to me from the beginning that the key-word-in-context or so-called KWIC concordances then in fashion were quite unacceptable and that our contexts or fragments should be as coherent and perspicuous as possible. In order to achieve this goal we assigned various weights to different punc-

tion marks in the text giving the highest to the period, question mark and explanation mark and the lowest to the comma. Thus the program begins with the concordance head or key word in question, moves alternately one word in each direction until stopped by a sufficient "weight" of punctuation on either side and completes the fragment by including whole words on the other side falling within the allotted 70 characters and blank spaces. Some typical results of this approach are shown in Figure 3 which reproduces 22 of the 70 lines or fragments on each page of this concordance. The first text line shows that this particular instance of *Fortviølelse* (despair) is from SD and occurs on p. 173, l. 31 of the Danish third edition, p. 264, l. 11 of the Danish second edition, p. 255, l. 24 of the then current English translation, etc. Note that an inspec-

tion of the original texts shows that punctuation has determined one or other terminus of 16 of these 22 fragments and both termini of five. Note, too, that of the English references cited, 10 or 45.5% are completely correct, 11 or 50% accurate within one line and 1 or 4.5% accurate within two. I have not checked the other "secondary" references shown in this excerpt but note that these figures are very similar to those reported to me by others. This work, the original impetus to the series, was entitled *Fundamental Polyglot Konkordans til Kierkegaards Samlede Værker* and published as vol. II.

Ideally I would have liked to treat all important words in this rather elaborate and expensive way but the original text contains 55,568 word-types and 1,944,767 word-tokens¹⁶ and this was obviously out of the question. Indeed, even the 1137 very large pages of this volume concord only 586 types together with approximately 210 variants. Accordingly we decided to provide a simple index of most of the remaining words in a work entitled *Index Verborum til Kierkegaards Samlede Værker* and published as volume III. In fact, even its 1322 equally large pages allowed us to index only the remaining words having a frequency less than 500 plus certain selected higher frequency words which play a key role in Kierkegaard's thought and other forms of which had already been treated in the concordance. The first 20 lines of p. 1199 of this volume are reproduced in Figure 4. The first shows that the word *ukjendelig* (unrecognizable) occurs 21 times in the entire text, that the first instance is found in BI (or volume 1 of the third edition according to Danish and German use) on p. 169, l. 9, the next that there are three or more occurrences of this word on p. 266 of T (or volume 4 of this edition), etc. Those using other editions or translations can of course convert these references with the help of the tables in volume I already described.

Just as I was beginning to think and hope that I was at last finished with the burden of these quite traditional and obvious works I chanced upon Kučera and Francis' *Computational Analysis of Present Day American English*¹⁷ and saw immediately that

a comparable analysis of Kierkegaard's writings might prove very helpful in understanding his thought. With their encouragement I therefore proceeded to produce a counterpart volume entitled *Computational Analysis of Kierkegaard's Samlede Værker* which appeared in 1975 as volume IV in this series. I quote from the Introduction:

Even without benefit of interpretation the reader will see the relevance of the following examples all of which are taken directly from this work or can be readily constructed therefrom. Of the 541 occurrences of *absurd*, *Absurde*, *Absurditet*, *Paradox*, *paradox*, *Paradoxet*, only two are from his acknowledged works. The correlation coefficient of *Abraham* and *Isaak* for all of the works is + 0.999, which result is significant at the 0.01% level. That between the passage of time and Kierkegaard's use of a selected set of "neutral" Christian terms is + 0.889, itself significant at the 0.01% level. The ratio between Kierkegaard's use of the various forms of *Styrelse* and *Skjebne* shows significant changes at mid December, 1845 and again during the period July-November, 1848. Certain allegedly key terms in Kierkegaard's thought (e.g. *existentielle*, *Existents-Inderlighed*, *Existents-Meddelelse*, *Existentsens*, *Existerende*, *existerende*) are effectively restricted to AE, a pseudonymous work written between April and December of 1845.¹⁸

I might state some of these points differently today but remain convinced that this is the most important of these four volumes and that this will become increasingly evident as the computer text and hence custom made concordances become more widely available. Certainly it persuaded me that statistics can help us identify the distinctive features of a text and that interpretations failing to explain these features cannot possibly be accepted as adequate or true. This realization has guided

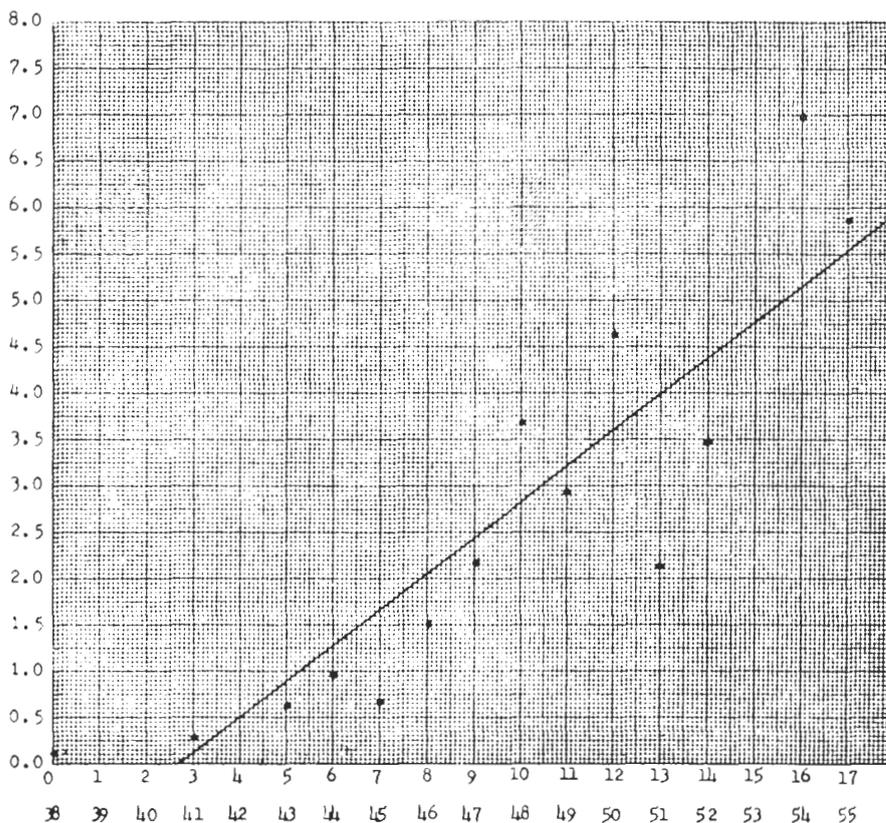


Figure 7. The increase of Christian terms across authorship.

much of my work since that time and, if more widely accepted, could greatly improve the quality of literary studies.

TRANSITION PIECES

Of course one does not change the focus of one's work and thought overnight and the record shows that I actually did some studies inspired by Kučera and Francis as early as 1973. These were not properly statistical and were done on the mainframe using awkward and now outdated programs but they are interesting in themselves and pointed the way to others which are obviously more important and which can now be done much more easily with the software available in this collection. We therefore begin with a brief summary of a few of these early and very simple studies.

One of the reasons Kierkegaard has not been taken more seriously as a philosopher is that his many philosophical remarks and insights occur within the context of a vast and wide ranging literature which is not itself primarily philosophical, at least in the narrow sense of that term. I sought to overcome this difficulty in a short and very densely packed piece entitled "Kierkegaard's Remarks on Philosophy"¹⁹ one page of which is shown as Figure 5. This data array is self-explanatory but the following brief comments should remove any possible confusion. The title codes across the top of the table represent Kierkegaard's works ordered, with one exception, according to their date of publication. The words in the left hand column represent names or topics of particular philosophical interest and the figure in brackets indicates

the number of forms included in the count. The second column represents the number of times the word or words occur in the corpus as a whole and the remaining columns the number of times they occur in the book in question. Of course the interested scholar can learn a great deal even from such an array. For example, the first row indicates that the three main forms of *Religieusiteten* (religiosity) occur 225 times in the corpus, for the first time in BA and most frequently in AE, that two main forms of *Theisme* together occur only twice and at the beginning of the authorship, etc.

A similar report dealing with another important area of his thought, "Theological Focus in Kierkegaard's *Samlede Værker*: Some Basic Data,"²⁰ was published in 1974 and shows the relative frequencies of nine key theological terms in all the works of the authorship. The core of this report is shown in Figure 6. The first column shows the title code of each work, the second its "corrected mean date of composition,"²¹ the third its classification (pseudonymous, acknowledged, late pseudonymous), the next nine the relative frequencies of the name in the work in question and the last the relative frequencies²² of all these names in that work. Note that this table cites relative frequencies in order to permit easy and meaningful comparisons between both books and names. Thus, for example, one can see immediately that *Gud* (God) is approximately three times more frequent in T than in EE2 and approximately 59 times more frequent than *Christus* (Christ) in T. Later we shall present some more recent and perspicuous graphic representations of such basic information but meanwhile note that this very simple summary provides a great deal of information in a very useful form and is an obvious model for anyone seeking to improve his own overall grasp of a particular area or to lay the groundwork for other more serious studies in the field.

Partly as a follow up of this study I published "The Increase of Christian Terms in Kierkegaard's *Samlede Værker*"²³ in 1974. This piece documents the increase in the average number of occurrences per page of a set of 13 "neutral"²⁴ Christian terms across the years of

the authorship. These data are plotted and their trend line shown in Figure 7. Note that there are significant "drop-offs" from previous levels in the years 1851 and 1855 and that the correlation coefficient between the frequencies of this sample set and the years in question is + 0.889 and hence so high that it clearly requires explanation. This study involved a great deal of manual counting and calculation but most of the programs for similar studies giving even more accurate results are now available in our collection.

"Kierkegaard's Literary Production by Quarterly Rates"²⁵ shows the approximate number of words from the *Samlede Værker* and the present three different "groups" of the *Papirer* (Kierkegaard's unpublished writings) written during each quarter of the years 1834 to 1855 in both tabular and graphic form. The graph for the *Samlede Værker* is shown in Figure 8 and that for all writings combined in Figure 9. Note that most of the early writings are from the *Papirer* and that his authorship proper begins around mid-1840, peaks in 1842, 1844-45 and again in the third quarter of 1847, virtually ceases in 1850 and thereafter accounts for more than half of his total production only during the second quarter of 1855. This information is particularly valuable in view of the fact that he seems to have been almost driven to write and, indeed, to publish. It tells us a great deal about the connection between his life and work and provides a background against which these and many other questions may be answered more precisely. Presumably similar studies would also be useful for most figures with whom humanists are concerned.

"A Method of Displaying Differences between Various Accounts of an Object"²⁶ is from a time when I had recognized the importance of identifying the distinguishing features of at least three different accounts of the same object but had not yet refined any of my present techniques or devised any of my present software for doing so. In fact it employs some relatively crude criteria, the KYST²⁷ multi-dimensional scaling program and a simple formula to convert its results to a "pseudo three-dimensional" space, but nevertheless clearly succeeds in identifying those words which dis-

McGill's Second Kierkegaard Collection

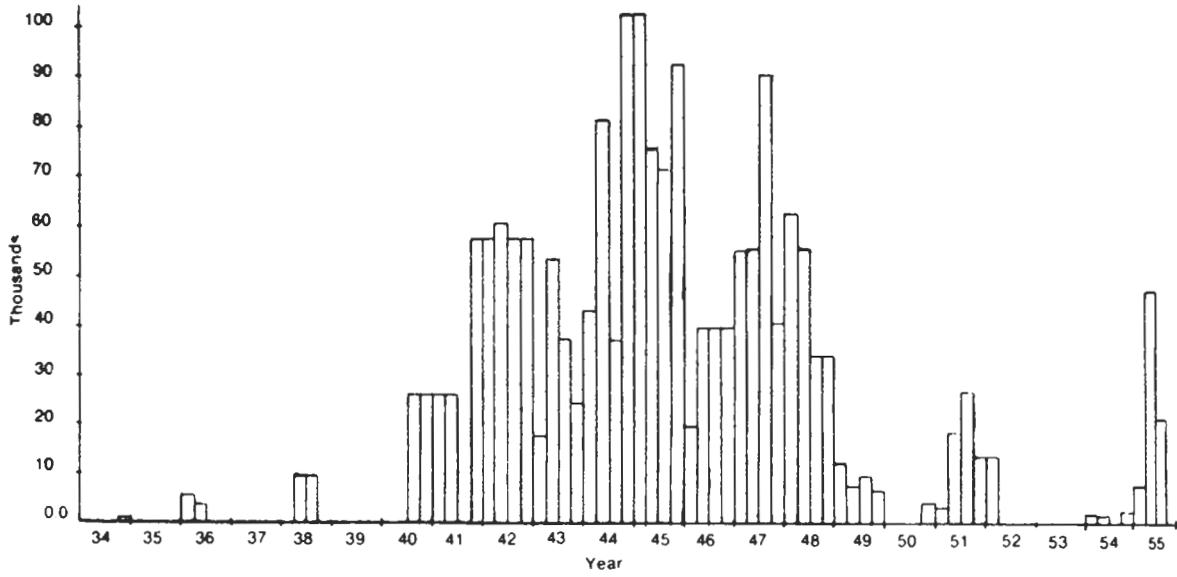


Figure 8. Kierkegaard's quarterly production: *Samlede Værker*.

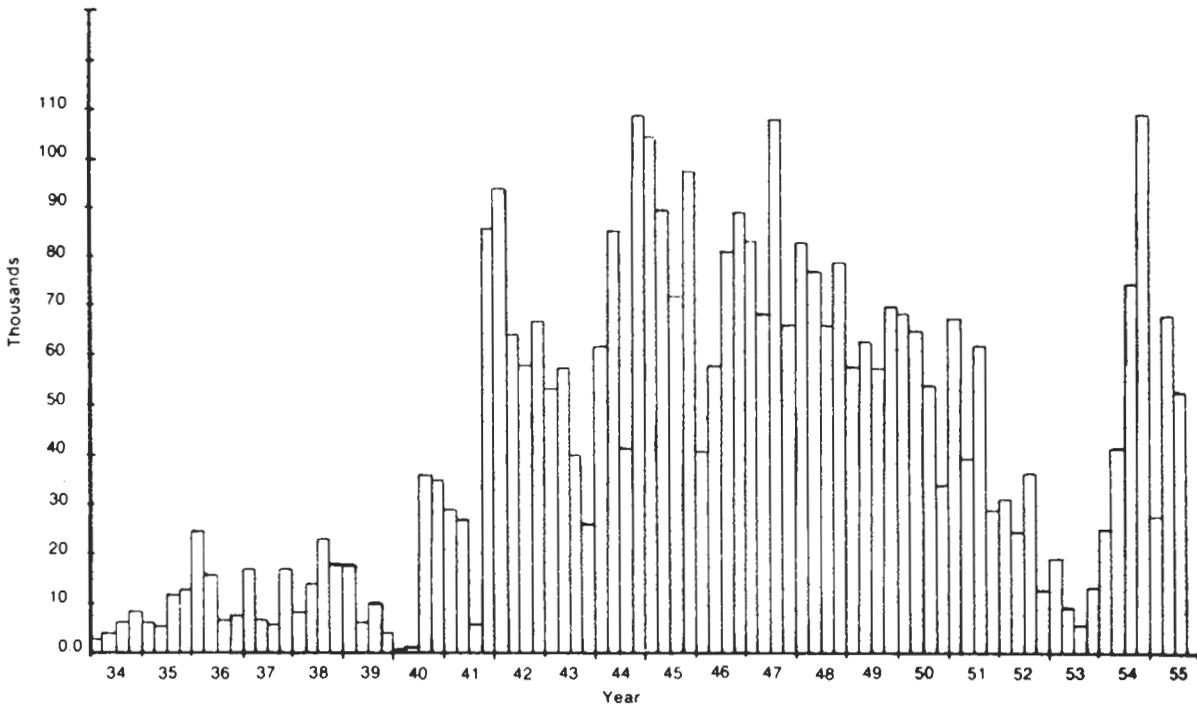


Figure 9. Kierkegaard's quarterly production: all writings.

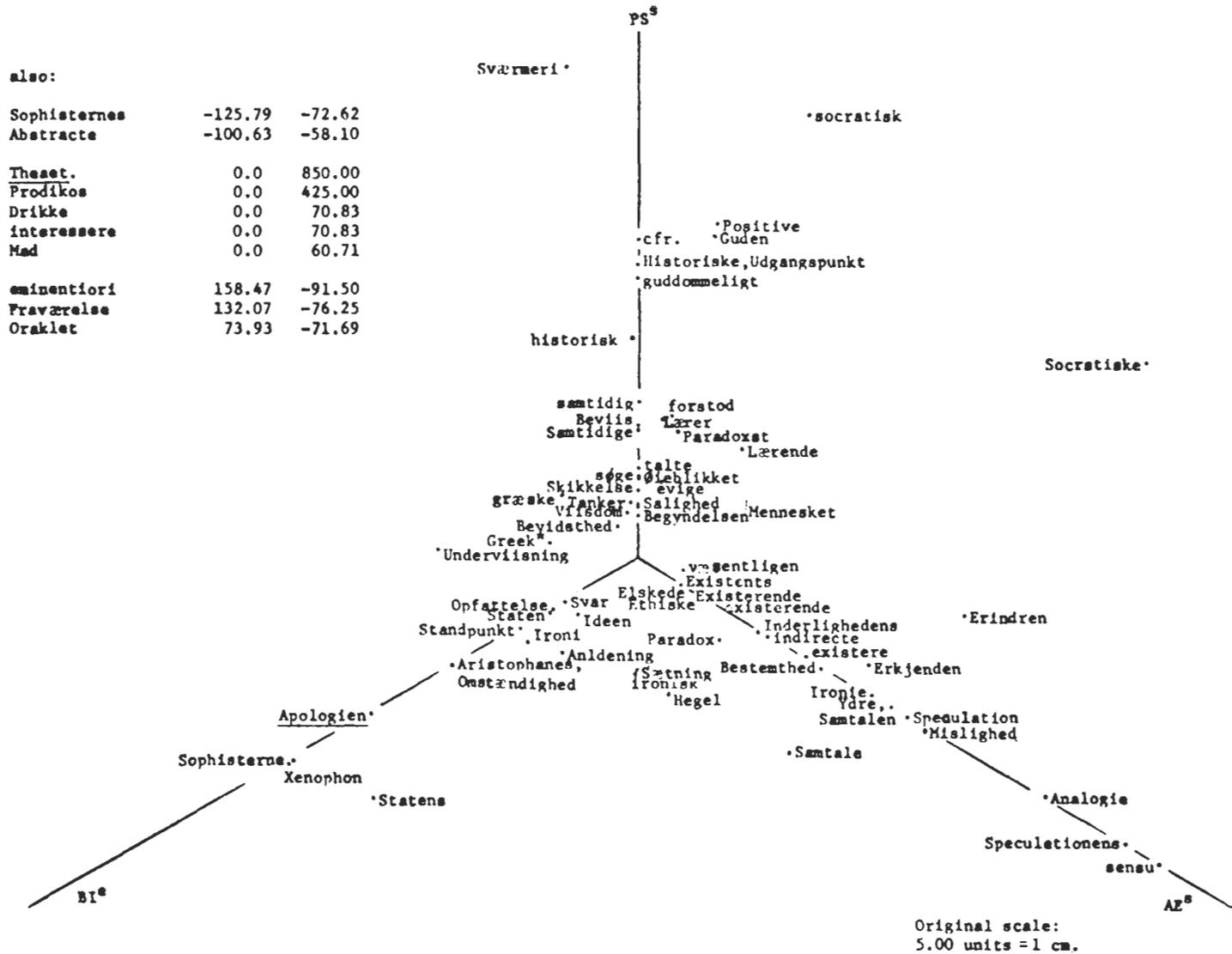
tinguish Kierkegaard's accounts of Socrates in BI, PS and AE, the three works in which he figures most prominently. The summary results are given in Figure 10 and, translated, show that Socrates is strongly and uniquely associated with Xenophon, the Sophists, *The Apology*, Aristophanes, *The Republic*, etc. in BI, with *Theaetetus*, Prodicus, the historical, divine, contemporary, proof, contemporaneity in PS and with *sensu*, speculation, analogy, misunderstanding, conversation, appearance, irony (with a final "e" in the original), certainty, to exist, etc. in AE. Note that they also show that, for example, he is clearly associated with Hegel in both BI and AE and with Socrates, the Socratic and recollection in both PS and AE. I believe that anyone who knows these works well will agree that these words point to the distinguishing characteristics of their different accounts of Socrates and that they will therefore enable one to grasp and understand these differences. I also believe that this approach could help us understand other important authors presenting similarly evolving accounts of some subject or figure. Note however that, as we shall see, our collection includes newer programs capable of producing much more detailed, sophisticated and perspicuous results which can be used for this same purpose.

Kierkegaard made constant reference to and was greatly influenced by the Bible and it is therefore important to document his perception of it as precisely and accurately as possible. I attempted to do this in "Kierkegaard's Perception of the Bible"²⁸ the results of which were originally generated by KYST but are shown here in part in a more recent three-dimensional plot as Figure 11. Note, for example, that Mark, Luke and Matthew are the most central, that most of the books of the Old Testament lie on the right of this space, etc. These results are entirely consonant with and, indeed, help us understand his writings. Had they been produced by our present software, they would contain at least as much information as, say, 10 pages of text in, and this is very important, a readily memorable form. I have no doubt that similar results for many other authors and their sources would be equally instructive and valuable.

SOME NECESSARY BACKGROUND

In 1981 I moved my Kierkegaard text from the mainframe to my own PC and began thinking about the creation of software which would produce better and more perspicuous results, emphasise exploratory data analysis rather than classical statistics, make more use of graphic representations and, above all, explore the possibilities of representing conceptual relations in multi-dimensional space, the last because I saw even then that this would be the next real frontier for computers and, for that matter, our understanding of text.²⁹ Of course this is and should be a continuing process but more than thirty of these programs have been completed and are included in the collection under discussion. Most of these presuppose a number of basic notions such as aberrant frequency word, data matrix, word profile, change point detection, correspondence analysis and the admittedly puzzling but, I believe, helpful and very promising idea of the "space" of a text. I shall now attempt to explain and illustrate these notions in terms of a book and its parts but stress that this is simply a matter of convenience and that these notions apply equally to any literary text ranging from all sentences in some book or books containing a selected key word or words to an entire literary corpus. First however I should like to give a brief account of some earlier work by Prof. Myron Wish which has now become more or less classic. I know that there are problems with his interpretation of his data and that the program he used is now quite dated but its essential simplicity has helped others to get at least some grasp of the underlying aims of my current research and I repeat it without apology.

In 1968 Professor Myron Wish of the University of Wisconsin asked 18 of his students to rank 12 countries of the world in terms of their "overall perceived similarity," this without indicating any basis for these judgements since, as he noted, one of his aims was to discover the bases which they actually used. After averaging their scores and analyzing the result with the KYST multi-dimensional scaling program, he noted that the pro-Western and pro-Communist countries were in one set of diagonally opposite



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Figure 10. Three different accounts of Socrates.

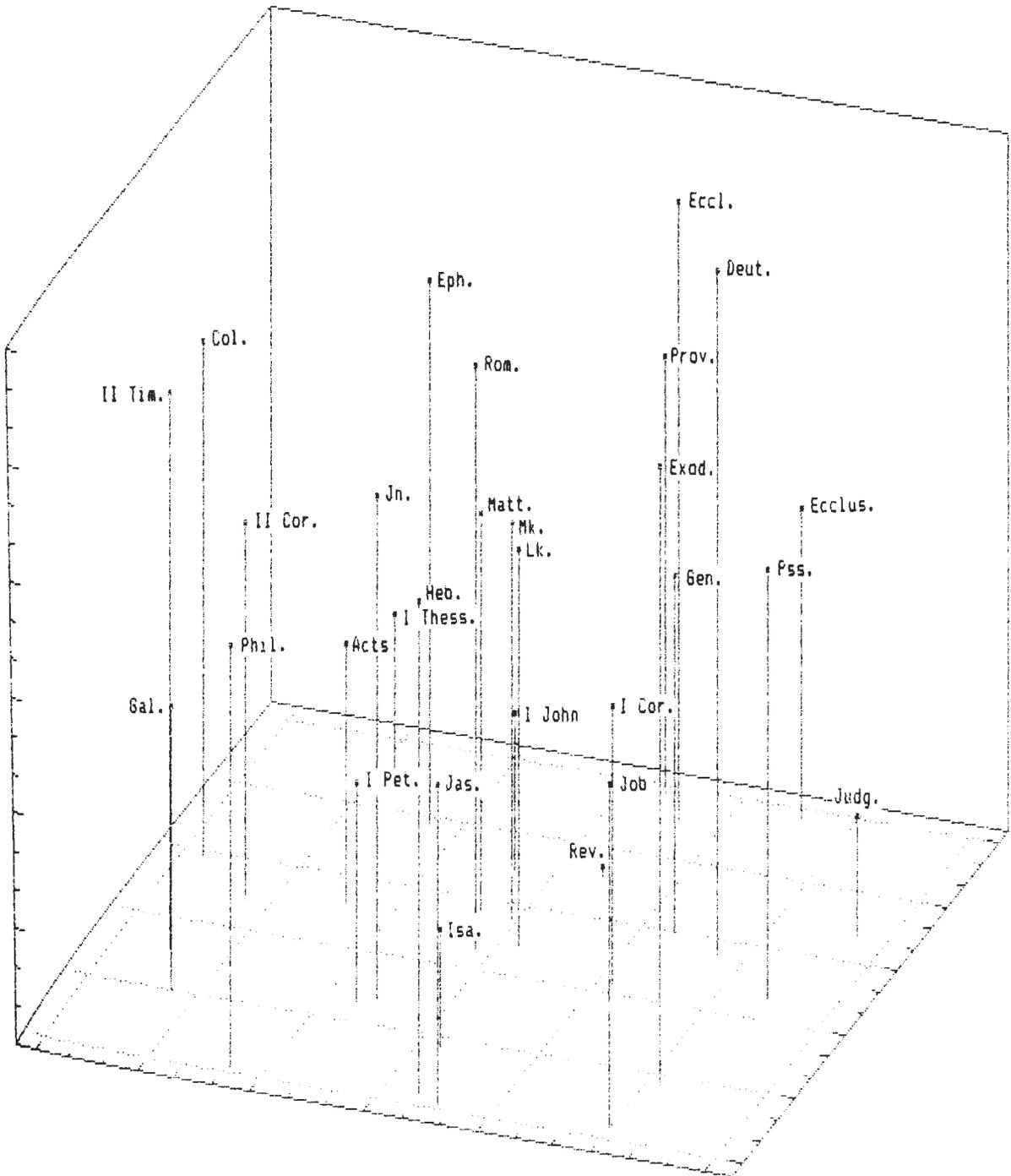


Figure 11. Kierkegaard's perception of the Bible.

quadrants, that the developed and underdeveloped ones were in the other and that these two dimensions together "explained" almost all of the variation in the original data matrix. Given these facts he concluded that these dimensions should be called "political alignment" and "economic development" and that his students had rated these countries primarily in light of these two features. Of course this does not necessarily mean that they consciously used these features but it clearly suggests that they made their actual judgements of similarity primarily in these terms. Details aside, I believe that Wish was entirely right and that his conclusions provide a radical insight into his students' collective perception of the relations of these countries. The aim of all my work in recent years has been to provide a similarly radical insight into Kierkegaard's works and the mind behind them and to show others how to do the same with the author in whom they are particularly interested.

This is a crucial point and should perhaps be explained more fully. I claim that Wish's dimensions provide a radical insight into his students' perception of the relations of these countries because they appear to be the bases upon which their particular judgements of similarity were actually made or, put another way, because they constitute the underlying structure of their collective perception of these relations. When we know the names of these dimensions we can understand or make sense of the two-dimensional array of their perception, explain why a particular country is here rather than there and, for example, even predict where these same students would place the next five countries within this space. My aim was to produce programs which would provide similarly radical insight into literary and philosophical texts. Of course, such texts are much more complex than 18 student replies to a questionnaire but real understanding is the same in both cases and fortunately we now have a much more powerful program capable of plotting many points in dimensions the number of which can equal that of actual text.

An aberrant frequency (hereafter, *abfreq*) word is one which an author has used in a par-

ticular book, for example, with a frequency statistically significantly greater than his normal one for that word.³⁰ The identification of such words is done by program and involves the following steps. First, divide the number of word-tokens in the book by the number of tokens in some appropriate control corpus and multiply by the frequency of that word in that corpus in order to determine its expected frequency in the book in question. Second, if that expected frequency is 20 or less, keep the word only if its observed frequency meets the criteria spelled out in our original account and shown here as Figure 12.³¹ Third, subtract the expected frequency of this word from its observed and divide the result by the square root of the expected to determine its number of standard deviations from the corpus norm, generally known as its Z score. Note that a Z score of 1.96 means that this word can be expected to occur with this or some greater frequency in a book of this length by this author only five in 100 times and one of 2.58 that it could be expected to occur with such frequency only once in 100 times. Put another way, a word with a Z score of 3.29 can be expected to show such a frequency in only one in a 1,000 texts of this length by the author in question.

Our *abfreq* program generates two separate lists or files, one ordering these words according to their Z scores and the other alphabetically to facilitate comparison of related word forms.³² In order to save space we show only the "top" and "bottom" of the Z score list for FB compared with Kierkegaard's *Samlede Værker* as a whole in Figure 13.³³ Note that this list has been expanded to provide translations and that even its last word shows a Z score of 9.77. This means that it could be expected to occur six or more times in only approximately one of every 10,000,000 texts of this size by Kierkegaard. Obviously these six uses of this word in this book represents such an extreme departure from his normal rate that it must have been deliberate and intentional. This must mean that its presence and use must be explained by any scholar claiming to understand or interpret this work and, equally clearly, that its real explanation must shed important light on this work.

$\hat{\lambda} >$ and $w_i <$		$\hat{\lambda} <$ and $w_i >$			
3.7	1	0.025	0	9.1	15
5.6	2	0.2	1	9.9	16
7.3	3	0.6	2	10.5	17
8.8	4	1.1	3	11.5	18
10.3	5	1.6	4	12.0	19
12.0	6	2.2	5	13.0	20
13.0	7	2.8	6	14.0	21
14.5	8	3.4	7	14.5	22
16.0	9	4.1	8	15.3	23
17.0	10	4.8	9	16.0	24
18.5	11	5.5	10	17.0	25
20.0	12	6.2	11	18.0	26
		6.9	12	18.5	27
		7.6	13	19.3	28
		8.4	14	20.0	29

Figure 12. Criteria for abfreq words with expected frequency = < 20.

Figure 14 shows one abfreq word from another and quite different point of view. Specifically, it shows the Z score of the intimate or familiar second person pronoun *Du* in each of Kierkegaard's works.³⁴ Thus we see at a glance that it has Z scores of approximately 55 in EE2, 33 in CT and 28 in TS and *minus* Z scores of approximately 27 in AE, 24 in SV and 21 in BI, the last three reminding us that low frequencies can be just as important and revealing as high ones. In fact this figure shows that we can and should think of all these statistically significant plotted Z scores as attributes or vectors of these particular books. Indeed, we can think of all the abfreq

words of a book as together constituting its distinctive attributes.

The usual next step in our method is to have the computer generate a data matrix or contingency table showing the frequency of each abfreq word in each chapter or section of the book in question similar to that shown as Figure 15. Note that this table uses my own abbreviations of the chapter titles of the recent Hong and Hong translation of FB, modified and explained in Appendix B, that it contains only some of the top 60 words from the previous abfreq list and that I have substituted their usual alphabetical order for one which

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Word	Translation/Use	Z score	Freq.
Abraham	Abraham	97.26	231
Isaak	Isaac	69.21	111
Almene	universal	44.57	104
Agnete	Agnes	42.16	40
Sara	Sarah	38.81	35
Havmanden	the merman	36.36	29
Abrahams	Abraham's	35.86	35
Ridder	knight	32.86	50
Helt	hero	30.56	71
Kniven	the knife	26.43	18
Agamemnon	Agamemnon	25.36	14
Troens	of faith	24.88	76
tragiske	tragic (=e)	24.63	39
Iphigenia	Iphigenia	23.39	12
Troen	faith	22.52	109
Morija	Moriah	21.30	10
Absurde	absurd	21.30	31
Enkelte	individual	20.84	103
Morijabjerget	Mount Moriah	20.26	9
Resignationens	of resignation	19.71	16
Søn	son	10.45	20
Forjættelsen	the promise	10.12	6
Sønnen	the son	10.07	11
Faust	Faust	9.98	16
drog	drew	9.97	9
Fortællingen	narrative	9.95	13
Bjerget	mountain	9.84	10
Store	the great	9.79	21
intellektuel	intellectual	9.77	6

Figure 13. Abbreviated abfreq list for FB, Z score version.

groups those having roughly similar profiles. This is a simple but crucial notion which we now explain briefly.

As the reader can readily determine for himself, Figure 15 shows that 31.7% of all cases of *universal* occur in P1, 40.4% in P2 and 27.9% in P3; that 4.9% of all cases of *individual* occur in PEX, 28.4% in P1, 37.3% in P2 and 29.4% in P3; and that 94.7% of all cases of *resignation* occur in PEX and 5.3% in P2. These, together with their equally important non-occurrences in all other chapters of this book, define or constitute the *profiles* of these words and are illustrated in Figure 16. The profiles of each of the chapters are calculated in precisely the same way, i.e. using the frequency of each of its abfreq words

expressed as a percentage of the frequencies of all its abfreq words. These profiles are the basis upon which all forms of correspondence analysis assign all word and chapter points to their proper position in multi-dimensional space and hence the key to the understanding of its operation.

Before proceeding to explain correspondence analysis we pause to note that our change program uses these same data matrices in a slightly different way. Briefly, it is a "moving window" chi-square test which begins by calculating the percentage of all occurrences of all abfreq words accounted for by the occurrences of each such word in the first chapter as against all remaining ones, in the first two against the remainder, etc., expresses these

McGill's Second Kierkegaard Collection

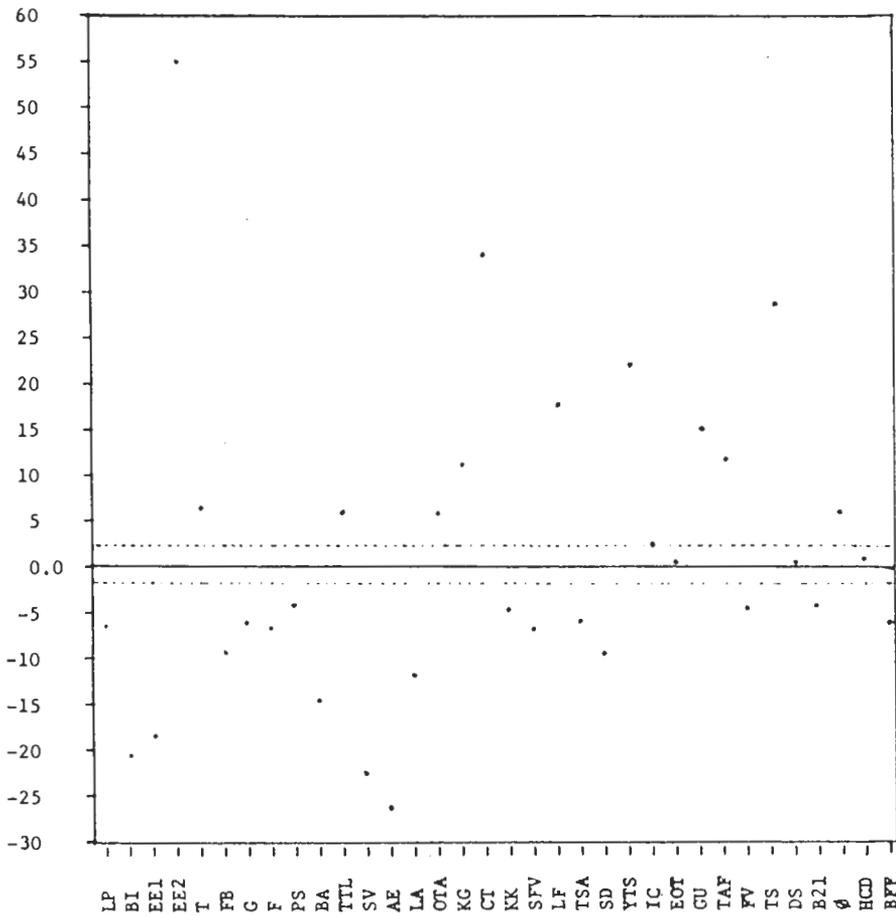


Figure 14. Z scores of D_u in all works of the authorship.

differences as a chi-square for each word, sums these chi-squares and identifies the point showing the largest total chi-square as the first or most important change. It then repeats this operation on both sequences of chapters on either side of this first break and continues thus until it has identified the number of changes requested or finds that none of the remainder are statistically significant. In fact the output shows the total chi-square value for every cut and both the actual and percentage contribution to this total of every word whose frequency shows a statistically significant change. For example, and as the full contents

of Figure 15 would show, *universal* accounts for 0.0% of all occurrences of all abfreq words in the first four chapters of FB but for 8.7% of all these occurrences in its last four chapters, a difference which represents a chi-square of 67.21. Of course such changes signal important shifts in the focus, subject and sometimes even tone of a book. No doubt a careful reader or, yet more likely, someone examining this matrix closely might identify some of these changes for himself but it is doubtful that anyone could identify all such changes or describe them in such detail as this relatively simple program.

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	PRF	EXM	ELY	PEX	P1	P2	P3	EPG
Mount Moriah	0	8	7	2	1	0	1	0
drew	0	5	4	0	0	0	0	0
rode	0	5	0	2	0	0	0	0
the knife	0	4	7	4	1	0	2	0
Sarah	0	7	11	0	0	1	4	0
the hero	0	0	8	2	3	0	9	0
the hero's	0	0	2	0	1	1	2	0
believed	0	0	13	10	1	1	2	0
Abraham	0	21	48	59	29	19	55	0
son	0	2	3	2	4	3	4	0
Isaac	0	23	17	27	7	16	21	0
Abraham's	0	9	9	6	5	1	5	0
the son	0	2	1	3	4	1	0	0
the distress	0	0	0	0	5	2	4	0
the dread	0	0	0	0	3	1	2	0
tears	0	0	0	3	8	0	8	0
universal	0	0	0	0	33	42	29	0
individual	0	0	0	5	29	38	30	1
movement	1	0	0	32	0	4	20	0
courage	0	0	0	14	1	9	15	0
narrative	0	2	0	5	1	1	4	0
of resignation	0	0	0	12	0	0	4	0
the movements	0	0	0	6	0	0	1	0
the princess	0	0	0	10	0	0	0	0
the knight	0	0	0	9	0	0	0	0
resignation	0	0	0	18	0	1	0	0

Figure 15. Abbreviated and re-ordered data matrix for FB.

Correspondence analysis is a relatively new form of exploratory data analysis which has proven extremely well suited for use with personal computers.³⁵ It is a powerful and highly specialized dual form of multi-dimensional scaling the goal of which is to represent the information contained in a data matrix in a more readily intelligible graphic display of lower dimensionality. Briefly, it uses eigenvalues and eigenvectors to compare the profiles of all word points in terms of their degree of similarity and determine their precise location in one true multi-dimensional space. It then does the same with all chapter points to determine their location in another such space. Finally, it superimposes one of these spaces upon the other to form a new joint multi-dimensional space in which all word and chapter points are arrayed in their proper relation to each other.

As already indicated, the program locates both word and chapter points according to the similarity of their respective profiles. Thus it clusters points with similar profiles into sets or clouds and separates those with the most dissimilar profiles as widely as possible throughout the available space. In fact it identifies the two most distant clusters as the termini of the first dimension, the next most distant clusters as the termini of the second, etc. Thus we can think of the dimensions of the space of a work as lines passing through its centroid or point of origin and joining clouds of points having very different profiles. Note that, unlike many earlier forms of multi-dimensional scaling, correspondence analysis makes these dimensions coincident with the actual geometrical axes of its space.

Another great advantage of correspondence analysis over other forms of multi-dimensional scaling is that it provides as supplementary information the percentage contribution of each word and chapter point to the total inertia of each dimension and indicates the pole of that dimension to which it contributes. This enables the scholar who already knows or is prepared to study the text carefully to name these dimensions. Of course the names of these dimensions together describe the ordered space of the book.

Note that it follows from the last two paragraphs that the dimensions of a space are identified by the program and are objective and real features of that space but that the names of these dimensions must be supplied by the researcher using the information provided by the program and his own preferably very considerable knowledge of the text. Briefly, the latter requires careful and prolonged reflection upon the two sets of chief contributors in order to discover what is common to these sets (the name of the dimension) and what distinguishes them (the names of the two poles). A difficult but very rewarding task!³⁶

We have already explained how correspondence analysis orders points in space and we now offer a preliminary account of how such an array can help us to understand a book. Of course everyone assumes that a book is a physical object consisting of printed pages but this is a gross confusion of the means with the message. In fact, the real book is much more like a vision in the mind of the author which he is attempting to convey to the mind of the reader through the awkward and often distorting medium of strings of linear text conforming at least generally to the local language and grammar. That vision is much more like an ordered space and can be represented more perspicuously and accurately as an array of its key words in multi-dimensional space, whether metaphorically in the mind of its author or literally as the profiles of the words and chapters (or other divisions) in the printed text. As already explained, correspondence analysis enables one to model these visions or, as I prefer, to re-create the space of the book or text in question. Briefly, it allows the user to name its dimensions,

describe its space, identify its most closely related words and concepts and, as we shall see, even construct its own multi-dimensional concordance.

It is perhaps worth noting one other reason why correspondence analysis results are so important. Books are generally read for what they say but the most important part of any book is precisely what it does *not* say. There are many reasons why such parts are regularly omitted. The author may be unconsciously or even consciously unable to write what he most wants to say. The point he wishes to make may be simply unsayable within his historical context. He may regard certain points as so obvious and self-evident that he would never think of asserting them. The last is particularly important because nothing is so difficult to see or so important to notice as the obvious. The approach we have been describing underscores the obvious and repeatedly calls attention to what the text assumes but does not explicitly say.

INTERLUDE: FROM DATA TO GRAPHICS

The preceding account attempts to explain how our software converts merely numeric data into meaningful graphics but may be too complicated and technical for some readers. We therefore pause briefly to describe a very simple example showing how one can move from mere word frequencies to a graphic display of the relations of the books in which they occur. The steps are shown in successive columns of Figure 17 and in Figures 18 and 19. We begin with the now familiar example *Du*.

Column A of Figure 17 shows the absolute frequency of *Du* in each of Kierkegaard's works ordered chronologically. Note the wealth of information and absence of or at least difficulty in discerning any trend or pattern. Column B shows these same books again ordered chronologically but this time with relative rather than absolute frequencies thus permitting meaningful comparisons between books of very different sizes. For example, it shows that *Du* is approximately 29 times more frequent in the relatively small YTS than in the very large AE but the chronological order still makes it difficult to detect any trends. Column C overcomes this difficulty by order-

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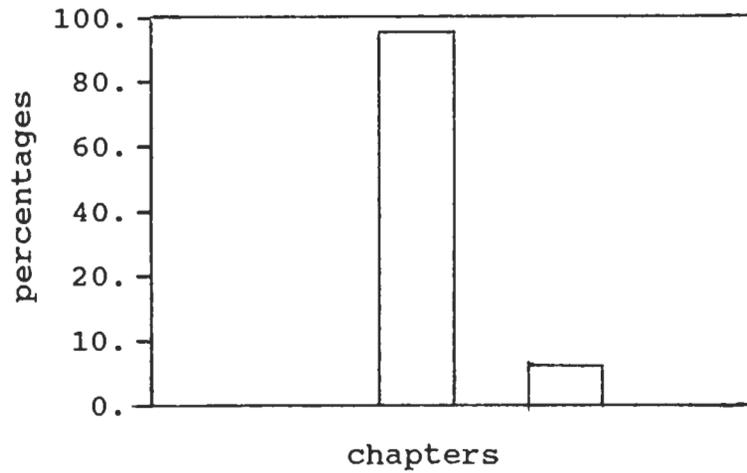
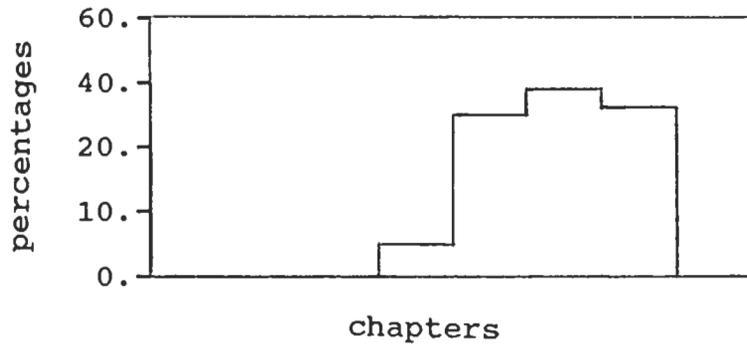
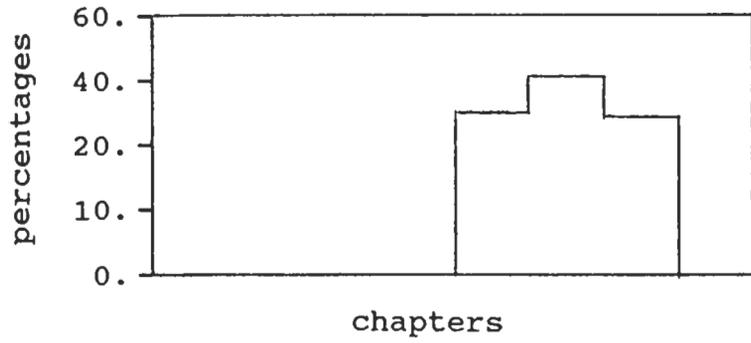


Figure 16. Profiles of *Almene*, *Enkelte* and *Resignation* in FB.

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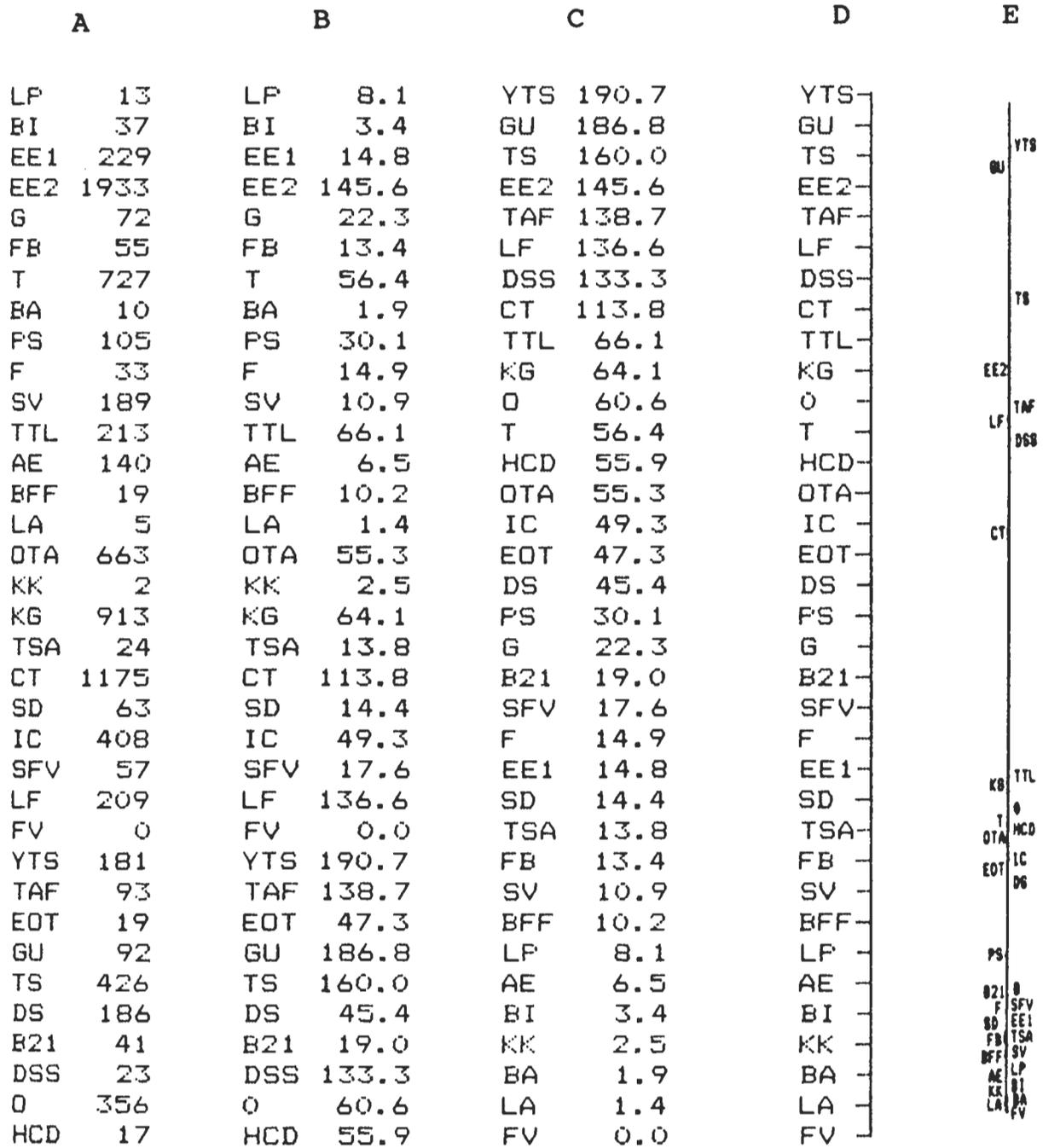


Figure 17. Comparison of various tabular and graphic displays.

ing these books according to the relative frequencies of this word. Note, for example, the large differences between the frequencies of DSS and CT and, especially, between CT and TTL. Note too the large number of works with frequency less than 10. Column D shows these books placed in this same order at regular intervals on a simple line graph and therefore actually contains less information than the preceding one. By contrast, column E plots these books using the relative frequencies of *Du* as coordinates and shows in a clear and graphic way the relation of these books to one another with respect to this particular but important attribute or property.

Figure 18 plots these same books using the relative frequencies of *Du* as the *y* and those of *man* (one, people) as the *x* coordinates. This plot shows the relations of these books to one another with respect to both these attributes simultaneously and hence is much richer than its one-dimensional counterpart. Note, for example, that the addition of *man* has separated some devotional works (T, TTL, OTA and KG) from some previously grouped "attack" works (IC, DS, HCD and O). Figure 19 adds a third dimension and arrays these points along it using the relative frequencies of *jeg* (I) as the *z* coordinates. This completes this process and produces a richer array which shows some interesting clusters (e.g. EOT, TSA and TAF, FV and SFV, and TS and DSS) but which in general does not reflect the actual relations of these works. But our real purpose in building up these two arrays is to stress that the very great difference between them and the kind produced by correspondence analysis, a difference frequently overlooked and even denied by those who fail to understand the latter. In the present two cases the points are plotted according to their relevant coordinates and the dimensions in question simply represent different relative frequencies for that variable. In short, these are simple two- and three-dimensional plots of the kind with which we are all familiar. In the case of correspondence analysis, however, the position and hence the coordinate of every point on every dimension is a complex function of the relations between its profile and that of all other points in the set. Thus correspondence analysis does not simply place

points along pre-defined dimensions but analyses the profiles of all the points to determine the dimensions of the space and the coordinates of each point on each of its dimensions. In this case the user does not tell the program where to place the points but rather provides a matrix giving their profiles and allows it to determine their space and their position within it. This is something quite different and is why, to use our own phrase, it can be used to recreate the space of a book.

Correspondence analysis allows the user to create multi-dimensional models of concepts, books and corpora as well as multi-dimensional concordances, etc. These appear to be the most important and promising results described in this study and some examples will be provided shortly. First, however, we briefly report some abfreq and change point studies which, separately and together, can tell us a great deal about the history of a concept, book or corpus.

THE USES OF ABFREQ WORDS

"Kierkegaard's Attack upon Christendom: Its Lexical History"³⁷ was one of my first and simplest abfreq-based studies and, as its title was intended to suggest, traces the history within the authorship of the words most characteristic of that attack. Briefly, it identified the first 60 abfreq words in B21, DSS, O and HCD, the four late works generally accepted as constituting this attack, and traced back through the authorship to the work in which these were first generally used in an "aggressive" sense. Our investigation showed that 45 of these words had already been so used much earlier, many as early as AE, that nine of the remaining 15 reflect the deliberately journalistic and provocative character of this attack and that another three are connected with its immediate occasion. In short, the essential vocabulary of the attack was already "on stream" or "in place" (i.e. had already been "shared" with his readers) well before the final attack itself was actually launched. Of course this means that the attack is much more closely connected with the earlier authorship than generally supposed and, I believe, suggests a new and promising interpretation of AE. Naturally it would be a very simple matter

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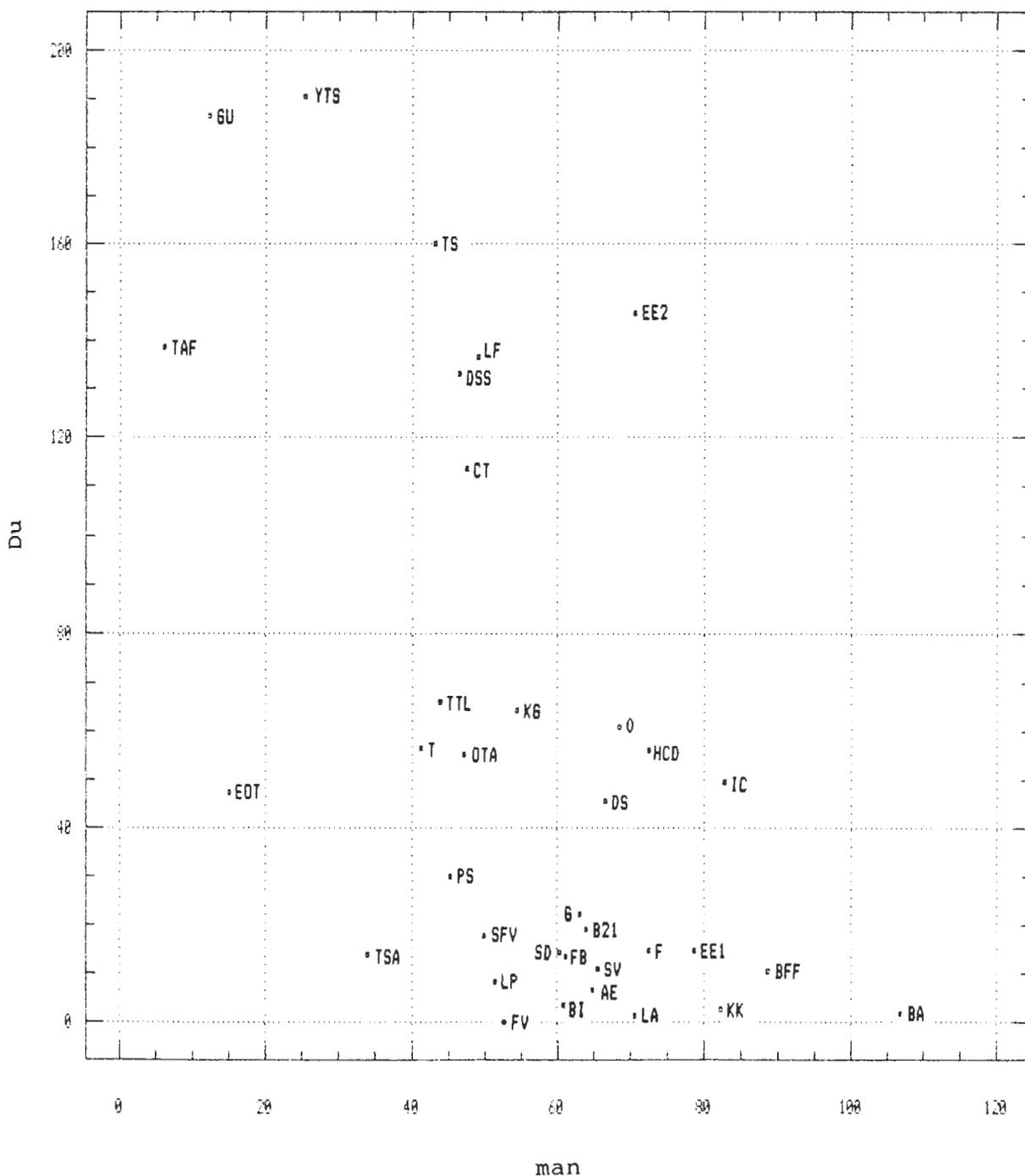


Figure 18. Books using *man* and *Du* as coordinates.

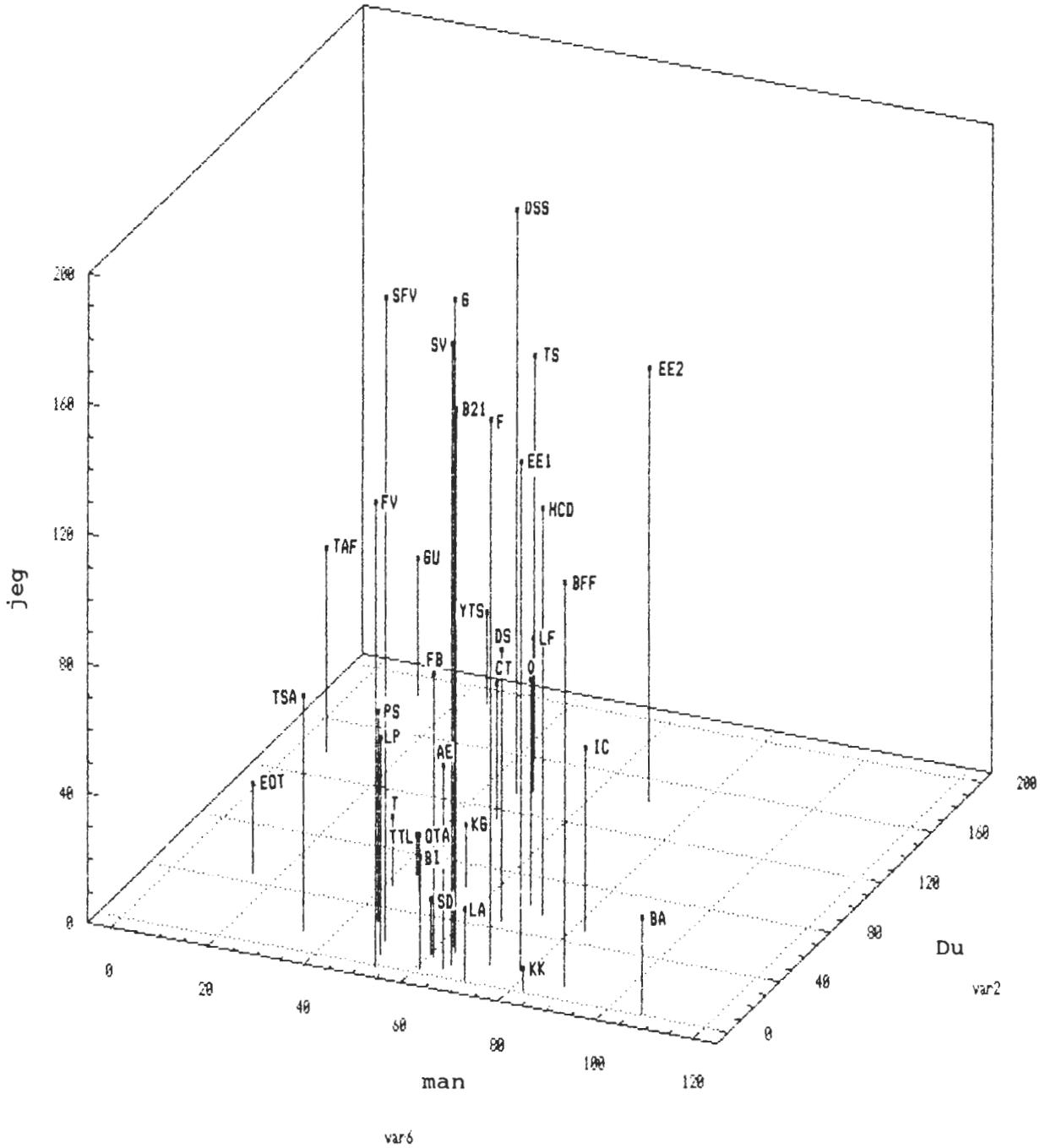


Figure 19. Books using *man*, *Du* and *jeg* as coordinates.

to adapt this method to trace the history and development of a theme in any other text or corpus.

A more recent and much more complex study identifies the abfreq words associated with God and with Christ in the 19 books of the authorship in which one or, in most cases, both figure significantly. Briefly, having identified these words in these books treated cumulatively, i.e. in the first book, in the first two books, in the first three books, etc., it then documents the "transfer" of words previously associated with one to the other. The results show that the accounts of God and Christ generally become more and more alike with the passage of time. This convergence is clearly illustrated and its rate shown in Figure 20. Of course this method can also be used to do studies of divergence or convergence of two or more characters, families, traditions, themes, etc. across a book or corpus.

A current abfreq study compares Kierkegaard's accounts of the lilies and the birds which, as in the gospels, are widely assumed to have similar characteristics and roles. Figure 21 contains two relevant short excerpts from the output of our COMPARE program which compares any two similar files, in this case the abfreq files containing the 60 words most closely associated with *Lilien* (the lily) and *Fuglen* (the bird) in Kierkegaard's four accounts of these figures. This program shows that these two lists have only 3 or 2.564% of their words in common,³⁸ namely, *anxious one*, *anxiety* and *be silent*. It is obvious then that while Kierkegaard revered both these "teachers" he nevertheless conceived and presented them in quite different ways and that an investigation of the words unique to each will enable us to tease out these differences. It is also clear that these programs can alert their user to many important and obvious differences which traditional scholarship frequently misses.

CHANGE POINT STUDIES

One of the change point studies we have done but not published uses as input the data matrix showing the frequencies of the first 60 words in the eight chapters of FB, part of which matrix has been shown as Figure 15.

As already explained, the method identifies the most important changes in these data, reports its chi-square value and that of individual words together with an indication of whether their proportional frequency is increasing or decreasing. The output of this program is necessarily extensive and, for the moment at least, not as transparent as one might wish. We have therefore devised a simple graphic which shows the five statistically significant changes in these data and which is shown as Figure 22. This graphic says that the first or most important change or shift occurred *between* the first four and the last four chapters in this book and that the chi-square value for this change is the very high 713.82. Similarly, it shows that the second and next most important change is *between* P1 and P2 on the one hand and P3 and EPG on the other and that the chi-square for this change is 345.92. Etc., etc. Note further that the original output also lists the words making the largest contributions to each of these changes together with their respective chi-squares and an indication of whether they are becoming a larger or smaller proportion of the whole. Thus it reports that *Almene* (universal), *Enkelte* (individual) and *Helt* (hero) show a proportional increase after the first change or cut, that the chi-squares of their changes are 67.21, 51.12 and 36.54 and that these represent 9.4, 7.2 and 5.1 percent, respectively, of the total chi-square of this change. Similarly, it reports that *Morijabjerget* (Mount Moriah) and *Troen* (the faith) show a proportional decrease after this cut, that the chi-squares of these changes are 35.27 and 26.44 and that these scores represent 4.9 and 3.7 percent of the total for this change. These results provide a complete and useful summary of the many changes in the proportional frequencies of key words in a text and the user who studies them carefully will find them helpful and revealing.

Another such study documented the changes in the frequencies of the abfreq words associated with *det Gode* (the Good) in the nine works in which this word occurs most frequently. Our simple graphic summary of these results is shown in Figure 23. Note that the first and second change occur immediately before and after OTA which contains Kierkegaard's only sustained treatment of this

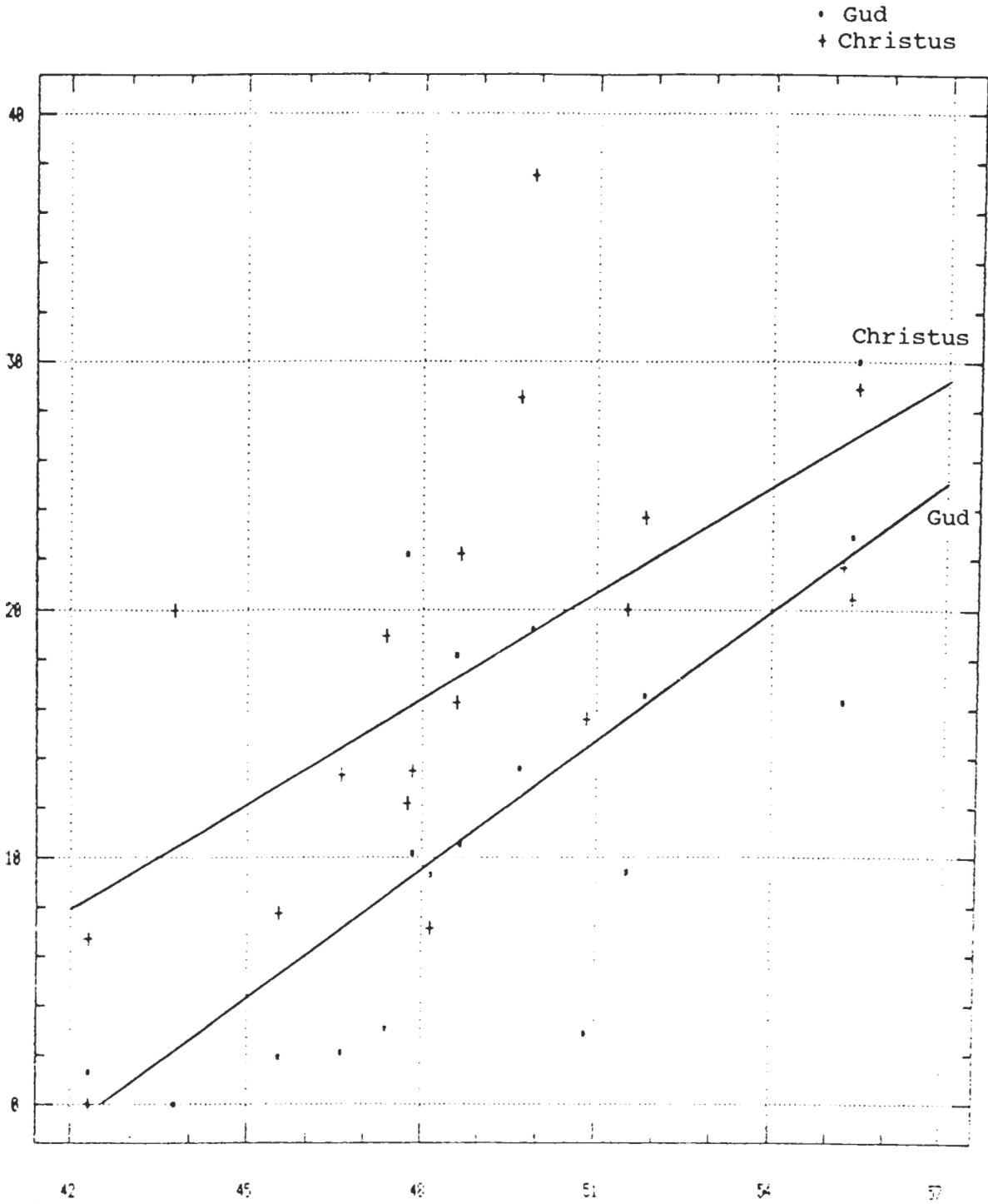


Figure 20. Convergence of *Gud* and *Christus* across authorship.

McGill's Second Kierkegaard Collection

		Afgrunden
agte		Armodens
	Bekymrede	
bekymrede		
bekymres		
	Bekymring	
Bekymringer		
Betragter		Brød
		Fuglen
Lilien		
syer		
Syerske		synger
tale		
	tier	
ubetinget		trælle
uheldigt		
Undergang		underveis
		uvidende

57 words unique to 'lil160.abf'.

57 words unique to 'fug60.abf'.

3 words appear in both files.

Percent common = 2.564 %

Index/Concordance = 0.026

Figure 21. Abfreq words peculiar and common to *Lilien* and *Fuglen*.

theme, that the dashed line indicates that none of the remaining changes are significant at the 0.05 level and that there are more and larger changes before OTA than after it. Of course the printout also shows the contribution of each word to each change, many of which are themselves statistically significant even when the overall changes themselves are not. It thus provides the user with many, many clues as

he seeks to understand and document more fully all of the various changes in the development of this or some other concept.

Another combined change point and classical chi-square study entitled *Dating Kierkegaard's Battles with Fate*³⁹ compared the respective frequencies of all forms of *Skjebne* (Fate), *Forsyn* (Providence) and

Styrelse (Governance) across Kierkegaard's *Samlede Værker* and *Papirer*, the latter as reported in Cappelørn's *Index*. The results of this study for the former of these sources are shown in a somewhat different graphic in Figure 24. Note that *Skjebne* accounts for a quite large percentage of all occurrences of these words in the writings from around 1840 but for a much smaller one in those from the end of 1851. By contrast, *Styrelse* accounts for only a very small percentage of all occurrences of these three words in the early writings but for a much larger percentage in the later ones. In fact this graph can be read as depicting a very important aspect of Kierkegaard's life and thought. Naturally, of course, similar studies can be done on other authors and their works on themes in which one is interested.

Finally, our MAP program shows the relative frequencies of a word or family of words in both tabular and graphic form. Those for the seven main forms of *Paradox* are shown in Figure 25 and Figure 26. Note that the former shows the works chronologically in three columns and uses two asterisks to indicate that these forms are most frequent in PS, that they have a relative frequency of 26.08 and so are to be given the highest shading level (8) in the map. The latter, Figure 26, arrays the works along a time line representing the years of the authorship with the acknowledged works above and the pseudonymous below. The base line of a work represents its period of composition, its total area its actual size and its shading level the frequency of these forms in this work. Note that most of the acknowledged works show no occurrences of any of these forms and that BI has only 2 and LA and O only one each. In short, they are virtually absent from the acknowledged works of the authorship.

CORRESPONDENCE ANALYSIS

The studies just described are obviously important but we think that those employing correspondence analysis have greater promise and potential. Briefly, they can recreate the space of a text, identify its clusters, name its dimensions and plot its argument; all this for any kind of text including all sentences containing some selected word or words in one

or more books, a book or set of books or even an entire corpus. We now briefly describe some of these studies beginning with two which used our own CORRESP program which is part of the collection and which accepts only a smaller input matrix.

One of my own first correspondence analysis studies used a matrix showing the frequency of Kierkegaard's 50 most common nouns in each of his 35 books to array these books in two dimensions and thus provide a very simple but reasonably accurate picture of their relation to each other and to the whole. To the best of my knowledge this array has not been previously published but I know that it hangs on the wall of several Kierkegaard scholars and I show it here as Figure 27 for any who may find it helpful in understanding the relations of the individual books to one another and to the authorship as a whole. Note that I have grouped these works and named the groups the aesthetic, the religious, the attack and the "meta" works, the last of course being the works about the works. Of all these placings the only one which seems to me at all problematic is that of AE within the "meta" works and it is clear even from this array that it might perhaps have been included instead within the aesthetic. However it contains an extended discussion of the earlier books, a final and crucial statement about their place in the authorship, was later described by Kierkegaard as its "turning point" and, at least on my reading, is among other things a preview of the attack. Of course it is possible that, given more data or a third dimension, this work might clearly separate itself from the other three in this group but with this proviso I believe that this array can be accepted as a simple, memorable and substantially accurate account of the various relations of these books. Of course I also believe that this simple approach would yield at least equally reliable results for the vast majority of other and less complex authors.

Several years ago I was invited to attempt to resolve the question whether Kierkegaard could have been the author of "Litterært Qvægsølv" ("Literary Quicksilver," hereafter LQ). For this study I used the same correspondence analysis program and the frequen-

McGill's Second Kierkegaard Collection

Cut	PRF	EXM	ELY	PEX	P1	P2	P3	EPG	chi-sq.
1.	-----	-----	-----	-----	-----	-----	-----	-----	713.82
2.	-----	-----	-----	-----	-----	-----	-----	-----	345.92
3.	-----	-----	-----	-----	-----	-----	-----	-----	311.30
4.	-----	-----	-----	-----	-----	-----	-----	-----	206.92
5.	-----	-----	-----	-----	-----	-----	-----	-----	135.54

Figure 22. Summary of changes in FB.

Cut	EE2	T	BA	AE	OTA	KG	CT	SD	IC	chi-sq.
1	-----	-----	-----	-----	-----	-----	-----	-----	-----	526.30
2	-----	-----	-----	-----	-----	-----	-----	-----	-----	401.54
3	-----	-----	-----	-----	-----	-----	-----	-----	-----	151.36
4	-----	-----	-----	-----	-----	-----	-----	-----	-----	104.12
5	-----	-----	-----	-----	-----	-----	-----	-----	-----	75.19
6	-----	-----	-----	-----	-----	-----	-----	-----	-----	70.00

Figure 23. Summary of changes in accounts of *det Gode*.

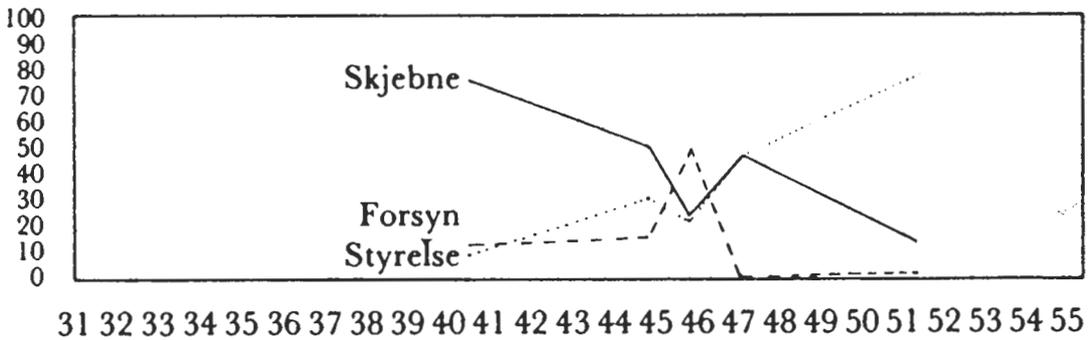


Figure 24. Changes in frequencies of *Skjebne*, *Forsyn* and *Styrelse*.

McGill's Second Kierkegaard Collection

LF:	0.00 (0)	AE:	10.13 (4)	FV:	0.00 (0)
BI:	0.19 (1)	BFF:	0.00 (0)	YTS:	0.00 (0)
EE1:	1.16 (1)	LA:	0.28 (1)	TAF:	0.00 (0)
EE2:	0.15 (1)	OTA:	0.00 (0)	EOT:	0.00 (0)
G:	0.00 (0)	KK:	0.00 (0)	GU:	0.00 (0)
FB:	18.83 (6)	KG:	0.00 (0)	TS:	0.00 (0)
T:	0.00 (0)	TSA:	4.61 (2)	DS:	0.00 (0)
BA:	0.00 (0)	CT:	0.00 (0)	B21:	0.00 (0)
** FS:	26.08 (8)	SD:	3.67 (2)	DSS:	0.00 (0)
F:	0.00 (0)	IC:	0.97 (1)	O:	0.17 (1)
SV:	0.06 (1)	SFV:	0.00 (0)	HCD:	0.00 (0)
TTL:	0.00 (0)	LF:	0.00 (0)		

Figure 25. Frequencies of main forms of *Paradox*.

cies of the comma, semi-colon, colon, period, exclamation and question mark which earlier tests showed to be his most sensitive punctuation discriminators. The correspondence analysis plot for LQ and nine of Kierkegaard's similar short writings from the same period are shown in Figure 28 and that for LQ and all of his 35 books in Figure 29. Note that in both cases LQ stands clearly apart from all the other texts and is distinguished mainly by its higher number of exclamation and question marks. This, together with the results of chi-square tests for the nine similar pieces, prompted me to conclude that it is extremely unlikely that this work could have been written by the author of these pieces or, indeed, of Kierkegaard's published writings. The need for and importance of authorship determination methods is obvious; this one has the advantage of providing both a probable answer and an explanation of its basis.

More recently I have used Professor Michael Greenacre's SimCA program to analyze a matrix containing the frequencies of the 250 most common nouns and names in 34 books⁴⁰ of the corpus. The purpose of this study, published as "Mapping the Dimensions of a Literary Corpus,"⁴¹ was to name the first eight dimensions of the authorship and thus shed light on its underlying oppositions and structure. A very brief and somewhat updated graphic summary of these results is provided

in Figure 30. Note that these eight dimensions account for 63.7% of the information in the input matrix and together presumably describe the most important of its many famous dialectical emphases. For example, the first line says that the strongest contrast or opposition in the authorship is that between the many early aesthetic and the middle period religious works and that this dimension accounts for 29.60% of the information in the original matrix. The fifth says that it presents the two main forms of the God relation as faith and despair and that this accounts for 9.02% of this information.

Yet more recently I have used this same program in an attempt to gain some insight into Kierkegaard's much celebrated but, I believe, very perplexing FB. In this study I analysed a matrix showing the frequencies of the first 124 abfreq words in each of its eight chapters using the same abbreviations as before. That study is not yet finished but I believe that I have succeeded in naming the first seven dimensions of this work. These are shown in a similarly simple form in Figure 31. The first line suggests (correctly and obviously) that the main division within this work is that between the accounts of Abraham's deed and those of the problems arising, especially that of his silence. The fifth line (and dimension) underscores the crucial fact that this work contains two quite different

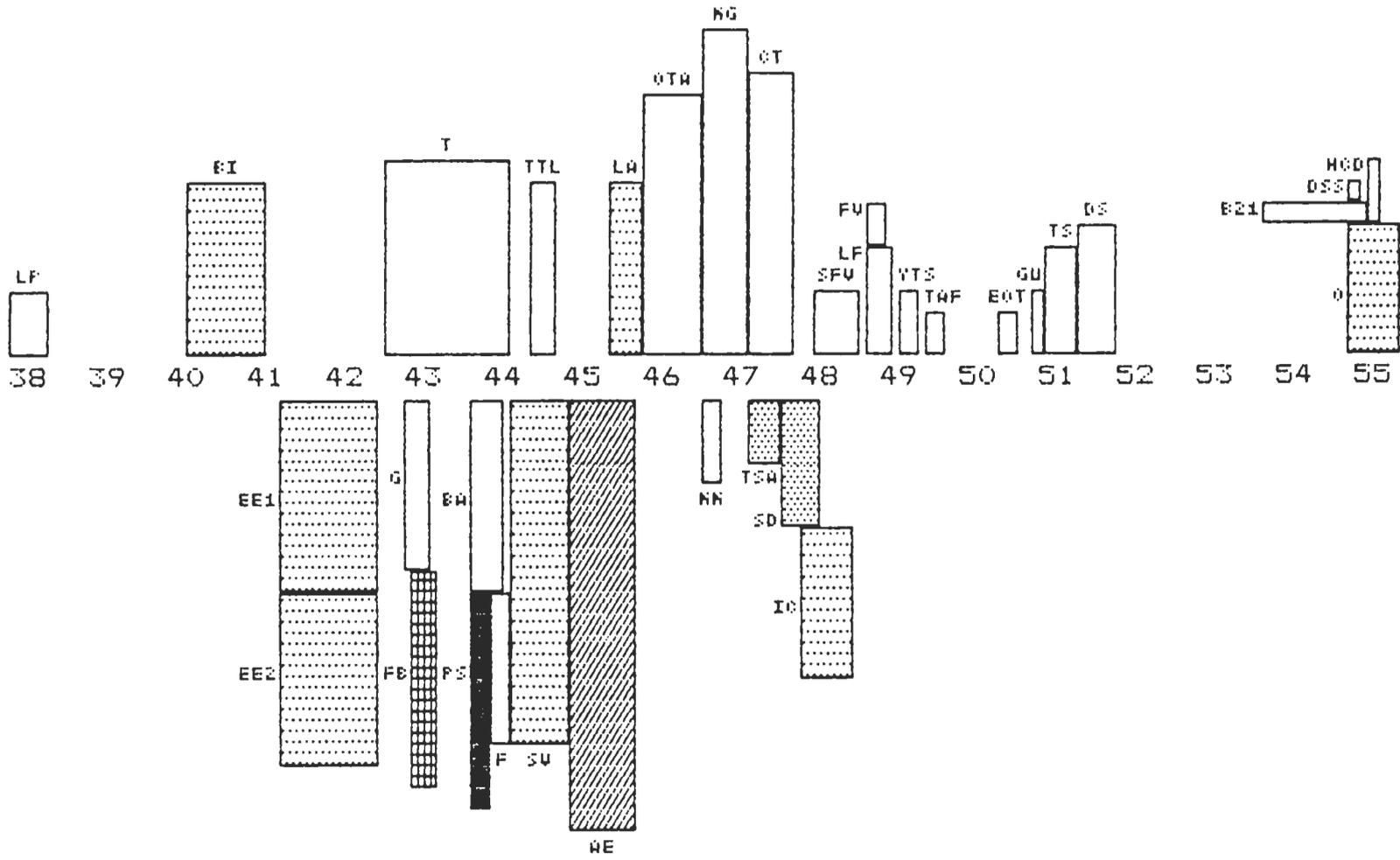


Figure 26. Main forms of *Paradox* in works of corpus.

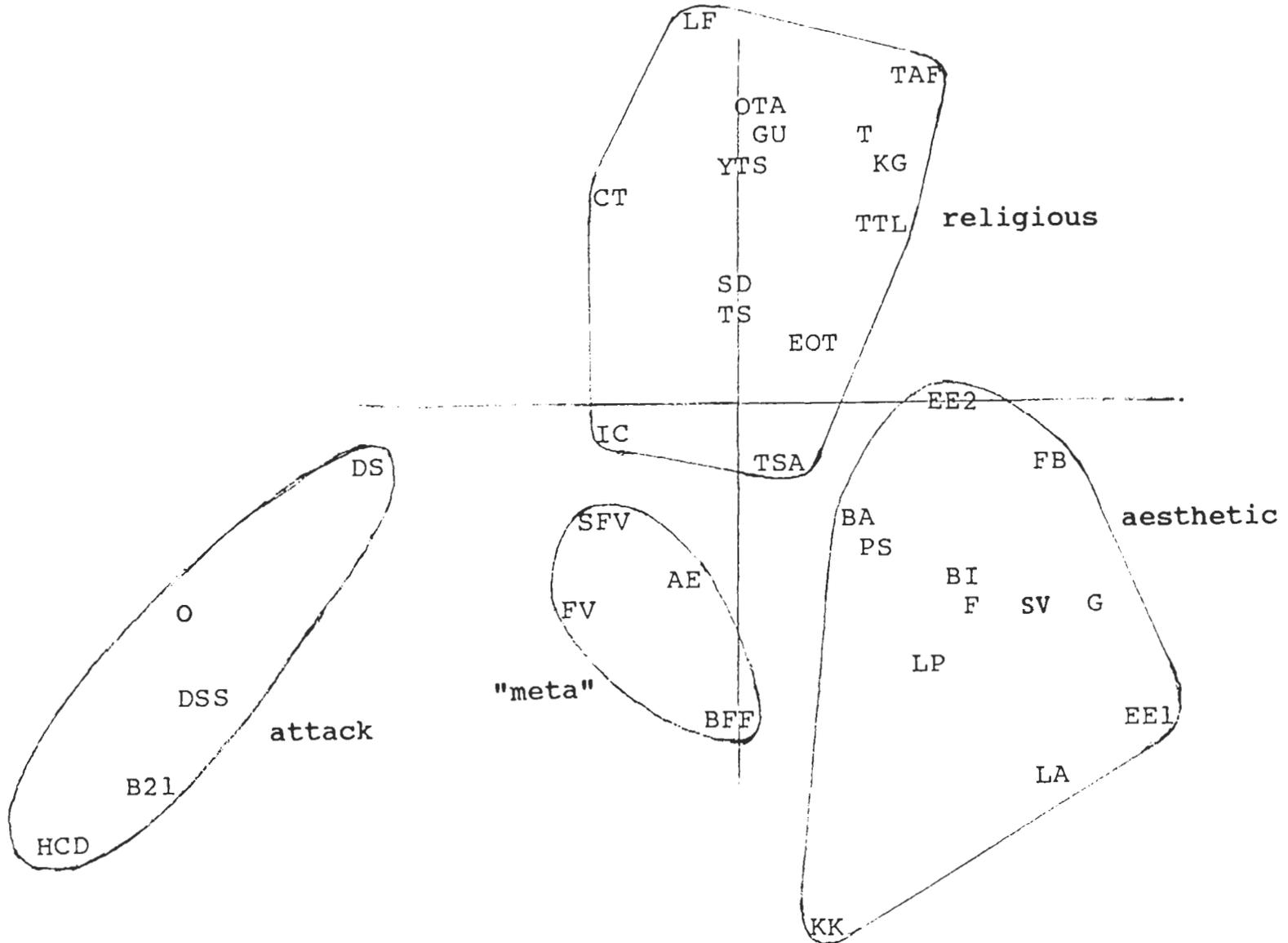


Figure 27. Array of works using frequencies of 50 most common nouns.

McGill's Second Kierkegaard Collection

C2	;
C6 C1 C4	LQ
C7 C9 C3 C8	C5 ? !
:	

Figure 28. Array of LQ and nine similar works using punctuation.

:	FV
YTS	KK SFV LA
HCD B21 ØOTA	AE BI
EOT IC	SD
TAF DS LF	LPTSA BFF EE2 BA
TS	TTL ;CTKG FSVFB EE1
GU	T PS
!	?
LQ	G

Figure 29. Array of LQ and works of corpus using punctuation.

McGill's Second Kierkegaard Collection

# +	Dimension	-	%
1. early aesthetic.....	MAIN THEMES.....	middle religious	12.85
2. aesth. & relig.....	THE WHOLE AUTHORSHIP.....	attack	9.81
3. love the neighbour.....	ENDS OF MAN.....	worship God	9.14
4. of society.....	PATHOLOGY.....	of self	7.58
5. faith.....	THE GOD RELATION.....	despair	6.99
6. as status.....	THE INDIVIDUAL.....	as task	6.59
7. God.....	OBJECTS OF DEVOTION.....	the Good	5.78
8. the individual in time.....	TIME.....	the God in time	4.93

Figure 30. The first eight dimensions of Kierkegaard's authorship based on frequencies of 250 most common nouns and names.

# -	Dimension	+ %	
1. problems, esp. silence....	MAIN THEMES.....	Abraham's deed	29.60
2. ethical.....	RIVAL PERSPECTIVES.....	religious	23.93
3. his silence.....	JUSTIFICATION OF ABRAHAM.....	his deed	21.13
4. ethical.....	JUSTIFICATION OF HIS DEED.....	religious	11.01
5. unbeliever.....	ACCOUNTS OF ABRAHAM.....	believer	9.02
6. resignation.....	SILENTIO'S DISTINCTION.....	faith	3.59
7. "beyond faith!".....	RIVAL VIEWS OF FAITH....	"highest passion"	1.71

Figure 31. The first seven dimensions of FB using 124 abfreq words.

accounts of Abraham, the first as unbeliever and the second as believer.

Figure 32 shows the space of FB in terms of its first three dimensions and traces the course of its "argument" through this space. Note that it begins with the Preface which appears to point to the justification of Abraham's deed from a religious perspective, moves to the Exordium where Abraham is presented as an unbeliever and from an ethical point of view, then to the Eulogy where he is presented as a believer and apparently from a less strictly ethical perspective. It then moves to the Preliminary Expectoration in which Johannes *de silentio* introduces a notion of faith which includes but goes beyond that of mere resignation. It next moves to the discussion of the problems raised by Abraham's deed (Problem 1 and Problem 2) and, espec-

ally, his silence (Problem 3), all considered from a mainly Hegelian ethical perspective, rather than Silentio's own properly religious perspective. Finally, it moves back to the Epilogue thus ending virtually where it began. Of course none of us can visualize more than three dimensions simultaneously but note that any three of these seven can be combined in such an array and the argument of the book traced through its space thus re-created.

In fact this same study had another and perhaps even more important outcome. Long and detailed study of its results and careful comparison with the text eventually led me to see that this program had actually given me what can only be called a multi-dimensional concordance to this work. Of course it has been widely assumed for more than twenty years that computers were ideally suited to produce

concordances just because they reproduce fragments of the original linear text. In fact I now see that this is precisely why they have not met and cannot meet our expectations. As I have already argued, books are not strings of linear text but rather visions in the minds of their author, visions which are best understood as arrays of their key words in multi-dimensional space. Correspondence analysis enables us to recover that vision or recreate that space and so provides a multi-dimensional concordance giving the context of any word in three quite new and different senses of that word. These I describe as the spatial, the overall and the role/sense context. The first is the *position* of the word in the named and ordered space of the work, the second the desired number of words closest to the word in the full space of the work and the third the desired number of words associated with that word in one of its various roles or senses and lying within a "cone" of the space radiating from its origin, adjacent to the vector of that word and running out to the edge of the space.

These new and different kinds of context can be illustrated with examples from FB the basic story of which is familiar to all. "Abraham" lies in the "Abraham's deed" (as opposed to the "problems arising") area of the work, has as its overall context the words son, should, father, God, Isaac, soul, God's, deed, was tried, the best, sacrifice (n.), etc. and as its role/sense context the words drew, expectation, Mount Moriah, rode, the mother, was tempted, Sarah, the knife, the Lord, etc. I believe that no one with a thorough knowledge of this text will deny the accuracy or relevance of any of these contexts. Consider, for example, that the accounts of Abraham as doer of the deed typically report that he was tempted (*fristet*) by the Lord (*Herren*) while those dealing with the problems arising say instead that he was tried (*forsøges*) by God (*Gud*). Note, too, that the words comprising the overall context (i.e. those connected with Abraham as he is presented in the book as a whole) are quite distinct from those comprising the role/sense one (i.e. those connected with him as "doer of the deed") and that, in principle at least, it is possible to provide all these contexts for any word in the original

text. Finally, note that this concordance helps the reader distinguish the different roles or senses of a word rather than simply confronting him with all its instances as they happen to occur in the text. In fact it represents a very great advance over the traditional linear concordance and in a better and different world would shortly replace it.

Of course this proposal to replace linear concordances with multi-dimensional ones represents a re-thinking of an earlier and important part of this entire project. In fact I now see that we should go back even further and return to the pseudonyms project with which it all began. The reason is obvious. Correspondence analysis can array the various pseudonyms in multi-dimensional space and thus provide a much more subtle, detailed and accurate account of their relation to Kierkegaard and to one another than the essentially one-dimensional one we produced in 1967. Of course this means going back to the beginning but there is nothing wrong with that. As an older Danish friend has always said, and as our own models of Kierkegaard's works have constantly shown, "all good books end where they begin."

PRINTED PAGE OR COMPUTER SCREEN?

Much of the preceding has described various programs and studies designed to help one discover and identify structures, patterns and connections within text and we now take the further and apparently outrageous step of suggesting that the computer screen is in many respects actually better suited for serious scholarly reading than the familiar printed page or, at the very least, that it has certain very important advantages. Of course many will dismiss this as unthinkable heresy but this is perhaps because they simply associate reading with books and fail to distinguish between reading for pleasure and reading for serious scholarly purposes. In fact, alleged eye problems, radiation hazards and hard chairs notwithstanding, the computer screen offers the scholar a number of important advantages which we detail in terms of the present collection and as briefly as possible.

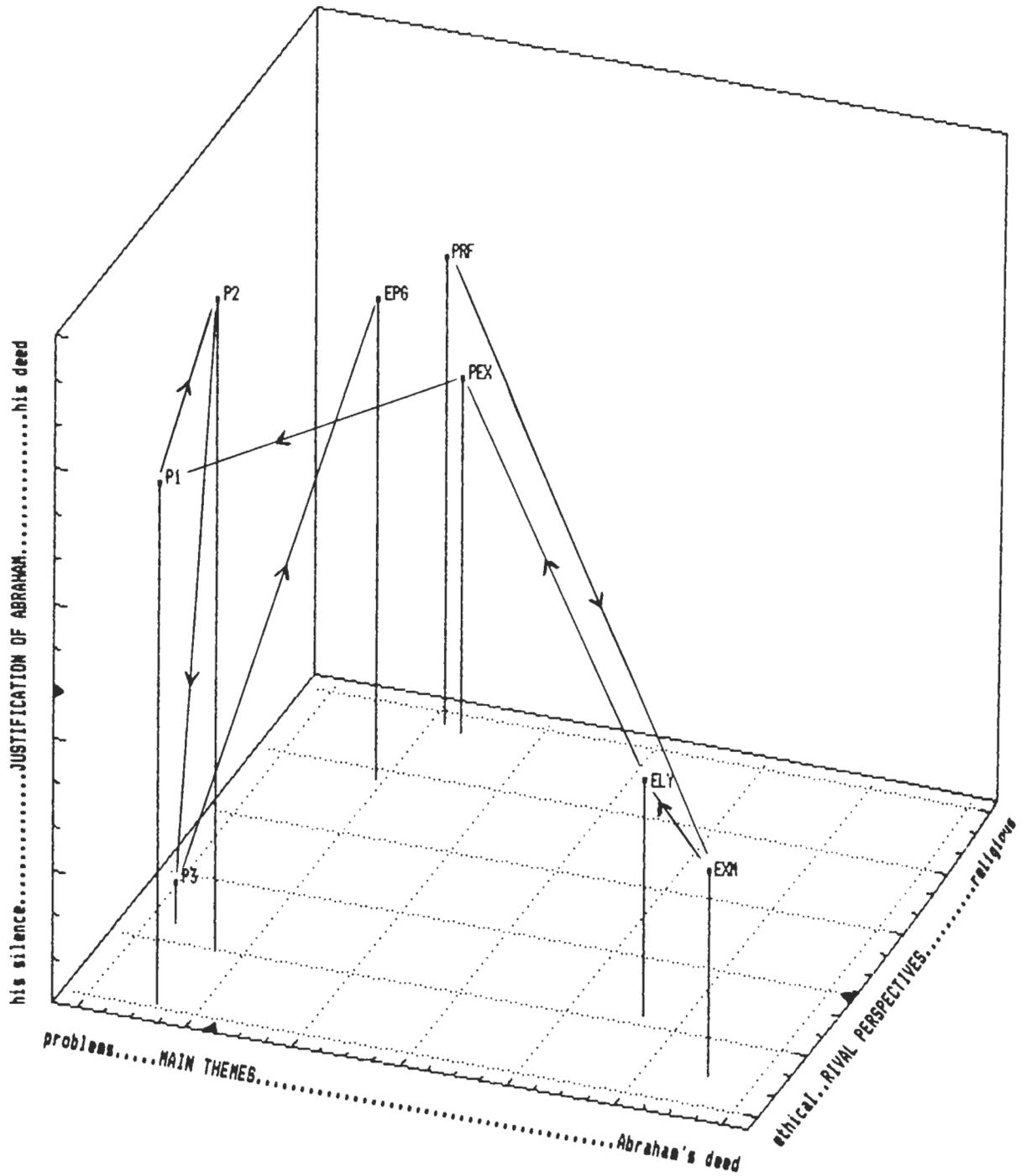


Figure 32. The "argument" of FB plotted in three dimensions.

The scholar using our display and search program can readily locate every occurrence of a given word in one or all texts of the third or "base" edition and instantly obtain on request its precise location in any or all of the "secondary" editions included in this collection. For example, he can display KG on the screen, type *Bedrag* (deception) on the status line and examine at his own pace every occurrence of this word in its complete context and, if he wishes, immediately consult another edition or translation of his choice. This is immensely faster than the traditional visual search and much less prone to distraction by other interesting passages.

Of course he can also locate and display every occurrence of a given concept as distinct from its various word forms. For example, he can type the string *edrag* and see in succession and at his pleasure every occurrence of every form of the concept deception (deception, deceptions, the deceptions, of deception, to deceive, deceive, deceived, deceiving, deceptively, etc.). Obviously this is very important for the scholar attempting to sense or taste the full range of the concept he is investigating.

Note that both the searches described above allow the user to obtain the location of the current instance in another edition or translation of his choice. This provides simultaneous and immediate access to both the original text and one's most trusted translation, saves much time, effort and confusion, rightly acknowledges the primacy of the original text and frees the user from undue dependence upon the translator.⁴²

Of course the scholar can also request the program to display any specified page and line in the text. In fact it will do this in a fraction of the time it takes one to find the same location in the printed text and at the same time provide any or all "secondary" references as a bonus.

Note that another program in the collection allows the user to extract the line, three lines, sentence or paragraph containing some specified word or words, save these extracts in a file showing their location in the "base" and some other edition and print out this file for subsequent study, notation and comment.

Further, another simple program allows the user to define any block of text and send it to a word processing program or editor for inclusion in a scholarly paper or book together with the secondary reference of his choice. Depending upon the amount of text involved, the saving in time and effort can be substantial. Of course one may xerox printed texts but the results are rarely suitable for pasting into a paper.

Finally we note that a number of electronic texts are already significantly cheaper than their printed counterparts and that their prices will almost certainly continue to decline. Indeed the difference is already so great that, all the old prejudices notwithstanding, it may soon do more to persuade scholars to use electronic text than all the considerations cited in this account.

CONCLUSION

All scholars know how to use traditional collections but this one is very different and consists of two separate though connected parts. We conclude by commenting briefly upon their present and possible uses both here at McGill and in the wider world of scholarship.

Imagine a scholar attempting to solve the question of Kierkegaard's use of *Spring* (leap) or of his even more difficult notion of *Anfægtelse* (spiritual trial [?]). One having access only to the Malantschuk collection would almost certainly begin with the works containing earlier uses of these terms with which Kierkegaard was known to be familiar and by which he was probably influenced. He would probably also consult Molbech's *Dansk Ordbog*, the 1819 Danish translation of the New Testament, etc. By contrast, one having access also to our second collection would, in the first instance at least, probably use it in one or more of the ways we have described in an attempt to understand more clearly how Kierkegaard actually used these words in his own works. Briefly, the Malantschuk collection gives insight into the historical background while the second collection provides new ways of discovering connections within the text. Hence, though very different, the

would seem to be that it comes from and points to the future.

The reader is reminded that the software now included in this collection can be used only with the Kierkegaard or other similarly formatted text but that a version for use with free format text can be made available. In fact, Kierkegaard computer studies are already in relatively good shape at McGill and my main concern in recent years, and certainly my chief purpose in providing this account, has been to encourage my colleagues in the humanities to venture into this field, mainly by providing tools for their use. Of course computer studies of text continue to be demanding and it is still true that faint heart never won fair lady. However, compared with the past, they are now relatively easy. Depending upon the quality of the original, text can now be scanned with around 96% accuracy and computer proof-reading programs can raise this to 99.9%, punctuation being the chief remaining problem. A proven set of formatting conventions have been established and others are possible. Software is available and I am of course prepared to provide assistance with its use. I would however make one point which is so important that it must be mentioned separately.

This account has consisted mainly of brief descriptions of the results of some of my own studies because I could not think of any other or better way to describe this software to colleagues in the humanities but I want to stress as strongly as possible that it was not designed primarily for any such specific studies. In fact it consists of approximately 30 separate programs most of which are basic tools designed to be put together in a variety of ways and intended primarily to allow and indeed encourage the user to indulge and follow his imagination; in fact, this is the chief reason I have always resisted pressure to combine them into a pretty menu-driven package. My own studies have now been recognized and, though no doubt applicable to other authors, do not need to be repeated. Of course this software will always be here at McGill but it will be more than an historical curiosity only if others find new and different ways of using it. I therefore encourage my colleagues to take

up the challenge; after all it will be their use of these tools which, in the long run, will determine the worth and importance of this aspect of the collection.

Finally, a word about the relation of the university to the past and the future. Humanists of course have a systematic bias in favour of the past which is why they always think of collections as consisting of old documents. Of course the past is important and those who do not learn from it are condemned to repeat it, a truism which has a darker side which many prefer to overlook. But we humanists also need to learn to think more seriously about and plan for the future. We need to ask if there are not better ways of doing the important work we have been given and, if there are such ways, to learn to use them. I recall a brief but magic moment which happened only recently. After a long and serious discussion, the editor of Denmark's oldest and largest publishing house interrupted the formalities of our parting to say how interesting it had been to talk with someone who thought "not of next Thursday but of the next century." As we say, "That made my day."

* * * * *

APPENDIX A

Title codes of works used in this account.

LP	Af en endnu Levendes Papirer	[From the Papers of One...]
BI	Om Begrebet Ironi	The Concept of Irony
EE1	Enten – Eller. Første halvbind	Either/Or, vol. 1
EE2	Enten – Eller. Andet halvbind	Either/Or, vol. 2
G	Gjentagelsen	Repetition
FB	Frygt og Bæven	Fear and Trembling
T	Atten opbyggelige Taler	Eighteen Edifying Discourses
BA	Begrebet Angest	The Concept of Dread
PS	Philosophiske Smuler	Philosophical Fragments
F	Forord	[Prefaces]
SV	Stadier paa Livets Vei	Stages on Life's Way
TTL	Tre Taler ved tænkte Leiligheder	Thoughts on Crucial Situations ...
AE	Afsluttende ... Efterskrift	Concluding Unscientific Postscript
BFF	Bladartikler, ..."Forfatterskabet"	[Articles about the Authorship]
LA	En literair Anmeldelse	Two Ages
OTA	Opbyggelige Taler ... Aand	Purity of Heart, Gospel of Suffering
KK	Krisen og en Krise ... Liv	Crisis in the Life of an Actress
KG	Kjerlighedens Gjerninger	Works of Love
TSA	Tvende ... Smaa-Afhandlinger	Two Minor ... Discourses
CT	Christelige Taler	Christian Discourses
SD	Sygdommen til Døden	The Sickness Unto Death
IC	Indøvelse i Christendom	Training in Christianity
SFV	Synspunktet ... Forfatter-Virksomhed	The Point of View ... an Author
LF	Lilien paa Marken og Fuglen ...	"The Lilies of the Field and ... "
FV	Om min Forfatter-Virksomhed	On My Work as an Author
YTS	"Ypperstepræsten" ... "Synderinden"	"The High Priest'... '... Sinner'"
TAF	To Taler ved Altergangen ...	Two Discourses at the Communion .
EOT	En opbyggelig Taler	"An Edifying Discourse"
GU	Guds Uforanderlighed	God's Unchangeableness
TS	Til Selvprøvelse, Samtiden anbefalet	For Self-Examination
DS	Dømmer selv	Judge for Yourself!
B21	Bladartikler 1854-55 I-XXI	Newspaper articles, 1854-5
DSS	Dette skal siges; ...	"This must be said ..."
O	Øieblikket, nr. 1-10	The Instant, nos. 1-10
HCD	Hvad Christus dømmer ...	"What Christ thinks ..."

APPENDIX B

Notes

Chapter titles of FB, modifications and abbreviations used in this account

1. PREFACE		
Preface		PRF
2. EXORDIUM		
Exordium		EXM
3. EULOGY ON ABRAHAM		
Eulogy		ELY
4. PRELIMINARY EXPECTORATION		
Preliminary Expectoration		PEX
5. PROBLEMA I		
Problema 1		P1
6. PROBLEMA II		
Problema 2		P2
7. PROBLEMA III		
Problema 3		P3
8. EPILOGUE		
Epilogue		EPG

* * * * *

1. In all honesty I must report that both the University of Copenhagen and St. Olaf College in Minnesota, the other two major centres of Kierkegaard research, also have book and computer collections. However this one was created at McGill and can truly be described as a McGill collection.

2. This collection, including the text and software, together with all the research summarized in this account, was made possible by continuing grants from the Canada Council, the Humanities Research Council of Canada and, at times of particular difficulty, the Faculty of Graduate Studies and Research of McGill University. The four volumes of *The Kierkegaard Indices*, also briefly described, were published with assistance from the Humanities Research Council of Canada. I take this opportunity to record my sincere thanks to these agencies and, particularly, to the late Dean Walter Hirschfeld and Dean Gordon MacLachlan and, for constant support during the early stages of this work, to the staff of the McGill Computing Centre, especially Professor David Thorpe, its former director.

3. This collection was donated to McGill University in March 1988 with the encouragement of the late Dean Richard Salisbury and is available to members of the University at the Faculty of Arts Computing Laboratory in the Leacock Building together with a manual for its use. Of course I should be glad to help anyone wishing advice about the use of any of this text or software. I also note that the Laboratory now has similar resources for the study of Wittgenstein.

4. This and the other title codes identifying Kierkegaard's various works are explained in Appendix A.

5. Kierkegaard's *Samlede Værker* has been published in three separate editions only the last of which is now widely available. Our computer version contains many corrections but generally follows the pagination and lineation of this edition which is therefore treated as our "base" printed text. I am happy

to take this opportunity to record my deep thanks to Gyldendalske Boghandel of Copenhagen for the gift of several copies of this edition over the many years of this work.

6. Note that the first six columns of this line actually read "00913M" and that the use of such "leading code" in computer text has many important advantages. In fact, our display program "hides" this information and shows it instead on the status line in order not to interfere with the reading of the text.

7. "Column 01" means that the cursor is presently in the first column of this line and "Replace" that this older program was then in the "Replace" mode, i.e. that it would permit corrections to the text. It has now been replaced by a more recent version which accepts changes only after the user has supplied the correct password.

8. This corresponds to the main divisions of a book and hence to the various levels of indentation found in a good table of contents to a complex work.

9. This important piece was added to AE and, on his instructions, originally printed on unnumbered pages.

10. "There is something inexplicably felicitous in the antithesis: Climacus – Anti-Climacus, I recognize so much of myself and my nature in it that if someone else had invented it I would believe that he had secretly observed my inner being. – ..." *Søren Kierkegaard's Journals and Papers*. Ed. Howard V. Hong and Edna H. Hong. (Bloomington: Indiana University Press, 1978): 6532.

11. Alastair McKinnon, *Kierkegaard's Critique of Rationalism* (University of Edinburgh, Ph.D. thesis, 1950), 53.

12. This error resulted from two decisions innocent in themselves but fatal when taken together. Briefly, we defined a "pair-word" as one found in any Kierkegaard sample but in only one pseudonymous one and at the same time chose two samples from Johannes Climacus, one from his PS and the other from his AE. These decisions, taken together, reduced the ratio for the author of AE to slightly less than that for the author of EE1.

13. The notable exceptions, of course, are those who, for their own reasons, deliberately restrict their attention entirely to the pseudonymous works, often implicitly identifying one or other of these with Kierkegaard.

14. Alastair McKinnon, "Kierkegaard's Pseudonyms: A New Hierarchy," *American Philosophical Quarterly*, 6, 2, (1969): 124.

15. The Kierkegaard Indices consist of the following four volumes: Alastair McKinnon, *Kierkegaard in Translation: en Traduction: in Übersetzung* (Leiden, Brill, 1970); Alastair McKinnon, *Konkordans til Kierkegaards Samlede Værker* (Leiden, Brill, 1971); Alastair McKinnon, *Index Verborum til Kierkegaards Samlede Værker* (Leiden, Brill, 1973) and Alastair McKinnon, *Computational Analysis of Kierkegaard's Samlede Værker* (Leiden, Brill, 1975).

16. These are slightly larger than the comparable figures reported for this corpus in volume IV; the differences are due almost entirely to the subsequent inclusion of all Greek text.

17. Henry Kučera and W. Nelson Francis, *Computational Analysis of Present-Day American English* (Providence, Brown University Press, 1970).

18. Alastair McKinnon, *Computational Analysis of Kierkegaard's Samlede Værker* II, column 1.

19. Alastair McKinnon, "Kierkegaard's Remarks on Philosophy," *Journal of the History of Philosophy* XI, 4 (1973): 513-522.

20. Alastair McKinnon, "Theological Focus in Kierkegaard's *Samlede Værker*: Some Basic Data," *Studies in Religion/Sciences Religieuses*, 4, (1974-75): 58-62.

21. This date represents the midpoint between the date of commencement and completion and has been calculated for every work on the basis of the information provided in Alastair McKinnon and Niels-Jørgen Cappelørn, "The Period of Composition of Kierkegaard's Published Works," *Kierkegaardiana*, (1974): 133-146.

22. The relative frequency of a word is its frequency in the unit in question divided by the

number of word-tokens in that unit, itself divided by the figure (e.g. 100, 1,000, etc.) yielding the most appropriate result. In this case the figure used was 100 but in retrospect it seems that a larger number would perhaps have been better.

23. Alastair McKinnon, "The Increase of Christian Terms in Kierkegaard's *Samlede Værker*," *Kierkegaardiana* (1974): 147-162.

24. By "neutral" I mean terms which in general at least reflect preoccupation with as distinct from advocacy of Christianity. These words are listed in the study in question.

25. Niels Jørgen Cappelørn and Alastair McKinnon, "Kierkegaard's Literary Production by Quarterly Rates," *Danske Studier* (1982): 21-34.

26. Alastair McKinnon, "A Method of Displaying Differences between Various Accounts of an Object," *revue CIRPHO review* (1974): 31-57. At the request of Alessandro Cortese a later version of this study was published as an introduction to such work for Italian scholars; see Alastair McKinnon, "Three Conceptions of Socrates in Kierkegaard's Writings," *Kierkegaard Oggi* (Milano, Vita e Pensiero, 1985): 27-39.

27. KYST is the acronym for the Kruskal-Young-Shepard-Torgerson multi-dimensional scaling program written by Dr. J. B. Kruskal, Bell Telephone Laboratories, Murray Hill, N.J. and Dr. F. W. Young, Psychometric Laboratory, University of North Carolina, Chapel Hill, N.C., assisted by Judith B. Seery, Bell Telephone Laboratories, Murray Hill, N.J.

28. Alastair McKinnon, "Kierkegaard's Perception of the Bible," *Kierkegaardiana* (1980): 132-147. This study was based upon information contained in Paul S. Morimoto and Paul Minear, *Kierkegaard and the Bible: An Index*," Princeton (1953).

29. I say more about this below in connection with the notion of the "space" of a text but meanwhile remark that our current understanding of intelligence appears to be as skewed as the Stanford-Binet test which, as Prof. Howard Gardner has been recently pointed out, is really only a measure of the

candidate's ability to move quickly from one item to another and does not touch any of at least seven other aspects of intelligence, one of the most important of which is the ability to conceive relations in spatial terms. Another sign of this same bias: not long ago a distinguished philosopher confessed to me that he could not read or understand even the simplest time vs. temperature chart. What have our philosophers and educators done to us? To what end or purpose? And for whose benefit?

30. Alastair McKinnon, "Aberrant Frequency Words: Their Identification and Uses," *Glottometrika* 2 (Bochum): 1980 108-124. G.L.M. Berry-Rogghe is generally credited as being the first to conceive and implement the basic idea and it is perhaps not to my credit that I was not aware that she had done so. The solution to the problem of words having an expected frequency = < 20 has been devised by David Sankoff to whom I am most grateful.

31. This table was constructed from a table of Poisson probabilities in a way which assures that the probability of rejecting the null hypothesis is about 5% evenly distributed between the two tails of the distribution.

32. Note that the package also includes a program allowing the user to edit the first of these files and that it saves an updated version of both if any changes are made.

33. Note that, though abbreviated, this list extends down to the sixtieth word, this because our own correspondence analysis and change point programs can accept matrices of only up to 36 rows and 60 columns. Later in this report we describe some more recent studies of this book based upon a matrix using its first 124 abfreq words.

34. Note that the dotted lines in this figure represents Z scores of 1.96 and hence that the frequency of *Du* in all works shown above or below these lines is significant at the conventional 0.05% level.

35. Given present attitudes to this approach it is perhaps worth noting at the outset that correspondence analysis is not merely a current French fashion but has a long and honourable history and was described and advocated in important publications on the

subject by Hirschfeld in 1935 and Fisher in 1940. The basic method has been "discovered" at least eight times and the currently celebrated version of J.-P. Benzécri is actually only one of the most recent ones. The present success and status of this version owes much to the energy and dedication of Benzécri and his disciples and, in the English speaking and wider world, to Michael J. Greenacre's *Theory and Applications of Correspondence Analysis* (London: Academic Press, 1984) but it seems also to be due in part to a number of other factors such as the following: the recent widespread use and availability of personal computers, particularly the IBM PC and its clones; the existence and availability of a number of relatively simple and friendly programs; the recent growth in and acceptance of multi-dimensional scaling; the discovery and increasing enthusiasm for exploratory data analysis as opposed to classical statistics; and the new interest in graphical forms as ways of presenting the results of statistical investigations.

36. For a fuller account of correspondence analysis at least as applied to literary text see Alastair McKinnon, "Mapping the Dimensions of a Literary Corpus," *Literary and Linguistic Computing* (1989) 73-84. Of course the reader wishing to gain a real understanding of this approach should read Greenacre's book cited in note 35 above.

37. Alastair McKinnon, "Kierkegaard's Attack upon Christendom: Its Lexical History," *Toronto Journal of Theology* (forthcoming).

38. The program also reports an index of concordance which expresses the number of actual common words as a proportion of the number of possible common words and is useful for comparing lists of different lengths. When both lists are the same length the two final scores are for practical purposes identical.

39. Alastair McKinnon, *Dating Kierkegaard's Battles with Fate*, (København, Det Kongelige Danske Videnskabernes Selskab, 1986).

40. All my early results in this study were seriously skewed and showed BI as a far

outlier. Many tests showed that its noun profile was radically different from that of any other work and I finally decided to delete it on the ground that it was his thesis and thus not part of the authorship. I take some comfort in the fact that Kierkegaard himself never treated it as such.

41. Alastair McKinnon, "Mapping the Dimensions of a Literary Corpus," *Literary and Linguistic Computing*, 4, 2, (1989):73-84.

42. The importance of having constant and easy access to the original can hardly be exaggerated. A simple example: many English speaking commentators on Kierkegaard write constantly of his "leap of faith" and the current translation of AE still contains that expression. In fact, a recent search of all the published works has shown that they do not contain a single occurrence of *Troens Spring* its only possible Danish counterpart.

Notes and Comments

The Haemmerle Archive

by Elizabeth Shapiro

MATCH Volunteer, McGill University Archives

The Haemmerle archive, measuring approximately 1.2 linear metres, in the McGill University Archives consists of a large number of letters to and from various members of a Russian emigré family who settled in England, France, Japan, the United States and Canada. In addition, there are Russian documents dating from the second half of the 19th century, many family photographs from the same period and more modern snapshots and photograph albums. As the Haemmerle family had a Danish branch, parts of the archival material relate to this connection.

However, the letters primarily concern the branch of the Haemmerle family who settled in Montreal in 1920 – the father, Alfred, his wife, Amy and their son, Anatole. This correspondence can be divided into two parts:

1. Letters written in Russian:

a) Almost daily letters from Alfred to his wife in Montreal when he was working for the Canadian Government in Ottawa during World War II.

b) Weekly letters from Amy to Anatole when the latter was working in Boston. These letters cover the period from 1947 to Amy's death in 1957.

c) Letters from Amy Haemmerle's sister, Mary, who lived in Buffalo, New York. Her letters cover the same period (1947-1957) and were written to both Amy and Anatole.

This Russian correspondence provides a detailed glimpse of the life of an emigré family.

2. Letters written in English to Anatole Haemmerle:

a) Correspondence from his twin aunts, Alma and Irma Haemmerle, who lived in England. The letters are mainly from the 1950s and early 1960s.

b) Correspondence from his aunt, Dina Waht, who settled in Japan. Her letters were written between 1960 and the early 1970s.

This note deals with the son, Anatole Haemmerle, and is based, not only on the letters written to him in English but also on his own memories which he dictated shortly before his death in 1986.

Family Man

Anatole Alfred Haemmerle was born in St. Petersburg, Russia in 1908, the son of a well-to-do banker, Alfred Haemmerle, and Amy Waht Haemmerle. His paternal grandfather, Jean Haemmerle, was a prominent merchant in Odessa who married Agathe Larssen, daughter of a Danish merchant shipper. This marriage was the origin of two branches of this family, some of whose descendants scattered throughout Europe only to be re-united several generations later. Anatole recalled the origin of this connection of these two families in the memoirs that he dictated to a friend late in his life.

The story of how Grandfather Haemmerle met Grandmother is worth a mention. Grandfather's estate was in the south of Russia bordering on the

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Sea of Azov. The nearest town was Berdiansk. He was a very large land owner having inherited the land from his parents and was engaged in growing and exporting grain. I believe he had a fleet of barges. Apparently the whole fleet was sunk by the British during the Crimean War. Grandfather began to look around for somebody with ships who could transport his crops the next season. He was given the name of a Danish Captain Klitgaard. Together they went about Norway seeking additional ships and Captains. They went to the city of Arundel. There he met Captain Larssen whose chief occupation was Pilot of the harbor of Arundel and who made his home on the island of Merdo situated at the entrance to the harbour [This house is now a museum] ... Captain Larssen had several very good looking daughters and my grandfather became enamoured (*sic*) and eventually married Agathe. [Her sister, Sophie, married Captain Klitgaard].

Anatole also dictated other recollections – of his childhood in St. Petersburg and growing up in Japan and Canada. He gives a vivid picture of pre-revolutionary St. Petersburg as seen through the eyes of an eight year old. He enjoyed the comfortable life of the upper classes, was taught by French and German tutors, went on outings with his parents or nurse, and spent happy summer holidays with his Danish grandmother in Arundel, Norway.

The day would start with breakfast in the dining room. At the conclusion of this father would go off to the bank... I would retire to the Children's (*sic*) quarters there to await the arrival of my teachers, which could either be the German 'Bonna' or the French 'Mademoiselle' and thus my day would begin ... Around mid afternoon I was taken for walks in the park... My escorts would either be the old nurse...or mother would go if she was free... A foray with my father was always an adventure...our coachman in his crushed black stovepipe hat soon arrived at the front gates with our carriage...we entered St. Isaac's Square. We stopped in front of the great cathedral and got out. I was a bit distracted by the large statue of Nicholas I close by the cathedral. But the domes of St. Isaac seemed so mammoth and so far up as I leaned back to look at them. Upon entering I was startled by the vast array of mosaic work of the interior. Father said that St. Isaac's was the third largest Cathedral in the world and was built in the 19th century by 400,000 serfs...father thought it was part of my education to see this great and famous cathedral.

Anatole also recounts the birth and tragic death in 1917, at the age of 5, of his only sibling, Eugene. Both the children had contracted dysentery after their nurse had given them unwashed apples to eat. Eugene did not survive, and Anatole remained sickly for many months.

Gradually Anatole's recollections introduce the ominous shadow of the Revolution. The gracious life into which he had been born ended abruptly in 1917 when the Haemmerle family, still mourning the death of their second son, escaped by train to Siberia together with Amy Haemmerle's unmarried sister, Dina. Her sister, Anne, had fled to Paris, and another sister, Mary, had gone to the United States. Alfred Haemmerle's sisters, the twins, Alma and Irma, had already moved to England, his mother had settled in Antwerp, and close cousins, Catherine and Nicholas Koolichenko (*sic*), after hiding in the Haemmerle's St. Petersburg home, had managed to get to Yugoslavia. These turbulent times made a lasting impression on the young boy. Gone was the secure affluent life and it was gone abruptly – home, possessions, business – all disappeared. What remained was a small family – mother, father and only child. Their safety and well-being became the dominant factor in their lives.



Figure 1. Amy Waht, Anatole and Alfred Haemmerle, ca. 1917.

Included with the memoirs is a copy of a talk that Anatole delivered at a boy's school in 1972. It is entitled "The Long Long Train Ride" and gives a vivid description of the civil disturbances in St. Petersburg in the spring and summer of 1917 and the family's subsequent flight to Vladivostock. The situation in St. Petersburg had deteriorated quickly, and the Haemmerle family was forced to flee by train with only what possessions they could carry.

The station itself was complete and utter chaos with thousands of people milling about, all trying to find some train that went somewhere to get away from the violence in St. Petersburg... the entrance to the platform was barred by a group of soldiers with fixed bayonets who stuck out their guns and flatly refused to let us proceed any further.

Mr. Haemmerle had had the use, for many years, of a private railway car for conducting his banking business throughout Russia. By bribing the appropriate officials as well as the hostile soldiers he had managed to have this car attached to a train going to Siberia. Onto this car scrambled the family and some of their friends, and the doors were bolted. The guard in charge was a Swiss, an employee of the Cie Wagon-Lits and sympathetic to their plight. The trip across the 6,000 miles of country took two weeks. It was not without danger as rebellious soldiers were determined to board the train at every stop, ready to loot and murder. It took the efforts of the sympathetic engineer and some friendly Chinese officials to keep the fleeing Russians ahead of the pursuing Bolshevik army. Eventually the Haemmerles arrived in Vladivostock, but any chance to settle there was thwarted by the advancing Red Army. After a year the family fled once more, this time to Tokyo. Unable to re-establish an international banking career, Alfred Haemmerle moved his family once again, this time to Montreal, arriving in 1920.

Anatole's recollections of the years 1920-1940 are detailed but light hearted as he remembered the escapades and adventures of his youth. The "foreign" schoolboy, from being taught by private tutors, was thrust into a Montreal classroom.

School was St. Patrick's Academy, a Catholic Parochial school outside the public school system of the city. The boys in the school were mostly Irish,

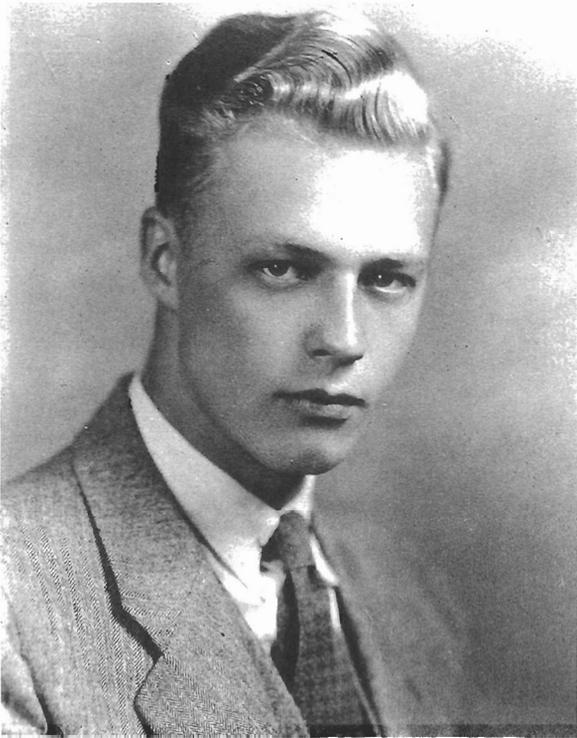


Figure 2.
Anatole Haemmerle, ca. 1926.

and the French they spoke was very different from the the French I had learned. Kids would laugh at me and I got a great deal of teasing because of what the boys called my 'la de da' accent.

The first years in Montreal were difficult. The struggles with poverty and the attempts to re-establish the standards of a former life were followed by the gradual improvement in the family's economic situation and the making of a new social life.

We went through a very difficult time since the only means by which my parents could get any cash was by selling or hocking some of the things we had brought with us... Mother made friends with some of the neighbours who taught her some cooking and showed her a few tricks to make housekeeping a little easier. I must say that poor mother who had never done anything like this before soon became very adept...

No matter how my poor mother tried to learn proper English, all her attempts ended up a dismal failures. However, her speech never failed to amuse her friends... One incident stands out. One Sunday on a particular cold winter day she was due to have tea at Lady Steele's...although the weather was very cold with high winds, she decided to walk...and arrived with the tea party already in progress...all the ladies showed their concern and chided her for walking in such cold... Mother explained it all very simply by saying 'I vas not cold because the vind was in my behind'...

Anatole's social life in Montreal began around 1925 when the friends he had made at school began to ask him to their parties. "The party was a fancy dress affair...we didn't have any

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Figure 3. The twin aunts, Alma and Irma Haemmerle, ca. 1960

special costumes lying about... Naturally I was anxious to go...and Father finally suggested I try his kimono. He had a beautiful grey flowered silk kimono which, of course, was much too big for me...it was a little long but I could shorten it by gathering the kimono around my ribs and pulling tightly so that the kimono did not come down over my shoes... I did not want to appear in public in a kimono. So I folded it up and carried it under my arm on the street car and bus... The party to which I wore the kimono seemed to be the key to Montreal's social doors, and invitations to parties after that came thick and fast."

Anatole confessed that he was never a very good student, lacking the necessary discipline to apply himself to his lessons. His high school performance was so poor that his father borrowed money to send the young man to a private tutorial college for his final year. Finally he was accepted by McGill University but only on probation. But Anatole was more interested in sports, amateur theatricals and the Mounted Squadron of the Officers' Training Corps than in his studies. The latter allowed him to demonstrate the riding skills he had learned at an early age from his father. In 1926, he helped form the McGill Light Aeroplane Club. Riding and flying were both time consuming and far more interesting than formal studies. Old newspaper clippings reveal that Anatole had, as well, a busy social life. He was handsome, a good dancer and interestingly "foreign." Not surprisingly, Anatole never completed his university education.

Throughout Anatole's stories the closeness of this small family unit grows ever stronger. Anatole had the deepest admiration for his father as well as a strong and protective love for his mother. The only letter by Anatole in the collection is a long and moving one written on Father's Day, 1947 when Anatole was 39 years old. In it he tries to express to his father what

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he never felt able to say directly: "...it all adds up to one of the two things or words which have meant everything to me – Mother and Father." In turn this only child remained the central object of the parent's affection, their hope for a secure and happy life in their adopted country.

Some time in the 1930s Anatole joined the 17th Duke of York's Royal Canadian Hussars, a regiment noted for its horsemanship. He rose rapidly to the rank of major. With the disbandment of the regiment in 1939 he joined the newly formed Citizens' Defense Corps. Shortly afterwards World War II was declared, and he enlisted in the Canadian Army and was sent to England. For the first time he met some of the members of his dispersed family, notably his twin maiden aunts, Alma and Irma Haemmerle as well as some of his cousins.

After the war Anatole settled in Boston, Massachusetts, finding employment with the Aetna Insurance Company where he remained until his retirement. He specialized in group insurance and pensions.

It is unfortunate that Anatole's own memoirs do not continue past 1929. However, further details of his adult life may be gathered from the many letters in English which exist in the McGill Archives' collection, particularly from his paternal aunts. These letters to Anatole cover the period 1945-1961 and are mainly from Alma and Irma. There is, as well, correspondence from some of his English cousins.

Successful in his employment, Anatole was in a position to do more than write letters; he was able to give financial assistance to the elderly twin aunts who had retired from a lifetime of teaching children of the English nobility. Like Alfred, the aunts strove constantly to maintain at least a semblance of their former, grander life-style when they lived in Russia. Timidly and apologetically they asked Anatole for small amounts of money. He, in turn, constantly sent them gifts, delighting both of them with little luxuries that they otherwise could not have afforded. He made regular visits to England to visit them, often twice a year, and after the death of Alfred in 1951, his mother frequently accompanied him. The few letters that exist from the English cousins kept him informed about these delightful and slightly eccentric twins.

A second source of information lies in the letters written in English to Anatole from his aunt Dina between 1957 and 1975. Dina, Amy Haemmerle's younger sister, had remained in Tokyo after the family's flight from Russia and maintained herself by working in a department store. Her letters from this period show that Anatole had assumed responsibility for her financial problems. Dina, like the aunts in England, welcomed Anatole's monetary assistance as well as his advice on business affairs. Indeed, Anatole was instrumental in helping his aunt Mary move to Tokyo to live with Dina. Mary's finances were also a constant worry to him, but one which he shouldered with patience and concern. It is obvious from Dina's many letters that the two sisters depended greatly on this far-away nephew. Even after the death of both sisters, he continued his financial support of Dina's adopted Japanese son.

The character of Anatole that emerges is based solely on his personal recollections and on the many letters that were written to him in English between 1945 and 1975. More than half of the letters in the collection – those from Alfred, Amy and Mary – were written in Russian and must be excluded from this note for want of translation. Even so, a picture emerges of a charming and successful man, who, never able to forget entirely his happy early childhood, seemed to need to restore the sense of family that the Russian Revolution had so abruptly terminated. It is hard to tell whether this came from a sense of guilt that he had survived and succeeded in Canada and the United States or whether there was genuine affection for these newly discovered relatives. It seems ironical that Anatole's success in re-establishing ties with his aunts in England and Japan should end with his death in 1986. The twin aunts remained spinsters as did Dina. Mary, though married, had no children. Anatole married Elizabeth Watt Harris, a Canadian living in Boston, in 1961 and although he had no offspring of his own, he did enjoy stepchildren and stepgrandchildren.

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As noted earlier, the Haemmerles had a strong Danish connection. This side of the family survived the dislocations of the war although various members scattered, resulting, in part, in the English branch that Anatole eventually met and with whom he corresponded. These relatives were successful on their own so Anatole was never directly involved in their well-being. Instead he enjoyed a lively and happy social relationship with them, cemented by a shared concern for the welfare of the twin aunts.

The story of Anatole Haemmerle is only part of the tale of this fascinating family. One can only surmise what the contents of his own letters to these correspondents might have revealed. In this day of telephones, fax machines and computers, the art of letter writing has diminished considerably. The McGill University Archives is fortunate to possess such a large collection of correspondence. Many of these letters await the scholar who can translate the Russian. There is, undoubtedly, a world of social history to be uncovered. Anatole's personal reminiscences provide just a glimpse of the struggles and successes of formerly well-to-do Russian emigrés in various parts of the world.

The McCord Museum's Inaugural Exhibition Programme

by Elizabeth H. Kennell

Head, Exhibition Services, McCord Museum of Canadian History

The Executive Director of the McCord Museum, Luke Rombout, gave the curatorial staff the mandate to develop over a six-month period the concepts for the inaugural exhibitions for the Museum's re-opening in May 1992. The concepts chosen reflect not only the richness of the McCord's collections, representing the strengths and range, but also the expertise of the curators. Although the research phase only began officially in January 1990, the results attest in many cases to the curators' long term interests and endeavours.

In the creation of the inaugural exhibition programme, much effort went into achieving a balance between thematic exhibitions and those which are collection-based, in deference to the McCord's appellation as a "history museum." In addition, while ensuring that the emphasis was on the McCord's own collections, adequate temporary exhibition space had to be set aside in order to receive exhibitions from outside sources. Therefore, while the inaugural exhibitions were the prime concern, a structure for the future, to build upon and maintain the public's interest, was also considered crucial.

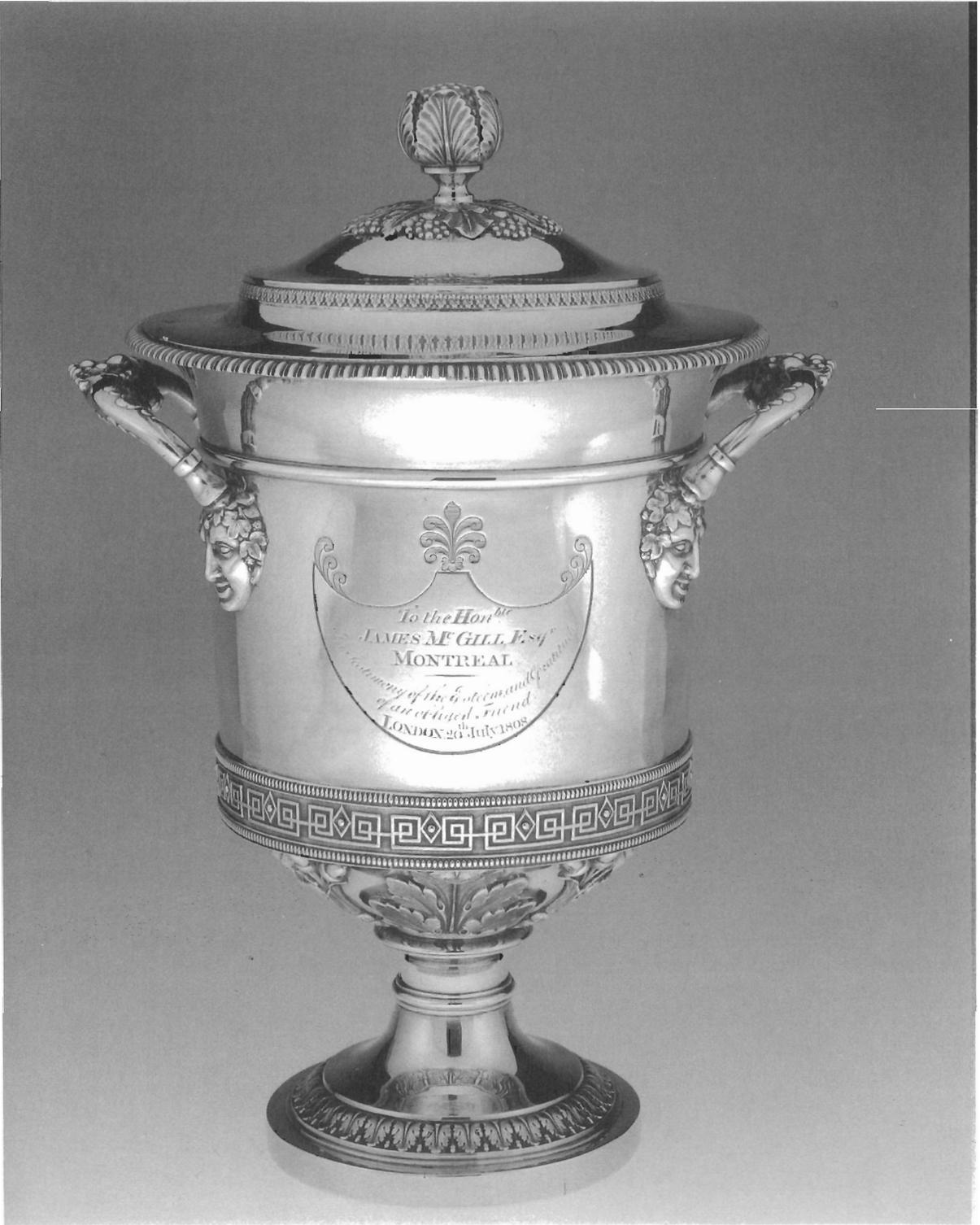
Because the year of the re-opening, 1992, coincides with the 350th anniversary of the founding of Montreal many of the inaugural exhibitions pay particular attention to this fact. However, it is *Victoria Bridge: The Vital Link* that represents the McCord's official contribution to the anniversary celebration. It is one part of a major historical overview, collectively entitled: *Montreal: A History to Treasure*.

With almost 20,000 square feet, or double the previous amount of exhibition space at our disposal, it was felt that we now have the opportunity to accommodate permanent galleries devoted to the presentation of the McCord's collections. The Notman Photographic Archives, Costume and Textiles, Archives, Prints and Drawings, and Ethnology and Archaeology each now have specifically designated areas, including Paintings and Decorative Arts in the newly-renovated Nobbs Gallery (named after the architect, Percy Nobbs, who designed the building



R. A. Sproule, *Place d'Armes, Montreal*, watercolour, 1828, David Ross McCord collection (M385).

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Urn Presented to James McGill by an Unidentified Friend, 1808, gift of McGill University (M20292).

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Dinner Dress, old-rose silk satin brocade, 1890-1891, gift of Mme Charles Taschereau (M968.2.1.1-2).

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in 1906, then known as the McGill Student Union). With the re-opening, it was also deemed essential to devote a space for the story of David Ross McCord, the Museum's founder.

Some of the inaugural exhibitions will be on view for limited periods of time depending on the fragility of the artifacts' and accepted conservation norms. These exhibitions will be replaced by a succession of shows with very specific foci – highlighting other aspects of the permanent collection hitherto unseen by the public. Where possible, even more exposure to the collections of the McCord Museum will be sought through travelling exhibitions, such as *Mont Royal-Ville Marie: Early Plans and Views of Montreal* which, following its presentation at the McCord, will be on view at the Courtauld Institute in London in January 1993.

Eight of the ten inaugural exhibitions are accompanied by fully-illustrated bilingual publications that together will provide a permanent record of parts of the McCord's collections. It is through these in-depth examinations – both in terms of the publications and the exhibitions – that the McCord Museum will be making significant contributions to research as well as appealing to the general public. Specialists in various fields have been consulted and some have contributed to the publications. Dr. Brian Young, Professor of History at McGill University, played an active role as consultant historian to a number of our inaugural exhibition projects, particularly *The McCord Family* and *Victoria Bridge: The Vital Link*.

The production schedule for these exhibitions and publications can be divided largely into four phases beginning in January 1990: a research phase which included the selection of objects and writing of texts; immediately followed by an object preparation phase which included the conservation treatments; an exhibition design phase including the installation which was initiated six months after the research began; and finally the publication production phase which began in January 1991.

We benefitted enormously from having been closed to the public during the three-year period of renovation and expansion during which time we were able to concentrate almost entirely on the development of these exhibitions. The challenge for the future will be to continue to meet the high standards achieved and to develop a dynamic exhibition programme.

List of Inaugural Exhibitions:

1. *Introduction to the McCord Museum* in the Court of the Museum.
2. *The McCord Family: A Passionate Vision*, May 9, 1992 -
Curator Responsible: Pamala Miller, Curator of Archival Collections; Contributing Authors: Moira McCaffrey, Curator of Ethnology and Archaeology; Brian Young, McGill University; Don Fyson, Université de Montréal; Don Wright, McGill University.

The origins of the McCord family from 1760 in Ireland to the time of David Ross McCord (1844-1930) are traced in this exhibition and the accompanying publication. While very much a man of his times, David Ross McCord's insatiable appetite for collecting in addition to his pursuit of a dream to build a national museum of Canadian history set him apart. With a marked taste for the unusual and a profound sense of history, McCord amassed a vast number and range of objects. It is to his thirst for knowledge and his passion for collecting that we owe the existence of the McCord Museum of Canadian History.

3. *Mont Royal-Ville Marie: Early Plans and View of Montreal*, May 9 – August 1, 1992
Curator Responsible: Conrad Graham, Curator of Decorative Arts; Contributing Author: Shahin Farzaneh, Courtauld Institute.

While other exhibitions and publications have treated early views of other Canadian cities, to date Montreal has not been examined. More than 100 very fragile watercolours and drawings of Montreal, dating primarily from the eighteenth and nineteenth centuries are on view, many

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lent from private and public collections, such as the British Library and the New York Historical Society.

4. *Wrapped in the Colours of the Earth: Cultural Heritage of the First Nations*, May 9, 1992 –

Curator Responsible: Moira McCaffrey, Curator of Ethnology and Archaeology; Contributing Authors: Claude Chapdelaine, Université de Montréal; Bruce Jamieson, McGill University; Ruth Holmes Whitehead, Nova Scotia Museum; Ludger Müller-Wille, McGill University; Taamusi Qumaq, Povungnituk Elder.

For this inaugural exhibition and the accompanying publication, the focus is on three eastern nations. *Marks of the Micmac Nation* explores the artistry of costume and quillwork designs, and the ongoing significance of these traditions to Micmac artists. *A Village called Hochelaga* illustrates Iroquoian lifeways on the Island of Montreal prior to European contact. *Names and Lives in Nunavik* describes Inuit toponomy and explores the critical link between language, culture and ancestral lands.

5. *Victoria Bridge: The Vital Link*, May 9 – October 15, 1992

Curator Responsible: Stanley Triggs, Curator of the Notman Photographic Archives; Contributing Authors: Conrad Graham, Curator of Decorative Arts; Brian Young, McGill University; Gilles Lauzon, Université du Québec à Montréal.

With the opening of the Victoria bridge in 1860, a year-round port was established for Montreal at Portland, Maine, not to mention connections via the railway to Upper Canada and to the mid-western United States. Divided into four parts, the setting, the bridge, the celebration and the impact, the exhibition and accompanying publication provide an in-depth examination of the period from 1845 to 1875, Montreal's industrialization.

6. *William Notman's Studio: The Canadian Picture*, May 9, 1992 –

Curator Responsible: Stanley Triggs, Curator of the Notman Photographic Archives.

The story of the pre-eminent Canadian photographer William Notman and his empire of photographic studios begun in 1856 is the focus of this exhibition and the accompanying publication. Selected from the extensive holdings of the Notman collection, which includes more than 400,000 photographs, a variety of portraits, urban scenes and landscapes are on view.

A second area is devoted to the presentation of a series of daguerreotypes dating from the period 1840 to 1860, and largely consisting of portraits of Canadians by various photographers.

7. *Turning Point: Quebec 1900*, May 9, 1992 – November 9, 1993

Curator Responsible: France Gascon, Chief Curator and Curator of Paintings, Prints and Drawings.

The period 1890-1914 was a time of major transition in the history of Quebec. What was still a very traditional society was changed forever by industrial development. The exhibition introduces visitors to this exceptionally rich period through some of its personalities, places and representative objects. More than fifty artifacts are complemented by almost 100 photographs and archival documents from the permanent holdings of the McCord.

8. *The McCord Museum Archives*, May 9 – November 9, 1992

Curator Responsible: Pamala Miller, Curator of Archival Collections.

While the McCord's archives traditionally have been a rich source of documentary support material to exhibitions, this is the first time that a gallery space has been devoted to the presentation of documents from the Archives. This is opportune as Montreal was host to some 3000 archivists attending international association meetings in September 1992. Together with an accompanying publication, a wide range of archival material will be on display, from the

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informative Dessaulles and Riel papers to visually appealing scrapbooks, cards and even a milk-bottle top collection.

9. *Eclectic Tastes: Fine and Decorative Arts from the McCord*, May 9, 1992 –

Curator Responsible: Conrad Graham, Curator of Decorative Arts; Contributing Authors: Sarah Ivory, Concordia University; Robert Derome, Université du Québec à Montréal.

Highlighting the nineteenth century, where the McCord holdings of paintings and decorative arts are strong, this exhibition and accompanying catalogue feature both secular and religious silver, furniture, ceramics, glass and wood sculpture. Sometimes important for their documentary value, sometimes for their inherent art-historical value, the artifacts on view underline the duality of the McCord's collecting mandate.

10. *Form and Fashion: Nineteenth-century Feminine Dress*, May 9, 1992 – January 15, 1993

Curator Responsible: Jacqueline Beaudoin-Ross, Curator of Costume and Textiles.

The form in the evolution of nineteenth-century costume is emphasized in this exhibition and accompanying catalogue. The selection of costumes from the McCord's extensive collection demonstrates that not only are styles in dress revised throughout history, but also that particular elements in attire re-appear again and again. For the first time, photographs from the McCord's Notman Photographic Archives will be used not only to date the costumes but also to demonstrate the evolution of the form. The dissemination of European fashion plates in Montreal is traced to show the extent to which Montreal was a "fashionable venue."

Breaking the Silence and Bridging the Gap: Documenting Personal Memories of the Holocaust

by Yehudi Lindeman, *Associate Professor of English, McGill University*

...I never thought that I would be able to sit here and talk about these things. I never had the courage to do it. And then I saw other people coming out... And then, a few times, I heard people say, about people like me, you are actually an endangered species, because after you are done there will be nobody else, there will be no one else left to tell the real story. And my children really wanted me to do it. And maybe because it is fifty years now, 1939-1989, I feel that everything is coming full circle, that I have to do it, that maybe my time is running out.

Renata Skotnicka-Zajdman, *in the McGill studio, June 1989.*

Renata Skotnicka-Zajdman is one of the many survivors of the Holocaust now in Montreal. Living in increasing fear with "Aryan papers," she managed to survive World War II as a 13 to 18 year old, dodging selections by hiding in cellars and safe-houses, and burrowing her way in and out of the ghettos of Bialystok and of Warsaw, where she witnessed the ghetto uprising. There are thousands of other survivors in the Montreal area.

In June, 1989, Renata was among the first survivors of the Holocaust to be interviewed by "Living Testimonies," McGill University's Video Archive. The Archive's goal is to record on studio-quality video-tape, eye-witness accounts of the Holocaust. Though the focus is on survivors, witness testimony by liberators and rescuers is also included.¹

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The need to combine the theoretically grounded ancient Hebrew injunction of *zakhor* with the practical reality of assisting in the process of *petach* (the vulnerable state of opening up) made this a very challenging project. While showing with touching and often painful frankness what precisely happened to an ordinary person caught in the wheels of an extraordinary time, each video document also presents images that provide a powerful counter-argument to the movement of Holocaust denial and historical revisionism. Thus every interview, ideally, constitutes a tremendous resource that has the power to change minds and challenge the perpetuation of anti-semitism and racism, nationally and world-wide. If the project's strength is in any sense weakened, it may be in the realization that with each passing year the survivors are diminishing in number. This is the sentiment that Renata speaks of in the above passage when she refers to people like herself as an "endangered species" whose "time may be running out." But the need to tell the story to the world is also motivated by a personal need of unburdening oneself. Many survivors still have nightmares and wake up in the middle of the night yelling or in a sweat, pursued by terrifying memories. Telling their story is one way of exorcising the past. Paul Landau's principal motive for confronting the video camera is so as "not to choke myself with the untold story." Externalizing it "dumps it out of my chest."²

There are other aspects that deserve scrutiny here. One of them is our preference for an open-ended and free-flowing interviewing format, so as to assist in the already-mentioned process of opening up on the part of the survivor who is, after all, asked to evoke in words and images aspects of everyday life in a place and time long since gone. The open-ended structure may also enhance the maximum future usefulness of the materials by historians, sociologists and educators alike. It is an aspect which "Living Testimonies" has in common with similar projects of this nature in Canada and the U.S. At this time the central issue is that of securing transmission, of bridging the gap between silence and documentation within the pinching restraints of time.³

History

"Living Testimonies" was founded in 1989. The first five interviews were conducted by Rabbi Ayla Grafstein and Yehudi Lindeman in the Concordia and McGill University studios and led to a half hour video documentary completed in November 1989.⁴

All the interviews are recorded on ¾ inch studio quality tape. The collection of Sinti (German Gypsy) survivors of the Holocaust is available on ¾ inch tapes which was copied from the original high eight format. The 20 hours of interviews with the Sinti survivors were recorded in 1991 by Gabrielle Tyrnauer on location in two camping areas in the village of Joditz, near Hof, close to the former East-West German border. The language of the interviews is German. Nearly all of those interviewed are veterans of the Auschwitz Gypsy camp. Some spent time in Jewish camps or ghettos, including the ghetto of Lodz, before being deported to Auschwitz in 1943.⁵

Since the spring of 1990, all in-studio interviews have been recorded at McGill's Instructional Communications Centre (ICC) at 550 Sherbrooke Street West, Montreal, with the generous and expert support of Mario DiPaolo, head of Television and Sound Production, and his competent staff.

By May 1992, "Living Testimonies" had conducted 35 interviews, for a total of about 80 hours. With one exception, all in-studio interviews were conducted in English. Most witness accounts run about two hours, but some are significantly longer, like the early testimony of Harry (or Hershel) Taichman, a survivor of various camps near Lublin who survived because his two sisters pushed him out of the small upper window of the transport train that was carrying them to Treblinka.



Figure 1. In 1942 the Jewish girl Renata Skotnicka became the Catholic Irena Christina Podbielska. She was able to maintain this new identity with the help of a forged I.D. for which this photograph was taken by an underground photographer.

A typical interview consists of a pre-interview, usually at the survivor's home, followed some days later by the taping session. There is a chronological order to the extent that the interview follows a three-part structure, from the survivor's memories of pre-war life through the war-time experiences of occupation and persecution to, finally, liberation and re-settlement in the new country with its challenges and possibilities for personal and social reintegration.

Any personal materials such as family photographs, camp uniforms or other camp paraphernalia such as badges or, in a rare case, original documents, are photographed and mounted on the video tape itself, whenever possible. These artifacts on tape are meant to complete the collections held privately by individuals as well as the collection of artifacts and memorabilia compiled by Krisha Starker for Montreal's Holocaust Memorial Centre.

Related Collections

It should perhaps be emphasized that a substantial printed collection of books, articles and bibliographies exists in the McGill Libraries.⁶ Those materials can be searched locally with the help of LC subject heading "Holocaust survivors" on the MUSE automated catalogue which yields 34 categories such as "Personal narratives" and "Bibliographies." Surprisingly, the only bibliography retrieved by this route was that by Leo Eitinger and others. If, leaving the MUSE, one follows the Eitinger bibliography to the Reference shelves, one finds it alongside six other bibliographies on the subject and eight separate volumes in Hebrew.⁷

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Figure 2. Hershel Taichman and his brother Leibel near Riky, Poland just before World War II.

When contacted, Film Reference Librarian Carol Grossman indicated that the ICC Film Library holds only a handful of relevant films. These include Alain Resnais' *Night and Fog* (1955) and Stanley Kramer's block-buster *Judgement at Nuremburg* (1961), as well as Claude Lanzmann's *Shoah* (1985).

"Living Testimonies" is similar in scope and purpose to projects elsewhere, notably in Canada and the United States. Its most immediate inspiration came from the Holocaust Documentation Project, a collection of studio-quality interviews with about eighty survivors from all over Canada made under the auspices of Canadian Jewish Congress and with the financial support of Canada's Department of Multiculturalism. Those tapes can be viewed upon request at Canadian Jewish Congress in Montreal.⁸

Another stimulating example is Yale University's extensive Fortunoff Video Archive for Holocaust History with which the McGill project is becoming affiliated. In return, Yale will also store copies of all the video interviews recorded at McGill. Among the other video tape collections of note, mention should be made of the Vancouver-based Holocaust Documentation Project directed by Robert Krell at the University of British Columbia and the Toronto-based Holocaust Documentation Project directed by Paula Draper. Other noteworthy collections include the Southeastern Florida Holocaust Memorial Center in Miami and Yad Vashem in Jerusalem.

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The relation between "Living Testimonies" and other oral history projects has not yet been defined. "Living Testimonies" is joining the Canadian Oral History Association and is including a description of its collection in the *National Inventory of Oral History Holdings*. The *Inventory* is being compiled right now (1992) with the assistance of the Social Science and Humanities Research Council and the National Archive of Canada and will, for the first time, give researchers access to Oral History collections throughout Canada.

Future

It is of foremost importance to sort and catalogue the collection and to provide printed synopses of each interview. The anticipated collection will also contain Holocaust-related documentary films (on video) as well as a modest reference library. Also, it is our intention to design a variety of maps to facilitate the location of survivors before and during the Holocaust, using the work of Martin Gibert and others and enlarging some of them for educational purposes.

This reference collection will make it easier to define terms, confirm dates and verify place names. Place names in particular present difficulties as sites are often known under two or three different names, while their spelling is uncertain. Problematic nomenclature especially occurs in border areas. Attention will also be given to the difficulty of transcribing and finding English equivalents for terms and expressions that defy translation. This concerns terms in use during World War II in Polish, Russian, Yiddish and German. Some of this work has already been started with the help of Marcia Goldberg, the Project's tireless research assistant.

So far, funding has been modest. To date, "Living Testimonies" received contributions from the Faculty of Arts and the Faculty of Graduate Studies and Research of McGill University, from the Fortunoff Video Archive of Yale University and through private donations. The Yale University funding was accompanied by matching grants from McGill and Concordia University. We are engaged in a vigorous fund raising effort that will enhance the uses of our project for educational purposes.

Regarding the numbers of planned interviews, there exists something in the nature of a five year plan. The present goal is that, at a rate of 40 interviews a year, approximately 200 new interviews will be produced by the end of 1997.

All tapes will be held in the Department of Rare Books and Special Collections, McGill University Libraries, and are there for storage only. They are the master copies from which copies (usually ½ inch VHS) will be made as they are needed. Also, given that the shelf life of the master tapes is a maximum of 50 years, even under optimal conditions, we are already anticipating that the collection may have to be copied onto a less vulnerable medium. One distinct, if as yet distant, possibility is the digital video disc (similar to CD or CD-ROM) which will soon be available at fairly reasonable cost.

While the original master tapes remain in storage and cannot be used or taken out of the Library, VHS copies of the entire collection can be freely viewed at the recently opened new office of "Living Testimonies" at 515 Pine Avenue West, Montreal, Quebec, H2W 1S4. Anyone interested should call (514) 398-8408. It may take about a week to ten days to book an appointment.

Notes

1. The term "Holocaust" (Hebrew, "Shoah") is used here in its specific meaning of the mass destruction of European Jews by the Nazi German state during World War II. Cf. Israel

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Gutman, editor-in-chief, *Encyclopedia of the Holocaust* (Jerusalem: Yad Vashem and New York: MacMillan Publishing Company, 1990), 681.

2. From the November 12 and 19, 1991, testimony of Paul Landau, a Frenchman who was born in Warsaw in 1922. Paul was arrested, along with his brother Jacques, and deported to Auschwitz on the eve of the Jewish holiday of Yom Kippur, 1942. Shortly before arrival in Auschwitz, the brothers were taken off the train (later known as Convoy no. 35) at the railway station of Kosel, along with 150 other men. The rest of the convoy of presumably exactly 1000 Jews continued on to Auschwitz where the large majority were gassed instantly. Paul and his brother ended up in a slave labour camp. After the death of his brother, Paul decided to escape, was discovered and, in a bizarre twist of fate, passed through Auschwitz to Oranienburg-Sachsenhausen where he worked as an engraver, forging fake bank notes (mostly British 10 and 20 pound notes) for the Germans before being shipped to Mauthausen and from there to Ebensee where he was liberated by Patton's Third Army. For details of Paul Landau's "Convoy no. 35" see Serge Klarsfeld, *Le Mémorial de la déportation des Juifs de France* (Paris: 1978).

3. Cf. the emphasis in book after book on the survivor's mission that forces him/her to be a witness, "to tell the story, to bear witness" (Primo Levi) or to "hurl the story [of the Ghetto] in the face of the world." Elie Wiesel, in turn, is caught between his desire to break the silence and his motivation to remain silent, as a gesture of greater loyalty to the unutterable experience itself (see Terrence Des Pres, *The Survivor: An Anatomy of Life in the Death Camps* [New York: Oxford University Press, 1976], 32, 31 and 35-36, respectively).

4. Yehudi Lindeman (producer and director), *Living Testimonies*, a video documentary, ¾ inch, 28 minutes (Montreal, November 1989).

5. For the Gypsies' journey to and final destiny in Auschwitz, see Gabrielle Tyrnauer, *Gypsies and the Holocaust: A Bibliography and Introductory Essay*, 2nd edition (Montreal: Montreal Institute for Genocide Studies, 1991), xv-xviii.

6. A number of books have recently explored the relation between the survivors' oral testimony and primary documentation as well as more traditional ways of witnessing in diaries and fictional accounts. The most challenging works among them are Lawrence Langer, *Holocaust Testimonies: The Ruins of Memory* (New Haven: Yale University Press, 1991), Deborah Dwork, *Children with a Star* (New Haven: Yale University Press, 1991) and Shoshana Felman and Dori Laub, *Testimony: Crises of Witnessing in Literature, Psychoanalysis and History* (New York: Routledge, 1991). All three works draw extensively on Yale University's Video Archive for Holocaust Testimony.

7. Leo Eitinger and Robert Krell with Miriam Rieck (eds.), *The Psychological and Medical Effects of Concentration Camps and Related Persecutions on Survivors of the Holocaust: A Research Bibliography* (Vancouver: University of British Columbia Press, 1985). Among other bibliographical tools in the Reference section are Harry James Cargas (ed.), *The Holocaust: An Annotated Bibliography*, 2nd edition (Chicago: American Library Association, 1985) and David Szonyi (ed.), *The Holocaust: An Annotated Bibliography and Resource Guide* (Hoboken, NJ: KTAV Publishing House, 1985).

8. Montreal cinematographer Alan Handel made a one-hour documentary based on the material in Canadian Jewish Congress' Holocaust Documentation Project called *Voices of Survival*. It was aired on CBC television in 1989.

The Earliest Canadian Music Programme

by Sandra Alston, *Thomas Fisher Rare Book Library, University of Toronto*

Work on the supplement to Marie Tremaine's *A Bibliography of Canadian Imprints* has led to serendipitous discoveries of a number of new titles invaluable for an understanding of our past. Among the most interesting of these is a previously unknown early broadside, printed in Montreal, giving the programme of a concert held in Montreal in 1786. This was found by the staff of the Department of Rare Books, McGill University Libraries, in the department's stacks.

The broadside is printed on a sheet of laid paper 31 cm. × 19 cm.; the chain lines are vertical and there is no watermark. A horizontal split in the middle of the sheet has been crudely repaired. The broadside is shelved with the Lande Canadiana Collection and has the call number: folio ML45 C66 1786. It has been filmed by the Canadian Institute for Historical Microreproductions (CIHM).

Not only does this broadside shed light on the type of concert to which an audience in Montreal in 1786 would have listened, it illuminates part of the history of music in Canada. Printed by Fleury Mesplet at the Montreal Gazette Office and dated 29 août 1786 it was followed shortly after by an abridged bilingual announcement in the August 31 issue of the newspaper:

The Public are most respectfully informed, that Several Musicians From Europe, intend to give on Thursday the 7th of September 1786, a Concert, of Vocal and Instrumental Music, at Mr. John Franks Vauxhall. After the Concert a Ball. To begin precisely at Eight o'Clock. Tickets, at One Dollar each, to be had at the Printing Office, and at Mr. John Franks, Vauxhall. Montreal 29 August 1786.

The musicians "nouvellement arrivés d'Europe" brought with them a programme which would have been fashionable in the Europe of the day. They also followed custom in completing the evening with a ball.

The three musicians, Mr. and Mme. Mechtler and Mr. Duplessy, are only briefly mentioned in *The Encyclopedia of Music in Canada* and documentary evidence is very scarce. Guillaume Mechtler, organist, teacher, composer was born in Brussels about 1763. He came to Canada with this concert tour and decided to remain in the colony. An advertisement in the *Quebec Gazette* for July 12, 1781 announced that he had "quitted entirely the business of the theatre" and would settle in Quebec City as a music teacher. By 1789 he had moved to Montreal and published this announcement in the *Montreal Gazette* for September 3, 1789:

Mr. Mechtler,
Begs leave to inform the Ladies and Gentlemen of Montreal that he has settled himself in this city as a Music Master, and intends to teach the forte piano, harpsichord and violin; he therefore flatters himself that he will meet with encouragement from those Ladies and gentlemen who may please to employ him, as they may depend that his conduct and attention to his Scholars shall be such as to merit their approbation and patronage. He lodges at present at Mr. Lemoine's next door to Sullivan's Coffee-House. Montreal, September 3, 1789.

In 1789 he was made assistant organist at Notre-Dame in Montreal, and in 1792, he was promoted to the post of general organist. During the next forty years, until his death, he was the leading church musician in the city. A musical programme announced in 1796 that he

CONCERT.

PLUSIEURS MUSICIENS nouvellement arrivés d'Europe, ont l'honneur d'informer le Public, qu'ils donneront, Jeudi le 7 du mois de Septembre, un *CONCERT* Vocal & Instrumental, composé de deux Actes ; chez Mr. JEAN FRANKS, au Vauxhall.

ACTE PREMIER.

L'Ouverture de l'Opéra de la BATAILLE d'IVRY, composé par *Martiny*.

Un Concerto de FLUTTE, par *Mr. Duplessy*.

Une Ariette, tirée de l'Opéra d'*Artaxerces*, par *Me. Mechtler*.

Le Menuet de FISHER, avec les Variations sur la Clarinete, par *Mr. Duplessy*.

Une Symphonie, composée par *Lachnith*.

Une Ariette, tirée de l'Opéra du CADENAS, par *Me. Mechtler*.

ACTE SECOND.

Un Concerto de FORTE-PIANO, par *Mr. Mechtler*.

Une Ariette, tirée de l'Opéra de ROSINE, ou LES MOISSONEURS, par *Me. Mechtler*.

Un Concerto de CLARINETE, par *Mr. Duplessy*.

Une Symphonie de Schwnidl ; Suivie

D'UN BAL.

L'on commencera à HUIT HEURES précises.

Les Billets feront de CINQ CHELINS, & feront distribués chez l'Imprimeur, & chez Mr. Jean Franks, au Vauxhall.

Montréal, 29 Août 1786.

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would play "Un concerto de forte-piano," perhaps the same one as listed in this programme. There is a possibility that this was composed by him as in 1811 he was paid £48 for "works of his composition" and so became, according to the *Encyclopedia of Music in Canada*, the first Canadian to be paid as a composer.

The singer, Mme. Mechtler was not Guillaume Mechtler's wife; he married in 1793, at the age of 29, Angèle Landriève of Montreal. Mme. Mechtler, the singer, later appeared in 1790-1792 in Halifax and then in New York and Boston.

Mr. Duplessy also decided to remain in the colony. On Thursday, October 26, 1786 a bilingual announcement was published in the *Montreal Gazette*:

Mr. Duplessy, respectfully informs the Public, that he intends teaching the Flute, Clarinet, Bassoon, Hautboy, French-Horn, Violin and any Musical Instructions. He proposes likewise to teach Fencing. N.B. He lodges at Mr. Deshotel's in St. Alexis Street. Montreal, 14 October 1786.

This announcement appeared for several issues before Mr. Duplessy disappears from our sight, both as a music teacher, and as a fencing master.

Much of the music played at this concert was recently published and was very popular in Europe. *Henri IV, ou La Bataille d'Ivry* had been published in 1774 by Jean Paul Egide Martini. *Henri IV* was immensely popular, being translated into Dutch, German, Russian and Swedish. Martini, a highly acclaimed opera composer is best known today for his song "Plaisir d'amour." *Artaxerxes*, by Thomas Arne, was first produced in London in 1762; its first complete performance in North America was in New York in 1828. The Fisher mentioned in the programme is most probably Johann Christian Fischer, one of the most notable oboists of his day; Mozart wrote a set of piano variations on one of Fischer's minuets. Ludwig Wenzel Lachnith, a Bohemian who spent a great deal of time in Paris, published six symphonies. *Cadenas*, the opera, is a mystery. No reference work, including those on obscure operas, lists it at all. Egide Duni, an Italian who settled in Paris wrote *Les Moissonneurs* in 1768. One of the most important Opéra Comique composers in the latter half of the eighteenth century, he helped create a new musical style—the *comédie mêlée d'ariettes*, an example of which is shown on the programme. Friedrich Schwindl, the composer of twenty-eight symphonies, was immensely popular. According to the conventions of the time, the flute and clarinet concerti "par Mr. Duplessy" were probably not composed by him; he is simply listed as the performer. As has been mentioned previously there is some question as to the composer of the concerto for the forte-piano.

It is interesting to speculate on the success of this concert in the Montreal of the day. On Thursday September 21, 1786 an announcement appeared in the *Montreal Gazette* advertising another "Concert of Vocal and Instrumental Music" at Mr. John Franks', to begin at six o'clock, followed by a Ball, on Tuesday, September 26. Tickets were again one dollar each but "no money to be received at the door, on any account what ever." The changes in the wording—the earlier time, the difference in ticket purchase—were perhaps the result of the experience of the previous concert.

This glimpse into the musical past of Canada can only tantalize the reader. Without a complete list one can only speculate as to who played the symphonies by Lachnith and Schwindl and the opera overture by Martini. No reviews of the concert exist so one can have no idea as to the reception this concert had. It is to be hoped that further research, into contemporary diaries perhaps, can provide us with more than a hint of the richness of our musical tradition.

Chronicle

The value of a research library is often measured by its actual size in terms of volumes. Equally important, however, is the rate of growth of its collection. Additions are made through acquisitions supported by book and periodical budgets, endowed funds, grants and donations. During times of budget restraints and government cut-backs, donations from private donors, alumni, professors, librarians and benefactors are absolutely vital. To this must be added several special grants: Social Sciences and Humanities Research Council of Canada (SSHRC), IMASCO, the New York Chapter of the Friends of McGill University, the McGill Associates, the McGill Women Associates and many others.

The following list represents merely a selection of significant and unusual items acquired by McGill libraries, archives and museums during 1991. This array of interesting acquisitions gives an impression of not just the quantity, but, also the quality of the McGill collections.

Department of Rare Books and Special Collections

Acquisitions by purchase:

W.E. Cormack, *Narrative of a Journey Across the Island of Newfoundland*. St. John's: Morning Post, 1856.

Joseph Noad, *Lecture on the Aborigines of Newfoundland*. St. John's: Patriot Press, 1853.

Lucie Lambert, *A Thousand Hooded Eyes*. Vancouver: Editions Lucie Lambert, 1991.

George Psalmanazaar, *An Historical and Geographical Description of the Island of Formosa*. London: For D. Brown, 1704.

Vera Frenkel, "Big × Window." 4 large colour lithographs.

A collection of 75 French books, mainly of the 18th century.

The literary papers of Canadian novelist Selwyn Dewdney, author of *Wind Without Rain*.

The literary papers of Toronto poet Judith Fitzgerald.

Acquisitions assisted by funds from SSHRC:

Some 160 volumes of Canadian poetry, acquired with a SSHRC Specialized Research Collections Program grant.

David Hume's *History of England* (London: Caddell, 1770), acquired with the assistance of a SSHRC Fleeting Opportunities grant.

A collection of books by and about English poet Thomas Chatterton (1751-1770), acquired with the assistance of a SSHRC Fleeting Opportunities grant.

Gifts:

Toronto artist Vera Frenkel donated her personal papers, consisting of correspondence, manuscripts, printed ephemera etc.

Montreal poet Michael Harris donated his literary papers (manuscripts, correspondence, editorial projects etc.).

Montreal poet and journalist Mark Abley donated his literary papers (manuscripts, correspondence etc.).

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Mrs. Frances MacLennan donated the remaining papers of novelists Hugh MacLennan and Dorothy Duncan.

Asher Joram donated two 19th century prints.

L.H. Packard donated 15 books by Frank Packard and some Civil War period diaries kept by his grandfather.

Jacques Bieler donated a collection of 440 family letters.

Charles Parent donated a copy of Joseph Donahue's *L'Oratoire*.

Judith Mappin donated a copy of D.G. Jones and Morton Rosengarten, *The Lines of the Poet* (1981), one of 18 copies *hors commerce*.

Françoise Feeny, Suzanne Reardon and the Estate of Madeleine Usher-Jones donated a copy of the Tissot *Bible*.

Dr. Simon Langlois donated a small collection of 18th and 19th century books.

Dr. Lewis Pyenson donated a large collection of 19th century theses and dissertations.

Barbara Whitley donated a collection of letters and manuscripts by Stephen Leacock.

Dr. Hans Möller donated a run of the library collections journal *Fund og Forskning* published by the Royal Library, Denmark.

Dr. Richard Mackler donated two limited editions of books by Hugo von Hofmannsthal.

Dr. Martin Cohen donated a large collection of books in the Insel-Bücherei Series.

William D. Anderson donated three limited edition Canadian art books.

Paul Duval donated a copy of his *Barker Fairley*, with two original prints laid in.

Barbara Johnson donated a collection of 44 books, mainly 20th century.

Walter Hitschfeld Environmental Earth Sciences Library

The McGill Geography Department donated a collection of 6700 air photos including some archival runs from the Arctic region dating from the 1930's.

McLennan – Redpath Libraries

A selective list of major purchases and gifts includes:

- Newspaper backfiles:
 - Vancouver Sun* 1930-1960 (Imasco)
 - Independent* (London) 1986-90 (Soldiers' Memorial)
 - Times of India* (Shastri)
- Serials backfiles: *Novy Mir* 1928-1958 microfilm (Webster Arts Library Dev.)
- Microlog Native Peoples microfiche collection: standing order (Northern Studies)
- Variorum Reprints: mediaeval texts (Soldiers' Memorial)
- Stenographische Berichte über die Verhandlungen des deutschen Reichstages 1882-1918 (microfiche from Deutsche Forschungsgemeinschaft)
- From the Swiss Consulate in Montreal we received a donation of 24 valuable books published in 1990 and 1991.

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– Mr. A. Vance generously donated 1473 books from the estate of his late father, George Vasilieff. Almost all the books are in the Russian language and concern Russian literature, culture and the arts. There are a number of beautiful books on Russian icons. It is worth noting that the collection is in excellent condition. Many of the books were bound or rebound by Mr. Vasilieff himself.

– Dr. Hans Möller donated about 90 books, mostly Scandinavian Literature and Natural Science.

– A considerable number of new serials were acquired in CD-ROM format, some as gifts but mostly bought from serials funds and endowments.

Management Library (Howard Ross Library of Management)

This library now houses the complete collection of current Quebec collective agreements. This collection consists of some 9000 labour agreements in force, deposited by Ministère du travail du Québec.

Religious Studies Library

This library was fortunate to acquire the facsimile edition of the *Dead Sea Scrolls* published in Washington, D.C. by the Biblical Archaeology Society (1991), volumes 1-2.

As a gift, the library also acquired:

Religion Index One: Periodicals Retrospective.

University Archives

The University Archives acquired the records of several distinguished McGill staff members. Professor of Law John T.P. Humphrey has contributed the diaries he kept while serving the United National as Director of the Division of Human Rights. Covering Humphrey's activities and his views on many issues, the diaries span the years 1948 to 1959 and join his previously deposited drafts for the Universal Declaration of Human Rights. Professor of Marine Sciences Maxwell Dunbar gave diaries which document the development of Canadian northern research. They were kept on expeditions to Greenland, Alaska, Ungava Bay, Hudson's Bay, Frobisher Bay, and other areas between 1935 and 1958. Included is a diary kept by Mrs. Joan Kohl in Greenland, 1945-1946. (Portions of both John Humphrey's and Maxwell Dunbar's diaries were published in *Fontanus* IV, 1991).

The Law Librarian transferred custody of private papers of McGill Law Faculty members and other Montreal judges and lawyers, ca 1820-1890. These include bench books of Judges Robert MacKay, 1871-1881; Andrew Stuart, 1859-1885; Frederick Torrance, ca 1830-1875; and papers of the firms Rose and Monk; and Buchanan; Rose and Holmes; and Torrance and Morris.

Raymond Klein gave the Archives correspondence of former Psychology Professor Donald O. Hebb with various colleagues and friends, 1943-1985. To the extensive John Grierson Collection already in the University Archives, the National Archives of Canada has added Grierson papers, including pocket diaries, correspondence, memoranda and notes relating to teaching in the Communications Program, 1969-1971. Photographs of former Principal F. Cyril James and his family were received from Doreen Darby.

The University Archives continued to acquire records of McGill graduates, documenting their student life and later careers. From Irene Commins, the Archives received notes of lecture given by George Adami among others, taken by Edward Commins (M.D. 1895) as a medical student at McGill. Jean Macqueen gave student papers, letters and photographs of Katherine

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Armstrong (B.A. 1899). Additions to previously deposited letters from Cynthia Rendall Toller (B.A. 1936) to Dorothy King were received from the latter. G.D. Armstrong (B.A. 1941, D.D.S. 1949) deposited a set of "The Marlowe Lowdown", a private newsletter of a group of friends, including several McGill students, documenting their experiences during the war years, 1940-1945. Dr. R.V.V. Nicholls deposited additions to the papers of chemical engineer J.R. Donald (B.A. & App. Sci. 1913).

From Gordon and Peter Kohl, the University Archives acquired daily journals kept by their father George H. Kohl (App. Sci. 1910) while serving as Chief Engineer and Alternate Member, Canadian Section, on the St. Lawrence Seaway Project, 1953-1963. Mrs. M. Carroll donated writings and correspondence of Austin "Dink" Carroll (LL. B. 1923), Montreal sports journalist. Althea Douglas (B.A. 1947, Assistant in English 1948-1951) contributed course notes as well as records relating to the English Department's drama program, 1945-1960, including programmes, production files, slides of productions, and original drawings for costumes.

The Department of Rare Books and Special Collections deposited publications by McGill groups and offices, an extensive chronological series of unworked examinations in most disciplines, photographs of groups and buildings (including 39 photographs presented to Sir William Macdonald), and other records relating to McGill University, ca 1895-1940.

Redpath Museum – Ethnology Collections

There has been a considerable effort over the past year to consolidate like holdings that have been spread amongst McGill's varied museums, libraries, and special collections. There were 78 objects from Ancient Egypt, Greece, and Rome added to the Ethnology Collections from the Department of Rare Books and Special Collections, including papyrus fragments, shawabti figures, scarabs, amulets, terracotta figures, and Roman glass. Two boxed sets (12 in each) of paintings on mica from nineteenth century India were also transferred to the Redpath Museum from Rare Books.

Perhaps the most significant addition to the Ethnology Collections resulted from the transfer from the Osler Library of the History of Medicine of 267 rare objects related to the practice of medicine in Ancient Ceylon (15th-17th century) collected by Dr. Casey Wood. This important collection of medicine boxes and implements used by Ceylon's "Vederalas" or native doctors was supplemented by a transfer from Rare Books of an additional 14 artifacts from Sri Lanka and India.

Library Publications

Christopher Dewdney, *Recent Artifacts from the Institute of Applied Fiction*. Department of Rare Books and Special Collections, McGill University Libraries, 1990.

Fontanus: from the Collections of McGill University, vol. IV, Montreal, 1991.

The Libraries of Edward and W. S. Maxwell in the Collections of Blackader-Lauterman Library of Architecture and Art, McGill University (Montreal), 1991.

John Bland at Eighty – A Tribute, edited by Irena Murray and Norbert Schoenauer. Blackader-Lauterman Library of Architecture and Art, School of Architecture, McGill University, Montreal, 1991.

Contributors

Real G. Boulianne received his doctorate in Canadian history from McGill University in 1970. He joined McGill's Faculty of Education in 1973 and served first as Director of College Level Programs, and later, as Associate Dean (Continuing Education). Currently, he is a member of the Department of Administration and Policy Studies in Education. His research interests and publications centre on the attempts, in the 19th century, to use education to anglicize the French Canadians, as well as on the role of the Church of England in the development of education in Lower Canada. Supported by a SSHRC grant, he is now working on a book outlining the work of the Society for the Propagation of the Gospel missionaries in education in Lower Canada.

Montague Cohen was born in London, England and obtained his B.Sc. (Physics) and Ph.D. (Medical Physics) from London University. Before coming to Canada in 1975, he worked at the London Hospital in London and the International Atomic Energy Agency in Vienna. He was appointed Director of McGill's Physics Unit in 1979 and held cross-appointments in Physics and Radiology. He is also Honorary Curator of the Rutherford Museum. He has been a member and/or Chairman of several task groups of the International Commission on Radiological Units and Measurements, and a consultant on radiation safety to the Ontario Government.

Dionysios Hatzopoulos holds a Ph.D. in Byzantine History from the Université de Montréal (1980); has studied Latin Palaeography at the Institut dominicain d'études médiévales in Montreal and currently teaches Greek Civilization in the Department of Languages, Faculté des arts et des sciences, at the Université de Montréal, as well as Greek and Roman History at Dawson College in Montreal.

Alastair McKinnon graduated from the University of Toronto (M.A., 1948), the University of Edinburgh (Ph.D., 1950) and McGill University (B.D., 1953). He joined the McGill Department of Philosophy in 1950 and was named Macdonald Professor of Moral Philosophy in 1971, Chairman of the Department in 1975 and Professor Emeritus in 1990. He was made a charter member of the Kierkegaard Academy in 1978 and a Fellow of the Royal Society of Canada in 1981. He is the author of *Falsification and Belief*, *The Kierkegaard Indices*, and, with Hans Kaal, *Concordance to Wittgenstein's Philosophische Untersuchungen*. He has published many papers on the philosophy of religion, Kierkegaard and computer analysis of philosophical and literary texts. Since 1989 has been one of the two Senior Editors of the new joint Canadian-Danish Kierkegaard Critical Edition project.

Robert H. Michel is an archivist in the McGill University Archives and a faculty lecturer in the Graduate School of Library and Information Studies for the team-taught archives course. He holds a doctorate in history from McGill University. He is member of the Acquisition Committee of the Canadian Council of Archives, established to help preserve Canada's documentary heritage. Currently he is president of the James McGill Society, which presents lectures on McGill's history and research.

Norma Morgan is the Curator of the Visual Arts Collection at McGill University. She holds a B.Com. and a B.A. from McGill and an M.A. (Art History) from Concordia University.

Reinhard Pummer has a doctorate in theology (Religionswissenschaft) from the University of Vienna, Austria. Since 1967 he has been a professor in the Department of Religious Studies at the University of Ottawa. His areas of research include: Samaritanism, Judaism, and the

methodology of the History of Religions. Among his publications are, *The Samaritans*, in the series *Iconography of Religions*, XXIII, 5 (Leiden: E.J. Brill, 1987); *Die Samaritaner*, coeditor and contributor (*Wege der Forschung*, 604; Darmstadt: Wissenschaftliche Buchgesellschaft, 1991); *A Companion to Samaritan Studies*, coeditor and contributor (Tübingen: J.C.B. Mohr [Paul Siebeck], in preparation); and articles and contributions to books on the History of Religions and various aspects of Samaritanism.

Richard Virr is Curator of Manuscripts, Department of Rare Books and Special Collections, McGill University Libraries and Associate Editor of *Fontanus*. He is also Archivist for the (Anglican) Diocese of Montreal and of the Ecclesiastical Province of Canada. He holds a doctorate in church history from McGill University. He teaches an introductory course on codicology and descriptive bibliography, has published regularly in *Fontanus* and other journals, and has a special interest in the history of collections and libraries.

Guidelines for Authors

Fontanus is an annual publication devoted to scholarly research based principally upon McGill University collections. The term 'collections' is interpreted in the broadest sense, to include books, archives, specimens, artifacts, buildings and other forms of documentary evidence. Contributions derived from all aspects of McGill collections will be considered. Submission of a contribution is understood to imply that no paper containing essentially the same material has been published previously and that the manuscript is not under editorial consideration elsewhere. All submissions will be reviewed by members of the Editorial Board and refereed by experts in the appropriate field. Any substantial changes will be cleared with the author before publication. Send submissions, prepared according to the instructions below, to:

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Form of Manuscript

All manuscripts (in two copies) must be typewritten and double-spaced. Articles may also be submitted on computer disk, using WordPerfect 4.2, 5.0 or 5.1 software. Notes should be numbered consecutively and follow the text of the article. Author's name should appear after the title and before the text of the article. A short biographical note of no more than 100 words should be included. Degrees, current and previous positions and major publications should be listed.

Abstracts

A brief abstract (of no more than 200 words) of the content of the article should be prepared by the author.

Form of Citation

Manuscripts should conform to the standards outlined in *The Canadian Style: a guide to writing and editing* (by the Department of the Secretary of State of Canada) Toronto, London: Dundurn, 1985. Translation of passages in other than French or English should be provided in the text.

Illustrations

Photocopies of visual material (with brief captions) must be submitted for initial evaluation. Once an article has been accepted, the author is responsible for supplying clear black and white glossy photos and for securing the permission to publish copyright material if necessary.

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