

Appendices

to

Voluntary Sector Research in Canada Since the Mid-1970s and Mid-1990s

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Contents

Appendix 1: Method of Compiling the Canadian Voluntary Sector Research Database	3
Inclusion Criteria.....	3
Appendix 2: Total English-language contemporary Canadian Voluntary Sector Research Items in Database, by Scope of Application and Year	5
Appendix 3: Comparable Recency of Other Voluntary Sector Research Domains	6
I) Comparable Recency of the United States Voluntary Sector Research.....	6
II) Comparable Recency of Canadian Health Voluntary Sector Research in Particular	8
Appendix 4: Distribution of Contemporary English-language Canadian Voluntary Sector Research in the Database by Scope of Application and Publication Format, for 1974- 2003/forthcoming, combined	10
Appendix 5: Distribution of English-language Canadian Voluntary Sector Research Works by Peer-Review Status and Among the Economic Sectors Employing the First-Listed Authors.....	11
Appendix 6: Distribution of Canadian Voluntary Sector Research Journal Articles per Periodical, by Scope of Application, 1974-2003/forth.	13
Appendix 7: Applying ‘Bradford’s Law’ to the Distribution of Serial Articles	18
Appendix 8: Comparable Indicators on the Rates of Multiple-Authorship in the Serial Articles of Various Research Domains.....	20
Table 1: Findings on the Average Number of Authors per title in Various Fields.....	21
Table 2: Comparisons of Multiple Authorship Frequencies in Different Research Domains (in percent).....	22
Appendix 9: Applying Lotka’s Law of Scientific Productivity to the Canadian Voluntary Sector Research Literature.....	23
Appendix 10: The Relative Contributions of the Private Sector and Certain Occupational Roles	27
Appendix 11: Institutional Factors in the Production of all the Canadian Voluntary Sector Research Literature and Number of Academic Disciplines Involved.....	30
Appendix 12: Distribution of the Subject-Matter of the Contemporary English-Language Canadian Voluntary Sector Research, 1974-2003	36
Appendix 13: Number of Cross-Cutting Canadian Voluntary Sector Research items by Format, 1994-2003/forth., and explanation of why some types are filtered out	39
Appendix 14: Distribution of Peer-Reviewed Articles among the Serials, for selected types of cross-cutting Canadian Voluntary Sector Research, 1994-2003/forth.	40
Appendix 15: Distribution of individually credited works by the Number of Authors, for selected types of cross-cutting Canadian Voluntary Sector Research, 1994-2003/forthcoming	42
Appendix 16: Top Ten Individual Authors producing selected types of cross-cutting Canadian Voluntary Sector Research, 1994-2003/forth.	43
Appendix 17: Distribution of publications among all the major institutions the Canadian first- listed Authors (including institutional authors) are affiliated with, for selected types of cross- cutting Canadian Voluntary Sector Research, 1994-2003/forth.	44

Appendix 18: Distribution of Academic Disciplines the first-listed authors were working in, for those selected types of cross-cutting Canadian Voluntary Sector Research which had an Academic Affiliation for the Canadian Academic first-listed Authors, 1994-2003/forth., by Publication Format..... 46

Appendix 19: Distribution of More Detailed Subject-Matter for selected types of cross-cutting Canadian voluntary sector research, 1994-2003/forth. 47

Appendix 20: Selected statistics on the breadth, diversity, and overlap of the more detailed topics covered in the cross-cutting Canadian voluntary sector literature both pre- and post-1994 48

Appendix 1: Method of Compiling the Canadian Voluntary Sector Research Database

The database was largely compiled by means of conventional library research. Considering the extent to which most publications have been indexed electronically over the past few years, this entailed using Internet-based searches using both public access and subscription-based databases, for at least 80% of the entries. This included visits to the home pages of various publishers, post-secondary institutions, think tanks, government departments, and individual investigators.

In addition to using the standard keywords for this domain,¹ I often searched for more outputs by individual Canadian authors who had self-registered in a Canadian nonprofit sector ‘Research In Progress’ database² in the late 1990s, or who were known to have other relevant publications. This was supplemented by ‘data mining’ my own archives from dozens of literature reviews,³ and some ‘snowballing,’ or following up on the references in others’ works.

Inclusion Criteria

To warrant entry, first, as noted, the items must deal with the voluntary sector in some way, and they must either be written by a Canadian or at least be on the Canadian sector (if authored by a foreigner). The entries also have to qualify as *research*. Although it’s not easy to articulate just what that is in an interdisciplinary context such as this, some of my operational criteria were: if the item presents the results of actual empirical investigations (such as case studies or surveys); if it conducts reviews or analyses of same; or if it brings some other well-grounded professional knowledge or methods to bear on some recent finding or development affecting the sector. Numerous other types of items were mostly excluded from the inventory, as well:

- **News**, especially *newsletter articles*, which merely provide secondary reports or press releases on research studies, unless it is the best way to access the primary data.
- **Speeches and How-To Manuals**, which may draw on some form of research but are usually too spare in the details of the actual evidence or basis for the insights being imparted. (However, about 10 manuals that are heavily laden with data have been included.)
- Most **evaluations** of individual agencies or programs, since they would dilute the database too much (given there are tens of thousands of agencies out there⁴). However, a number of evaluations which have appeared in peer-reviewed journals *have* been included; most of these concern health agencies in particular.

¹ Including the terms: Nonprofit, Third, and Voluntary sector; Volunteering; Charitable organizations, and Charities; Voluntary, Community, and Grassroots Organizations; and Philanthropy; Contributions; and Donations, among others.

² Maintained by the Canadian Centre for Philanthropy (now ‘Imagine Canada’) in Toronto, available online at <http://nonprofitscan.andornot.com/default.aspx>

³ E.g., see my two Fall, 2000 reviews of Human Resource issues in the nonprofit sector for the federal Voluntary Sector Initiative, at www.vsi-isbc.ca/eng/products/reports.cfm or my series of “Briefing Notes” reviews on the individual sub-sectors for the Manitoba Voluntary Sector Initiative, formerly at <http://voluntarysector.mb.ca> and currently at <http://plug.ca/resources/vnpsom/pdfs/>

⁴ Canada has about 80,000 registered charities (www.c CRA-ADRC.gc.ca/tax/charities/online_listings/canreg_interim-e.html lists them with some of their financial data) and perhaps 100,000 additional non-charitable nonprofit organizations.

- **Position papers** by unions, health associations, etc., are generally excluded, although a few of their discussion papers *were* included, if laden with otherwise hard-to-get data.
- Documents posted mainly for **accountability** or **progress report** purposes, concerning an organization's own decision or nominating processes, unless they go far beyond merely outlining procedural matters and options and the opinions of the principal organizers.
- **Internal-use documents.** For practical purposes, the items need to be *accessible* to researchers or other interested parties – unlike most government-commissioned reports by Health Boards and the like, as well as proprietary market research or evaluations commissioned by individual agencies, and even many academic conference papers, e.g., which might be very informative indeed but were never meant for public release.

As the last point notes, my final criterion for inclusion is that the items still have to be publicly **available**: whether this is through the Internet, or via the regular Canadian public or academic libraries, or the handful of specialized voluntary sector libraries with significant holdings (principally at the Canadian Centre for Philanthropy in Toronto (now known as 'Imagine Canada') and Volunteer Centres of Ottawa, Winnipeg, Calgary and Vancouver), or at the National Library in Ottawa, which may be the only reliable source for most of the older documents and especially the theses.⁵

⁵ Note, the "Theses Canada" program of the National Library of Canada (www.nlc-bnc.ca/index-e.html) archives all the recent Masters and Doctoral theses by Canadians on microform, including many of the doctoral theses completed at foreign universities. Their holdings can be searched online (only by keywords in the title, unfortunately), and the actual theses can be borrowed through interlibrary loans or even purchased through www.nlc-bnc.ca/6/4/s4-230-e.html

Appendix 2: Total English-language contemporary Canadian Voluntary Sector Research Items in Database, by Scope of Application and Year

Year of publication or release	Cross-Cutting	Regional	Sub-Sectors	Total	As a % of total holdings
1974	3		1	4	0.2%
1975	1			1	0.1%
1976	3	1	1	5	0.3%
1977	5		4	9	0.5%
1978	9		1	10	0.6%
1979	1	3	8	12	0.7%
1980	1		3	4	0.2%
1981	3	1	4	8	0.4%
1982	7		4	11	0.6%
1983	22	3	5	30	1.7%
1984	11		4	15	0.8%
1985	12	1	6	19	1.1%
1986	12	1	8	21	1.2%
1987	5		13	18	1.0%
1988	8	2	9	19	1.1%
1989	27	10	28	65	3.6%
1990	22	1	20	43	2.4%
1991	6		23	29	1.6%
1992	27	3	26	56	3.1%
1993	11	5	36	52	2.9%
1994	13	4	27	44	2.5%
1995	21	8	38	67	3.7%
1996	35	5	24	64	3.6%
1997	41	10	31	82	4.6%
1998	39	8	30	77	4.3%
1999	62	18	52	132	7.4%
2000	110	36	100	246	13.8%
2001	140	43	112	295	16.5%
2002	130	27	86	243	13.6%
2003	65	9	33	107	6.0%
forth.	37	5	12	54	3.0%
Total works	852	199	737	1788	100.0%
Number of Years with published Works*	30	21	29	30	n/a
Average across all 29.75 years	28.4	9.5	25.4	59.6	3.3%
Median *	28.6	6.7	24.8	60.1	3.4%
Maximum per year *	140	43	112	295	16.5%
Mode/most frequent *	12	5	20	30	1.6%

* Including the 2003 and forthcoming titles together as one year.

Appendix 3: Comparable Recency of Other Voluntary Sector Research Domains

D) Comparable Recency of the United States Voluntary Sector Research

To discover the number of pure U.S. voluntary sector research items published per year to serve as a comparison group with the body of Canadian research, there does not seem to be any way to manipulate the previously cited ‘Philanthropic Studies Index’ or ‘Literature of the Nonprofit Sector Online’ databases,⁶ unfortunately.

However, the SCI[®] database⁷ can be used in this way: its ‘Advanced Search’ feature enables one to identify all the articles over the same period from American sources with explicit nonprofit or voluntary sector topics.⁸ But because this is first and foremost a *science* index, the SCI[®] covers relatively few *social science* journals,⁹ especially those specializing in the voluntary sector.¹⁰ Hence, only a limited number of voluntary sector research items are to be found in it. As of May 1, 2003, after culling the ineligible items,¹¹ there were just 125 relevant research articles with identified American authors explicitly addressing nonprofit or voluntary sector issues in their topic over this period¹² (and only eighteen articles by identified Canadian authors, using the same parameters, after culling ineligible items.)

These only represent a fraction of the estimated fifteen to twenty thousand nonprofit sector research items by American authors which might be found, of course, but they do have a similar distribution to the Canadian-authored holdings in the present database in terms of their recency, especially if the latter is confined to a comparable set (i.e., journal articles alone). (See Figures 1 and 2.)

Moreover, almost 80% of this indexed U.S. voluntary sector research has been published within the last decade alone, for over a six-fold increase in production relative to previous interval,

⁶ See <http://cheever.ulib.iupui.edu/psipublicsearch/PSIsearchForm.htm> and <http://lnps.fdncenter.org>, respectively.

⁷ As noted in the main text, the SCI[®] or Scientific Citation Index[®] is a subscription-based database compiled by the ‘ISI Web of Science’ division of the Thomson Corporation’s Institute for Scientific Information in Philadelphia. It is widely available through university libraries, and online at www.isinet.com/isi

⁸ In a limited way, unfortunately, since its Topic search appears to be keyed into phrases in the original abstracts, rather than being independently coded for content, as my database has been. Searching for the phrases “nonprofit sector” or “voluntary sector” under the Topic turns up only a handful of records with those phrases explicitly in their abstracts. I used this search protocol for the subsequent analysis: “TS=(nonprofit or voluntary) AND TS=(sector)AND AD=(USA) DocType=Article; Language=All languages; Database(s)=SCI-EXPANDED, SSCI, A&HCI; Timespan=1974-2003.”

⁹ E.g., Katz reports that while ISI indexed approximately 5,500 journals in the physical sciences at that time, it only covered 1,800 in the social sciences. See Katz, J. Sylvan. (1999) *Bibliometric Indicators and the Social Sciences*. Prepared for ESRC Polaris House. Available online at www.sussex.ac.uk/Users/sylvank/pubs/ESRC.pdf

¹⁰ E.g., the *Nonprofit and Voluntary Sector Quarterly* is only covered in the SCI[®] in a piecemeal fashion, and *Nonprofit Management & Leadership* (or its precursor, the *Journal of Voluntary Action Research*) and *Voluntas*, not at all.

¹¹ E.g., many articles use term “voluntary” in other senses, such as in compliance with a pollution, debt-reduction, or immunisation program. Similarly, some mention nonprofits in only a tangential way.

¹² None of these were published between 1974 and 1977, as it happens; hence the restriction introduced in Table 1 in the main text

similar to what we saw with the Canadian research in Table 3 in the main text.. This is shown here in the following Table:

Table 1: Total and Average United States Nonprofit or Voluntary Sector Research Journal Articles indexed by the Scientific Citation Index® for Selected Intervals

Interval	No.	%	Average no. of items per year over this entire interval	Average for most recent interval in proportion to this one
Most recent decade (1994 – first quarter of 2003)	97	77.6%	10.2	=
Early period (1977-1993)	23	22.4%	1.6	6.4
Total, entire 26.25 year span (1977-2003)	125	100.0%	4.8	2.2

Figure 1: Number of Nonprofit or Voluntary Sector Research Journal Articles by American Authors indexed by the SCI per Year, for 1977 to 2003 inclusive

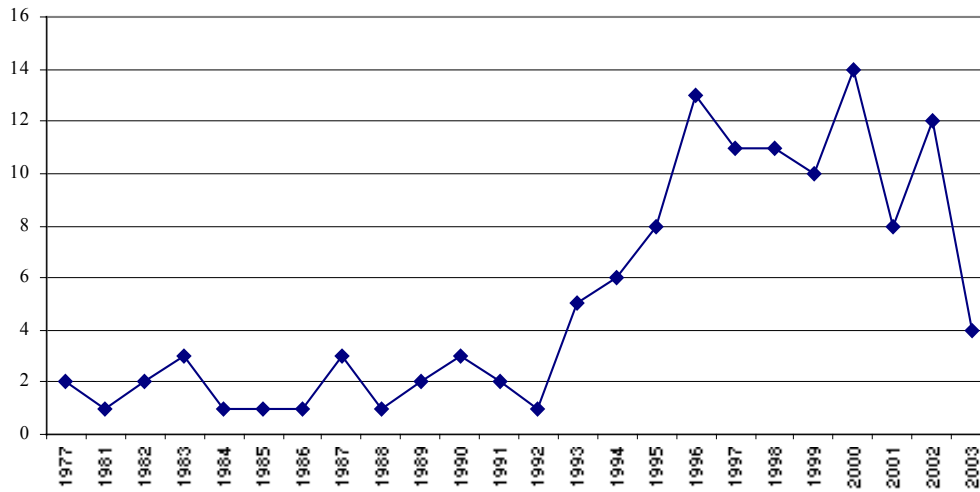
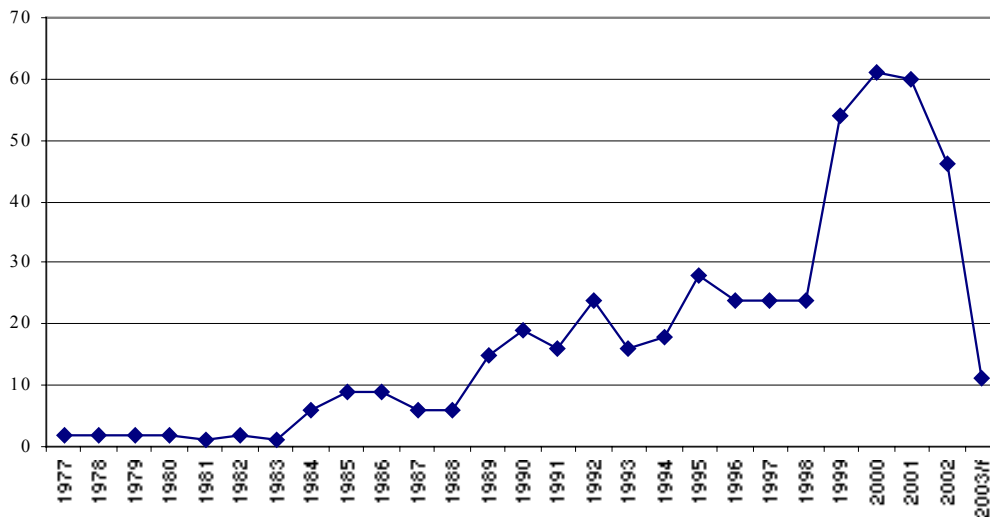


Figure 2: Number of Canadian Nonprofit or Voluntary Sector Research Journal or Periodical Articles in the Canadian voluntary sector research Database, per Year



Of course, while this line of evidence may be taken as confirmation that the American voluntary sector research field is just as recent as the Canadian one, suggesting that there is not all that much earlier Canadian literature to *be* missed, it may simply be a reflection of the fact that earlier titles are not well indexed in electronic databases, period. Hence, we must turn to the other, more direct line of evidence, to try to circumvent that objection.

II) Comparable Recency of Canadian Health Voluntary Sector Research in Particular

As noted, a completely thorough compilation of voluntary sector literature would scour all the individual journal contents and card catalogues of all of Canada's post-secondary and nonprofit agency libraries to identify all the items omitted from the electronic databases. Now, although I certainly cannot pretend to have done that for the Canadian literature as a whole, there is one recent federally-commissioned research report which made a credible attempt to thoroughly document the holdings on one particular sub-sector, up to the end of 2001.

On behalf of Health Canada, Dorman (2002) gave it the old college try, and it seems he dug deeply back into not only the slightly older CD-ROM databases, but also the older hardcopy journal indices and card-catalogues, themselves.¹³ He came up with a little over 100 health-sector related journal articles alone, along with a number of dissertations and other research formats.¹⁴ A quick overview of the chronological findings on this particular subset may help attenuate the concern about the data quality of my overall database, if it shows a similar percentage of early titles despite an enhanced method of data collection.

As you can see in Figure 1 below, the periodical articles pertaining to the Canadian health voluntary sector compiled in Dorman (2002) exhibit a similar chronological distribution to both the U.S.- and Canadian-VSR, with very little showing up prior to early nineties. A comparable analysis also shows that almost 80% of the items have appeared since 1993 (even with two fewer years of holdings), for slightly more than a seven-fold increase in average annual production relative to the earliest period. (Table 2)

While by no means definitive, this, along with the parallel evidence from the indexed American literature, may be taken as provisional evidence that only about a fifth of all the contemporary Canadian voluntary sector research in existence predates 1993 or so. Thus, while it is still not possible to quantify with any precision how much potentially locatable, publicly available research is missing from my database, this suggests that it may be under 5% of the titles.

¹³ Among the indices he consulted; Social Science Citation Index (SSCI); CUBE (Carleton University Bibliographic Enquiry); Canadian Research Index (CRI); Canadian Business and Current Affairs (CBCA); Gov-INFO (Sub-index of CRI); PsycLIT; Public Policy PAIS International; Social Work Abstracts; Cambridge Scientific Abstracts (CSA); Conference Papers Index; EconLIT; ERIC; Social Services Abstracts; Sociological Abstracts; Worldwide Political Science Abstracts; PUBMED; AIDSEARCH; MEDLINE; CISTI; Web of Science; Wilson Indexes; PAIS

¹⁴ These articles and the other research formats identified in Dorman (2002) have been incorporated into the current database, although a number of been classified as more regional or even cross-cutting, in scope, adding information for the other fields, except for some omitted articles by European or American authors who used their own countries' data.

Figure 1: Number of Health-Related Canadian Voluntary Sector Research Journal Articles indexed by Dorman (2002), by Year

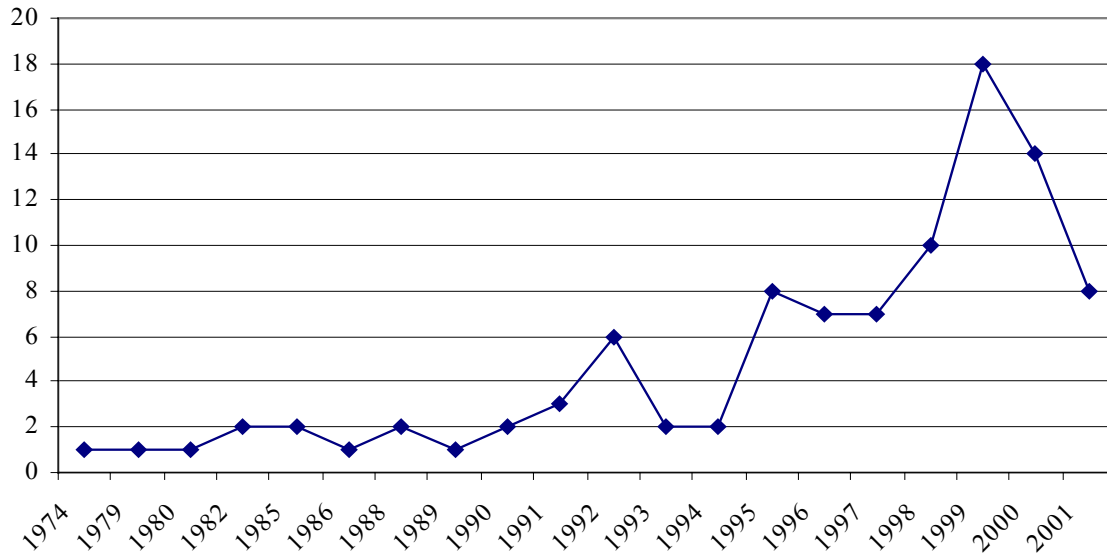


Table 2: Total and Average Number of Health-Related Canadian Voluntary Sector Research Journal Articles indexed by Dorman (2002), for Selected Intervals

Interval	No.	%	Ave. titles per year over this entire interval	Ave. Relative to most recent
Total, entire 28 year span (1974-2001)	98	100.0%	3.5	2.4
Early, pre-1993 period (1974-1992)	22	22.4%	1.2	7.3
Most recent decade (1993-2001)	76	77.6%	8.4	=

Appendix 4: Distribution of Contemporary English-language Canadian Voluntary Sector Research in the Database by Scope of Application and Publication Format, for 1974-2003/forthcoming, combined

Type of Publication Format	No. of items that are Cross-Cutting in their evidence or appl.	% of all the cross-cutting items that are in this format	% of all the items in this format that are cross-cutting in scope	No. of items that are Regionally based	% of the regional items that are in this format	% of all the items in this format that are regional in scope	No. of items based on or applicable to particular Sub-Sectors	% of all the Sub-Sector items that are in this format	% of all the items in this format mainly applying to Sub-Sectors	Total no. of items, for all three scopes of application	% of all the items in the database that are in this format	% of all the items in this format
Articles	37	4.3%	44.6%	7	3.5%	8.4%	39	5.3%	47.0%	83	4.6%	100.0%
Articles in Books	82	9.6%	52.9%	10	5.0%	6.5%	63	8.5%	40.6%	155	8.7%	100.0%
Books	19	2.2%	37.3%		0.0%	0.0%	32	4.3%	62.7%	51	2.9%	100.0%
Book Anthologies	12	1.4%	75.0%	2	1.0%	12.5%	2	0.3%	12.5%	16	0.9%	100.0%
Brief Reports	18	2.1%	26.5%	16	8.0%	23.5%	34	4.6%	50.0%	68	3.8%	100.0%
Datafiles	13	1.5%	76.5%		0.0%	0.0%	4	0.5%	23.5%	17	1.0%	100.0%
Fact Sheets	23	2.7%	32.9%	34	17.1%	48.6%	13	1.8%	18.6%	70	3.9%	100.0%
Journal Articles (feature-length, 10 pages or more))	153	18.0%	47.5%	24	12.1%	7.5%	145	19.7%	45.0%	322	18.0%	100.0%
Periodical Articles (2-9 page-length)	55	6.5%	32.4%	8	4.0%	4.7%	107	14.5%	62.9%	170	9.5%	100.0%
Journal & Periodical articles	208	24.4%	42.3%	32	16.1%	6.5%	252	34.2%	51.2%	492	27.5%	100.0%
Manuals w. data	12	1.4%	85.7%	1	0.5%	7.1%	1	0.1%	7.1%	14	0.8%	100.0%
Reports	296	34.7%	55.3%	71	35.7%	13.3%	167	22.7%	31.2%	535	29.9%	100.0%
(Book) Reviews	2	0.2%	50.0%		0.0%	0.0%	2	0.3%	50.0%	4	0.2%	100.0%
Theses	55	6.5%	34.8%	11	5.5%	7.0%	92	12.5%	58.2%	158	8.8%	100.0%
Working Papers	75	8.8%	59.5%	15	7.5%	11.9%	36	4.9%	28.6%	126	7.0%	100.0%
Total	852	100.0%	47.7%	199	100.0%	11.1%	737	100.0%	41.2%	1788	100.0%	100.0%

Appendix 5: Distribution of English-language Canadian Voluntary Sector Research Works by Peer-Review Status and Among the Economic Sectors Employing the First-Listed Authors

Table 1: Number of Canadian voluntary sector research items in database that appeared to be Peer-Reviewed, by Scope of Application

	Cross-Cutting	Regional in scope	Mainly Sub-Sectors	Total
Probably peer-reviewed	412	48	399	859
Unlikely or Unknown to be peer-reviewed	440	151	338	929
Total no. of Canadian Voluntary Sector Research works	852	199	737	1788
Percentage known or presumed to be Peer-Reviewed	48.4	24.1	54.1	48.0

Table 2: Number and Percentage of Peer-Reviewed Publications for 1974-2003/forthcoming, by Publication Format

	Number known or presumed to be peer-reviewed	No. that are Unlikely to be peer-reviewed	Total no. of Canadian Voluntary Sector Research Works	Percentage that are Probably Peer-Reviewed
Articles (either under two pages in length or in a non-standard media such as a newsletter)	9	74	83	10.8
Articles in a Book Anthology Conference Proceedings vol.	155		155	100.0
Books	51		51	100.0
Book Anthologies or Volumes of Conference Proceedings	16		16	100.0
Brief (2-4 pg.) Reports		68	68	0.0
Datafiles		17	17	0.0
Fact Sheets		70	70	0.0
Journal Articles (of 10+ pgs.)	322		322	100.0
Manuals		14	14	0.0
Periodical Articles (2-10 pgs.)	170		170	100.0
Reports	95	439	534	17.8
Book Reviews		4	4	0.0
Theses/Dissertations	41	117	158	25.9
Working Papers		126	126	0.0
Total	859	929	1,788	48.0

Table 3: Distribution of English-language Canadian Voluntary Sector Research Works among the Economic Sectors Commissioning the Works or Employing the First-Listed Authors, by Format

	Article	Article in Book	Book	Book, Anthol.	Brief Report	Data-file	Fact Sheet	Journal Article	Manual w. data	Periodical Article	Report	Review	Thesis	Working Paper	Total
Academic	9	105	26	12			9	231	2	49	56	2	158	86	745
Private	15	22	5	1				52		20	16			7	138
Public *	20	11	4		46	17	8	11	1	69	209			6	402
Voluntary	37	17	16	3	22		53	28	11	31	253	2		27	500
Totals**	81	155	51	16	68	17	70	322	14	169	534	4	158	126	1785
No. of sectors producing each type	4	4	4	3	2	1	3	4	3	4	4	2	1	4	4
Average per sector participating in each	20.3	38.5	12.8	4.0	17.0	4.3	17.5	80.5	3.5	42.3	133.5	1.0	39.5	31.5	446.0
Maximum works per sector	37	104	26	12	46	17	53	231	11	69	253	2	158	86	744
Percent per sector per format	Article	Article in Book	Book	Book, Anthol.	Brief Report	Data-file	Fact Sheet	Journal Article	Manual w. data	Periodical Article	Report	Review	Thesis	Working Paper	Total
Academic	11.1	67.7	51.0	75.0	0.0	0.0	12.9	71.7	14.3	29.0	10.5	50.0	100.0	68.3	41.7
Private	18.5	14.1	9.8	6.3	0.0	0.0	0.0	16.1	0.0	11.8	3.0	0.0	0.0	5.6	7.7
Public	24.7	7.1	7.8	0.0	67.6	100.0	11.4	3.4	7.1	40.8	39.1	0.0	0.0	4.8	22.5
Voluntary	45.7	11.0	31.4	18.8	32.4	0.0	75.7	8.7	78.6	18.3	47.4	50.0	0.0	21.4	28.0
Rank of each sector per format	Article	Article in Book	Book	Book, Anthol.	Brief Report	Data-file	Fact Sheet	Journal Article	Manual w. data	Periodical Article	Report	Review	Thesis	Working Paper	Total
Academic	4	1	1	1	n/a	n/a	2	1	2	2	3	1	1	1	1
Private	3	2	3	3	n/a	n/a	n/a	2	n/a	4	4	n/a	n/a	3	4
Public	2	4	4	n/a	1	1	3	4	3	1	2	n/a	n/a	4	3
Voluntary	1	3	2	2	2	n/a	1	3	1	3	1	1	n/a	2	2
*Public sector works	Article	Article in Book	Book	Book, Anthol.	Brief Report	Data-file	Fact Sheet	Journal Article	Manual w. data	Periodical Article	Report	Review	Thesis	Working Paper	Total
Public, Fed.	20	9	1		46	17	8	6	1	65	190			6	369
Public, Municipal											2				2
Public, Prov.		2	3					5		4	17				31

** Excluding three titles with ambiguous or unknown affiliations.

Appendix 6: Distribution of Canadian Voluntary Sector Research Journal Articles per Periodical, by Scope of Application, 1974-2003/forth.

Name of Journal or Periodical	Cross-Cutting	Regional	Sub-Sectors	Total	%	Rank
<i>Accounting Review</i>			1	1	0.2%	57
<i>Administration in Social Work</i>			2	2	0.4%	29
<i>Age and Ageing</i>			1	1	0.2%	57
<i>AIDS and Public Policy Journal</i>			1	1	0.2%	57
<i>AIDS Care</i>			2	2	0.4%	29
<i>AIDS Patient Care and STDs</i>			1	1	0.2%	57
<i>Alberta Journal of Educational Research</i>			1	1	0.2%	57
<i>American Behavioral Scientist</i>	1			1	0.2%	57
<i>American Ethnologist</i>			1	1	0.2%	57
<i>American Journal of Drug and Alcohol Abuse</i>		1		1	0.2%	57
<i>American Journal of Health Promotion</i>			1	1	0.2%	57
<i>American Journal of International Law</i>			1	1	0.2%	57
<i>American Journal of Occupational Therapy</i>			1	1	0.2%	57
<i>American Journal of Preventive Medicine</i>			1	1	0.2%	57
<i>American Journal of Public Health</i>			1	1	0.2%	57
<i>American Review of Canadian Studies</i>			1	1	0.2%	57
<i>American Sociological Review</i>	2			2	0.4%	29
<i>Annals of Otology Rhinology and Laryngology</i>			1	1	0.2%	57
<i>Annals of Public and Cooperative Economics</i>	2		1	3	0.6%	24
<i>Applied Economics</i>	3			3	0.6%	24
<i>Canadian Home Economics Journal</i>			1	1	0.2%	57
<i>Canadian Journal of Administrative Sciences/ Revue canadienne des sciences de l'administration</i>		1	1	2	0.4%	29
<i>Canadian Journal of Cardiology</i>			1	1	0.2%	57
<i>Canadian Journal of Community Mental Health</i>			2	2	0.4%	29
<i>Canadian Journal of Higher Education</i>			1	1	0.2%	57
<i>Canadian Journal of Nursing Administration</i>			1	1	0.2%	57
<i>Canadian Journal of Nursing Research</i>			1	1	0.2%	57
<i>Canadian Journal of Oncology</i>			1	1	0.2%	57
<i>Canadian Journal of Political Science/ Revue canadienne de science politique</i>			2	2	0.4%	29
<i>Canadian Journal of Program Evaluation</i>			1	1	0.2%	57
<i>Canadian Journal of Psychiatry/ Revue canadienne de psychiatrie</i>			1	1	0.2%	57
<i>Canadian Journal of Public Health/ Revue canadienne de santé publique</i>		2	8	10	1.9%	7
<i>Canadian Journal of Sociology/ Cahiers canadiens de sociologie</i>	2			2	0.4%	29
<i>Canadian Journal of Urban Research</i>	1		3	4	0.8%	15
<i>Canadian Journal on Aging/ Revue canadienne du vieillissement</i>	3	1	3	7	1.4%	11

Voluntary Sector Research in Canada Since the Mid-1970s and Mid-1990s

Name of Journal or Periodical	Cross-Cutting	Regional	Sub-Sectors	Total	%	Rank
<i>Canadian Medical Association Journal/ Journal de l'association medicale canadienne</i>			2	2	0.4%	29
<i>Canadian Public Administration/ Administration publique du Canada</i>	2	1	3	6	1.2%	13
<i>Canadian Public Policy/ Analyse de politiques</i>	1		3	4	0.8%	15
<i>Canadian Review of Social Policy/ Revue canadienne de politique sociale</i>			2	2	0.4%	29
<i>Canadian Review of Sociology & Anthropology</i>			1	1	0.2%	57
<i>Canadian Social Trends</i>	9		10	19	3.7%	4
<i>Canadian Tax Journal</i>	1		1	2	0.4%	29
<i>Charity Law and Practice Review</i>	1			1	0.2%	57
<i>Child Abuse and Neglect</i>			1	1	0.2%	57
<i>Children and Youth Services Review</i>	1			1	0.2%	57
<i>Clinical and Investigative Medicine/ Medecine clinique et experimentale</i>			1	1	0.2%	57
<i>Community Mental Health Journal</i>			2	2	0.4%	29
<i>Contemporary Drug Problems</i>		1		1	0.2%	57
<i>Continuing Higher Education Review</i>			1	1	0.2%	57
<i>Critical Social Policy</i>		1		1	0.2%	57
<i>Daedalus</i>			1	1	0.2%	57
<i>Disability and Society</i>			1	1	0.2%	57
<i>Drug Information Association</i>			1	1	0.2%	57
<i>Économie et Solidarités</i>	1		1	2	0.4%	29
<i>Education Canada</i>			1	1	0.2%	57
<i>Environment and Behavior</i>			1	1	0.2%	57
<i>Estates Trusts and Pensions Journal</i>	1			1	0.2%	57
<i>Evaluation and Program Planning</i>			1	1	0.2%	57
<i>Experimental Economics</i>	1			1	0.2%	57
<i>Financial Accountability and Management</i>	1			1	0.2%	57
<i>Focus on Culture</i>			35	35	6.8%	2
<i>Forschungsjournal Neue Soziale Bewegungen</i>			1	1	0.2%	57
<i>Futures</i>			1	1	0.2%	57
<i>Gender & Society</i>			1	1	0.2%	57
<i>Gender, Place and Culture</i>			1	1	0.2%	57
<i>Global Networks</i>			1	1	0.2%	57
<i>Governance</i>			1	1	0.2%	57
<i>Health & Place</i>			2	2	0.4%	29
<i>Health & Social Care in the Community</i>			1	1	0.2%	57
<i>Health Care Management Review</i>			4	4	0.8%	15
<i>Health Education & Behavior</i>			1	1	0.2%	57
<i>Health Law Review</i>			2	2	0.4%	29
<i>Health Reports</i>	1			1	0.2%	57
<i>Home Health Care Services Quarterly</i>			1	1	0.2%	57
<i>Hospital Progress</i>			1	1	0.2%	57
<i>Hospital Quarterly</i>			1	1	0.2%	57

Voluntary Sector Research in Canada Since the Mid-1970s and Mid-1990s

Name of Journal or Periodical	Cross-Cutting	Regional	Sub-Sectors	Total	%	Rank
<i>Housing and People</i>			1	1	0.2%	57
<i>Housing Policy Debate</i>			4	4	0.8%	15
<i>Housing Studies</i>		1		1	0.2%	57
<i>Human Organization</i>			1	1	0.2%	57
<i>Information & Management</i>			1	1	0.2%	57
<i>Inroads</i>		1		1	0.2%	57
<i>International Journal</i>			2	2	0.4%	29
<i>International Journal of Aging & Human Development</i>	1			1	0.2%	57
<i>International Journal of Arts Management</i>			9	9	1.7%	8
<i>International Journal of Health Care Quality Assurance</i>			1	1	0.2%	57
<i>International Journal of Health Services</i>		2	2	4	0.8%	15
<i>International Journal of Migration and Integration</i>	1		1	2	0.4%	29
<i>International Journal of Nonprofit and Voluntary Sector Marketing</i>	1		1	2	0.4%	29
<i>International Journal of Public Sector Management</i>			1	1	0.2%	57
<i>International Journal of Social Economics</i>			1	1	0.2%	57
<i>Isuma: Canadian Journal of Policy Research</i>	7	1		8	1.5%	10
<i>Journal for the Scientific Study of Religion</i>	1		2	3	0.6%	24
<i>Journal of Advanced Nursing</i>			1	1	0.2%	57
<i>Journal of Arts Management, Law and Society</i>			1	1	0.2%	57
<i>Journal of Canadian Studies/ Revue d'etudes canadiennes</i>	2		1	3	0.6%	24
<i>Journal of Community Health</i>		1	3	4	0.8%	15
<i>Journal of Comparative Economics</i>	1			1	0.2%	57
<i>Journal of Consumer Research</i>	1			1	0.2%	57
<i>Journal of Economic Behavior and Organization</i>	2			2	0.4%	29
<i>Journal of Economic Education</i>			1	1	0.2%	57
<i>Journal of Epidemiology and Community Health</i>			2	2	0.4%	29
<i>Journal of Health Politics Policy and Law</i>			1	1	0.2%	57
<i>Journal of Medical Systems</i>			1	1	0.2%	57
<i>Journal of Nonprofit & Public Sector Marketing</i>	2			2	0.4%	29
<i>Journal of Nursing Education</i>			1	1	0.2%	57
<i>Journal of Planning Education and Research</i>			1	1	0.2%	57
<i>Journal of Policy Analysis and Management</i>	1	1		2	0.4%	29
<i>Journal of Political and Military Sociology</i>		1		1	0.2%	57
<i>Journal of Progressive Human Services</i>			1	1	0.2%	57
<i>Journal of Public Economic Theory</i>	1			1	0.2%	57
<i>Journal of Public Health Policy</i>			1	1	0.2%	57
<i>Journal of Public Policy</i>	1			1	0.2%	57

Voluntary Sector Research in Canada Since the Mid-1970s and Mid-1990s

Name of Journal or Periodical	Cross-Cutting	Regional	Sub-Sectors	Total	%	Rank
<i>Journal of Sociology and Social Welfare</i>			1	1	0.2%	57
<i>Journal of Sport Management</i>			1	1	0.2%	57
<i>Journal of the American Geriatrics Society</i>			1	1	0.2%	57
<i>Journal of the Community Development Society</i>	1	1		2	0.4%	29
<i>Journal of Urban Affairs</i>	1		1	2	0.4%	29
<i>Journal of Volunteer Administration</i>	6		1	7	1.4%	11
<i>La revue canadienne de sociologie et d'anthropologie/ The Canadian Review of Sociology and Anthropology</i>	1		1	2	0.4%	29
<i>Leadership and Organization Development Journal</i>	1			1	0.2%	57
<i>Managing Leisure, An International Journal</i>			1	1	0.2%	57
<i>Medical Care</i>		1		1	0.2%	57
<i>Mental Retardation</i>			1	1	0.2%	57
<i>New Directions in Mental Health Services</i>			1	1	0.2%	57
<i>Nonprofit and Voluntary Sector Quarterly</i> (or its predecessor, the <i>Journal of Voluntary Action Research</i>)	15		4	19	3.7%	4
<i>Nonprofit Management & Leadership</i>	10		2	12	2.3%	6
<i>Nouvelles pratiques sociales</i>		25		25	4.8%	3
<i>Optimum</i>	1			1	0.2%	57
<i>Perspectives on Labour and Income</i>	3			3	0.6%	24
<i>Policy & Politics</i>		1		1	0.2%	57
<i>Politique et sociétés</i>	1			1	0.2%	57
<i>Public Health Nursing</i>			2	2	0.4%	29
<i>Queen's Law Journal</i>	1			1	0.2%	57
<i>Recherches sociographiques</i>			2	2	0.4%	29
<i>Reclaiming Children and Youth: Journal of Emotional and Behavioral Problems</i>			1	1	0.2%	57
<i>Regional Politics & Policy</i>			1	1	0.2%	57
<i>Research in Community Sociology</i>			2	2	0.4%	29
<i>Research on Social Work Practice</i>			1	1	0.2%	57
<i>Resources for Feminist Research// Documentation sur la recherche féministe</i>	1			1	0.2%	57
<i>Revue canadienne d'études du développement/ Canadian Journal of Development Studies</i>			1	1	0.2%	57
<i>Revue internationale d'action communautaire/ International Review of Community Development</i>	1			1	0.2%	57
<i>Sexuality and Disability</i>			1	1	0.2%	57
<i>Social Indicators Research</i>	1			1	0.2%	57
<i>Social Justice</i>			1	1	0.2%	57
<i>Social Marketing Quarterly</i>	1			1	0.2%	57
<i>Social Policy and Administration</i>	1			1	0.2%	57
<i>Social Policy Journal</i>	1			1	0.2%	57
<i>Social Science and Medicine</i>		6	3	9	1.7%	8

Voluntary Sector Research in Canada Since the Mid-1970s and Mid-1990s

Name of Journal or Periodical	Cross-Cutting	Regional	Sub-Sectors	Total	%	Rank
<i>Sociology of Health & Illness</i>		1		1	0.2%	57
<i>Sport Science Studies</i>			1	1	0.2%	57
<i>Studies in Political Economy</i>		1		1	0.2%	57
<i>The Academy of Management Journal</i>	1			1	0.2%	57
<i>The American Journal of Hospice & Palliative Care</i>			1	1	0.2%	57
<i>The American Journal of Psychiatry</i>			1	1	0.2%	57
<i>The Canadian Geographer/ Géographe canadien</i>			2	2	0.4%	29
<i>The Canadian Journal of Communication</i>			1	1	0.2%	57
<i>The Canadian Journal of Economics/ Revue canadienne d'économie</i>	4		1	5	1.0%	14
<i>The International Journal of Health Care Quality Assurance</i>			1	1	0.2%	57
<i>The Journal of Economics and Management Strategy</i>	1			1	0.2%	57
<i>The Journal of Public Economics</i>	3		1	4	0.8%	15
<i>The Philanthropis t/ Le philanthrope</i>	90	3	31	124	24.0%	1
<i>The Service Industries Journal</i>			1	1	0.2%	57
<i>The Social Service Review</i>			1	1	0.2%	57
<i>Voluntas: International Journal of Voluntary and Nonprofit Organizations</i>	1		3	4	0.8%	15
<i>Women & Environments International Magazine</i>		3	1	4	0.8%	15
<i>Women Health</i>			1	1	0.2%	57
<i>Women's Health and Urban Life: An International and Interdisciplinary Journal</i>			1	1	0.2%	57
<i>World Development</i>			1	1	0.2%	57
<i>World Health Forum</i>			1	1	0.2%	57
<i>Youth and Society</i>	1			1	0.2%	57
Total	204	58	255	517	100.0%	

Appendix 7: Applying ‘Bradford’s Law’ to the Distribution of Serial Articles

In its simplest form, Bradford’s Law holds that all the journals featuring articles in a single field can be divided into three clusters: the core journals, which have the heaviest concentration of articles in the field, and two other rings containing roughly the same number of articles which appear in an exponentially larger number of journals, in a relationship of $1:n:n^2$.¹⁵

Given this grouping, the classic formulation of Bradford’s law might project that there should be 236 serials capturing this discipline (if it were one) altogether, rather than just the 171 that I identified. The reason: there were 8.3 times as many journals in that middle cluster of journals (25) with about one third of the articles as there were in the core (3), so there could be another 208 peripheral journals only featuring one or two articles each (that’s the number of journals in the intermediate cluster multiplied by that first ‘scaling-up’ factor of 8.3). So maybe I missed dozens of articles and/or journals featuring Canadian voluntary sector research.

However, as most information science specialists (e.g., see Palmquist n.d.) point out, in practice, Bradford’s may be less of a law than a rule of thumb to help determine how many journals a library needs to carry in order to capture most of a given field. Moreover, as Garfield (1980) among others have pointed out, Bradford’s original numeric expression of this relationship was flawed compared to his graphical representation of it, and subsequent attempts to formulate the slope of the latter have found that its numerical constant will vary with the size and timespan of the database in question. This has been reinforced empirically by Wagner-Döbler (1997), concerning even complete bibliographies.

When the current data on the relative concentration of contemporary Canadian voluntary sector research appearing in different serials since 1974 *is* plotted in graphic form, the results are somewhat equivocal. Rather than approximating a straight line after the first couple of points for the core journals, the resulting curve is a bit wobbly. And the coefficient of determination or R^2 for this curve is .9254, which means that only 93% of the variance between the three tiers of journals with the greatest and least concentration of voluntary sector articles could be explained by Bradford’s Law. Ideally, that would be a little higher, if this were truly a field unto itself, or if the database were essentially complete.

¹⁵ See Bradford, Samuel C. (1934) “Sources of information on specific subjects,” *Engineering*, 137 (3550): 85-86.

According to the method set out by Chen and Leimkuhler (1986),¹⁶ to assess whether a given field conforms to a Bradford's style distribution of core, intermediate, and peripheral journals, the distribution of articles among the various journals in a given can be plotted graphically by first constructing a "Cumulative frequency, log rank" table like the following, for the data points:

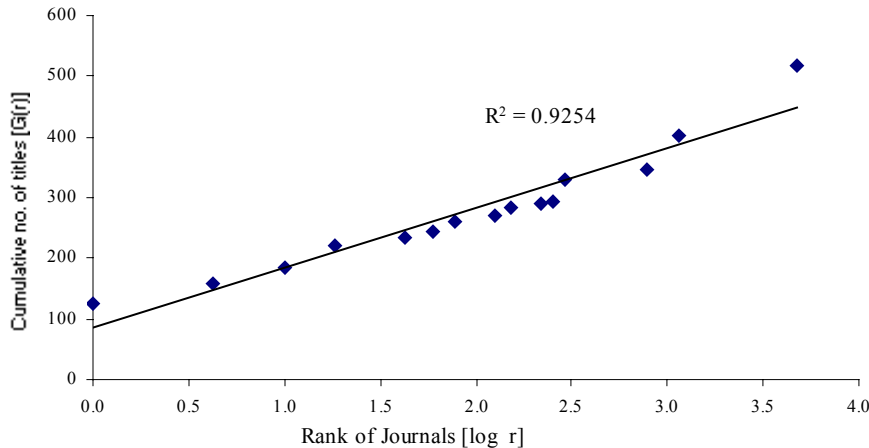
Cumulative Frequency Log Rank Approach to the Distribution of Canadian Voluntary Sector Research Articles Appearing in Peer-Reviewed Journals, 1974-2003

A	B	C	D	E	F	G
<i>i</i>	<i>n_i</i>	<i>f(n_j)</i>	<i>n_if(n_j)</i>	<i>r_i</i>	<i>G(r_j)</i>	<i>log r_i</i>
Index for each position, or group	Number of Articles per Journal in this group	No. of Journals with this no. of Articles in this group	No. of Articles times the no. of Journals for this group (BXC)	The Reverse Rank* of Journals in this position	G (r), or Cumulation starting from Least ranked	Log (base 3) of the reverse ranks from column E
1	1	115	115	1	124	0.00000
2	2	29	58	2	159	0.63093
3	3	4	12	3	184	1.00000
4	4	9	36	4	222	1.26186
5	5	1	5	6	234	1.63093
6	6	1	6	7	244	1.77124
7	7	2	14	8	262	1.89279
8	8	1	8	10	270	2.09590
9	9	2	18	11	284	2.18266
10	10	1	10	13	290	2.33472
11	12	1	12	14	295	2.40217
12	19	2	38	15	331	2.46497
13	25	1	25	24	343	2.89279
14	35	1	35	28	401	3.03310
15	124	1	124	57	516	3.68014

* As Chen & Leimkuhler (1986) put it, " = cumulation of Column C from the bottom = rank *r_i* of journals producing a corresponding given number of papers."

The resulting graph looks like this:

Plot of the Scattering of the Journals with Canadian Voluntary Sector Research Articles, 1974-2003/forth.



¹⁶ See Chen, Ye-Sho; & Leimkuhler, Ferdinand F. (1986) "A relationship between Lotka's Law, Bradford's Law, and Zipf's Law," *Journal of the American Society for Information Science*, 37(5):307-14)

Appendix 8: Comparable Indicators on the Rates of Multiple-Authorship in the Serial Articles of Various Research Domains

To assess how the Canadian voluntary sector research serial articles fare with respect to multi-authorship (which some take as a sign of enhanced quality) compared to those of other research domains, I scoured all the bibliometric literature I could access to find comparable indicators on the numbers and relative percentages of multiple authorship in other fields, in both the physical and the social sciences. Sometimes this information was front and centre in articles on those topics, but sometimes it had to be interpolated or estimated from the related numbers or percentages they did give.

I also developed two further data sets involving the voluntary sector literature in general to serve as points of comparison for the *Canadian* voluntary literature in particular. The first of these is an American analogue: a set of all the voluntary sector research covering the same period (nearly 30 years) done by investigators based in the United States or featuring U.S. data, which appears in the standard database for most bibliometric investigations: the Science Citation Index[®]. The second, more “International” set includes voluntary sector researchers of numerous nationalities (including Canadian, British, and other European, but mostly American) based on the holdings of the three core journals in the field, which covers a much more finite period (about 7.5 years, from 1996 to the first half of 2003, which is the only period I could get all the requisite information for), but which has the virtue of being complete. These journals are: the *Nonprofit and Voluntary Sector Quarterly* (or ‘NVSQ’); *Nonprofit Management & Leadership* (or ‘NML’); and *Voluntas* (subtitled, the *International Journal of Voluntary and Nonprofit Organizations*).

A synthesis of the findings on multiple authorship appears below in Table 1. Its first 15 rows give the results on the average number of authors per article (and in some cases, the average production per author, as well) for some Science and Technology fields, followed by results for some Social Sciences in the next seven rows, and then the three sets of voluntary sector results (Canadian 30-year set, United States 30-year set; and International in the final three rows. It shows the Canadian voluntary sector research results (about 1.8 authors per article) are not only slightly higher than the U.S. and International voluntary sector research averages (about 1.6), but also very much in the same range as the other social science and interdisciplinary fields examined (from about 1.5 to 2.1), especially if the varying intervals are taken into account.

The different frequencies on the number of authors per work, which were harder to come by, are presented for about nine different fields thereafter, in Table 2. It shows that the voluntary sector literature is actually in the middle of the pack, regarding the main split between singly or multiply-authored (with some types of Economic research doing the best, with 60% of the articles being co-authored; and the Biomedical and Chemistry research actually faring the worst in terms of having the highest percentage of solo authored works (at about 72%), despite their ‘cast of thousands’ approach in those with are multiply-authored).

Among the works which do have more than one author, the Canadian voluntary sector research exceeds both the other voluntary sector research and the other social sciences examined, in having proportionally more works with three or more authors. In fact, apart from the aforementioned Chemistry and Biomedical research (where two-thirds and three-quarters of those articles have four or more authors, respectively), the only other fields with a comparable

proportion of multiply authored works with four or more authors (namely, about one in five) were Mathematics, and recent, health-related Economics.

Table 1: Findings on the Average Number of Authors per title in Various Fields

Discipline or Field	Total papers	Total authors	Ave. papers per author	Ave. authors per paper	Database	Interval analyzed	No. of Journals in sample	Source
Biomedical (incl. Pharmacology & Pharmacy; Pathology, Research Medicine; Immunology)	324,470	n/a	n/a	4.38	SCI	1980, 1986, 1992, 1996, & 1998	n/a	Interpolated from Glänzel (2002)
Biomedical Research	2,163,923	1,520,251	6.4	3.75	MEDLINE	1995-1999	n/a	Newman (2001)
Micro-Biology & Biology-related by Norwegian authors	1,914	3,486	n/a	4.36	NSIOD	1992-1996	n/a	Seglen & Aksnes (2000)
Chemistry (incl. Inorganic Chem. & Engineering; Analytical; Physical; & Organic)	310,962	n/a	n/a	3.45	SCI	1980, 1986, 1992, 1996, & 1998	n/a	Interpolated from Glänzel (2002)
Chemistry	2,150	6,535	1.2	3.79	SCI	1994	1	Kostoff <i>et al.</i> (2001)
Computer Science	13,169	11,994	2.55	2.22	NCSTRL	1995-1999	n/a	Newman (2001)
Hypersonics: Mechanical Engineering	1,284	2,483	1.38	2.63	SCI	1993-1996	277	Kostoff <i>et al.</i> (2001)
Mathematics	58,368	n/a	n/a	2.39	SCI	1980, 1986, 1992, 1996, & 1998	n/a	Interpolated from Glänzel (2002)
Physics: several types	98,502	52,909	5.1	2.53	Los Alamos e-Print Archive	1995-1999	n/a	Newman (2001)
Astro-physics	22,029	16,706	4.8	3.35	Los Alamos e-Print Archive	1995-1999	n/a	Newman (2001)
Condensed Matter Physics	22,016	16,726	3.65	2.66	Los Alamos e-Print Archive	1995-1999	n/a	Newman (2001)
High Energy Physics, theoretical	19,085	8,361	4.8	1.99	Los Alamos e-Print Archive	1995-1999	n/a	Newman (2001)
High Energy Physics	66,652	56,627	11.6	8.96	SPIRES	1995-1999	n/a	Newman (2001)
Near-Earth Space Physics	5,481	12,453	1.5	3.37	SCI	1993-1996	628	Kostoff <i>et al.</i> (2001)
Criminology & Criminal Justice	999	2,063	n/a	2.07	Core journals	1995-1999	8	Sorensen & Pilgrim (2002)
Economics	3,105	n/a	n/a	1.57	Core journals	1984-1996	3	Endersby (1996)
Health Economics	5,545	n/a	n/a	1.57	EconLit	1991-2000	423	Rubin & Chang (2003)
Interdisciplinary	695	n/a	n/a	1.70	Core journal	1984-1997	1	Endersby (1996)
Political Science	1,518	n/a	n/a	1.60	Core journals	1984-1994	3	Endersby (1996)

Discipline or Field	Total papers	Total authors	Ave. papers per author	Ave. authors per paper	Database	Interval analyzed	No. of Journals in sample	Source
Sociology	281,163	n/a	n/a	1.52	Sociological Abstracts	1963-1999	n/a	Moody (2002)
Sociology	1,577	n/a	n/a	1.72	Core journals	1984-1995	3	Endersby (1996)
Int'l Voluntary Sector Research	475	584	1.32	1.62	Core journals	1996-2003	3	Current author
US Voluntary Sector Research	125	178	1.15	1.64	SCI	1977-2003	58	Current author
Cndn. Voluntary Sector Research	493	640	1.35	1.76	Current author's	1974-2003	171	Current author

Table 2: Comparisons of Multiple Authorship Frequencies in Different Research Domains (in percent)

Field, sample size, and time interval analysed	% w. only one author	% multi-authored	Distr. of multiply authored			Source of Data
			% w. 2 authors	% w. 3 authors	% w. 4 or more	
Biomedical Research (n= 324,470), for 1980, 1986, 1992, 1996, & 1998	71.6	28.4	8.8	14.0	77.1	Interpolated from Glänzel (2002)
Chemistry (n= 310,962) 1980, 1986, 1992, 1996, & 1998	72.6	27.4	9.7	24.6	65.8	Interpolated from Glänzel (2002)
Economics (n=5277), 1981	42.5	57.5	77.4	20.5	2.0	Hollis (2001)
Economics (n=3,105), 1984-94	54.1	45.9	81.3	16.8	2.0	Interpolated from Endersby (1996)
Health Economics (n=5,545), 1991-2000	40.9	59.1	53.6	25.9	20.5	Interpolated from Rubin & Chang (2003)
Interdisciplinary (n=695), 1984-1994	46.9	53.1	74.3	21.7	4.0	Interpolated from Endersby (1996)
Mathematics (n= 58,368) 1980, 1986, 1992, 1996, & 1998	72.1	27.9	41.6	37.8	20.6	Interpolated from Glänzel (2002)
Political Science (n=1,518), 1984-1994	53.7	46.3	75.9	20.7	3.4	Interpolated from Endersby (1996)
Political Science (n=3,558), 1970-1996	62.3	37.7	77.1	18.3	4.7	Interpolated from Fisher <i>et al.</i> (1998)
Sociology (n=1,577), 1984-94	47.4	52.6	71.1	23.5	5.4	Interpolated from Endersby (1996)
Sociology (n=281,163), 1963-99	68.0	32.0	66.0	21.0	13.0	Moody (2002)
Theoretical Population Genetics (n=872), 1976-1980	56.7	43.3	65.6	25.1	9.3	Gupta, Kumar, & Rousseau (1998)
Cndn. Voluntary Sector Research (n=486), 1974-2003	56.4	43.6	57.2	24.2	18.6	Current author
Int'l Voluntary Sector Research (n=475), 1996-2003	54.5	45.5	73.6	20.4	6.0	Current author
US Voluntary Sector Research (n=125), 1977-2003	56.8	43.2	72.2	16.7	11.1	Current author

The numbers in columns 2 and 3, and columns 4 to 6 should sum to 100%, but may not, due to rounding.

Appendix 9: Applying Lotka's Law of Scientific Productivity to the Canadian Voluntary Sector Research Literature

“Lotka's Law,” as Palmquist (n.d.) notes, is one of the three most commonly used ‘laws’ used in bibliometrics, and it is often used by librarians to estimate the frequency with which authors will appear in an online catalog. The short version of it is expressed here by Garfield (1980): “In 1926, Alfred J. Lotka observed that the distribution of scientific authorship follows an inverse square formula...the number of scientists who author n papers will be $1/n^2$ of those who author just one paper.”

Does that observation apply to the Canadian voluntary sector research literature, as well – particularly the literature found in serials, which is the usual object of such inquiries? Let's see.

The short answer is, “No – the Canadian literature does not conform to the original, simplified version of Lotka's Law, at this point. In the classic example, Lotka found that about 60% of the authors have just one article. But that is the case for over 80% of the authors of Canadian voluntary sector research serial articles (as indicated in Tables 8 and 10 of the main text).

Moreover, if we use that simplified version of Lotka's Law, and begin from that starting point of 520 authors with just one qualifying article and move upwards to the discovered maximum of 15 articles by the most prolific Canadian voluntary sector researcher(s), then according to my calculations (which I'll spare you), it would predict that there should be 820 authors contributing to this field (instead of just 640), and that there should be at least 16 authors with over ten titles, each (instead of just the one found here), and far more with the intermediate numbers of articles, as well. Indeed, there might even be twice as many relevant articles to be found, altogether, to match all those predicted authors and rates. This might suggest that either the database is radically incomplete, or that this area is in such an early state of development that it does not qualify as a research field at all.

However, those conclusions may not be warranted – at least, not on the basis of ‘failing’ Lotka's Law, for two main reasons. First, it's not really a ‘Law,’ so much as a heuristic, and an overly simplified one, at that; and second, the present Canadian literature *does* conform to some more refined articulations of this heuristic, as we shall see.

Regarding the first point, as we saw, Palmquist (n.d.) observes, “Lotka's Law, when applied to large bodies of literature over a fairly long period of time, can be accurate in general, but not statistically exact.” Indeed, as Pao (1986), Nicholls (1989), and others have shown, that inverse square formulation (“the number of scientists who author n papers will be $1/n^2$ of those who author just one paper”) is just an approximation: the actual formula adequate to capture most well formed bibliographic data sets is far more complicated.¹⁷ Lotka himself indicated that the exponent was only *approximately* 2 in the bibliographies he examined; similarly, Chung & Puelz (1992) tested

¹⁷ As Nicholls (1989) points out, subsequent investigations have shown it should be more of the form:

$$g(x) = kx^{-b}; \quad x = 1, 2, \dots, x_{\max}; \quad k > 0, \quad b > 1, \quad (1)$$

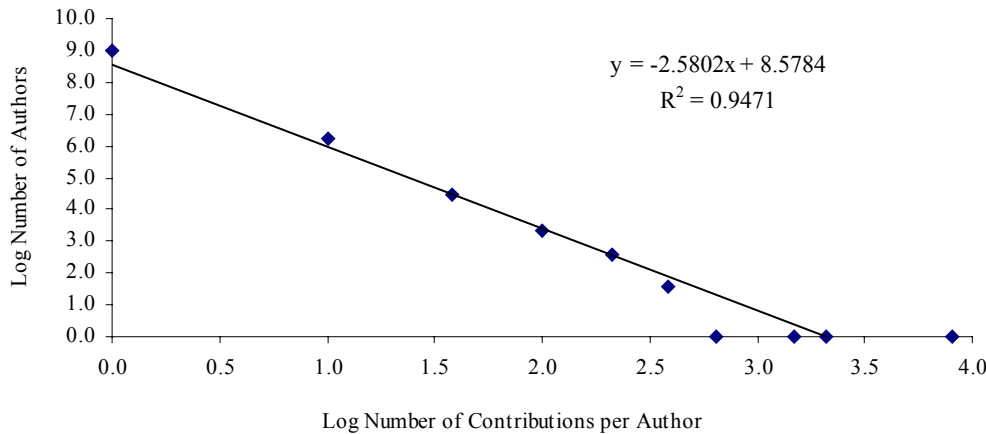
where $g(x)$ represents the probability of an author publishing x times in the subject area, x_{\max} represents the maximum size or value of the productivity variable x , and k and b are parameters to be estimated.”

a full set of 1,878 articles from the eight journals regularly featuring articles on risk and insurance from 1976-1990, and found an exponent of 2.27. Moreover, Pao (1986) found that only seven out of the forty-eight databases she tested had an exponent of even roughly 2: for the full range of applicable exponents, rather than it being 1 divided by n squared, it was n to the power of 1.7828 all the way to 3.7747.

There are alternative, graphical means of applying Lotka's Law, however (just as there are with Bradford's Law, as seen in Appendix 7 above), which get around this. The method for carrying this out is to construct a table which ranks all the authors in terms of the number of articles they have authored (with the one(s) with the most in first place, and all the ones with just one publication each in last place); then count the number of authors who have a given number of titles in each place (including ties); and then compute the logarithms of those counts of the number of authors and publications in each place, in order to get them on a continuous scale more conducive to plotting them.

So, when we do represent the data on the relative rates of productivity of contemporary Canadian voluntary sector research articles graphically (by showing a plot of a logarithm of the number of authors in each rank with a given number of titles, against the log of those numbers of titles, which is the standard way to represent this relationship), the initial results are as follows:

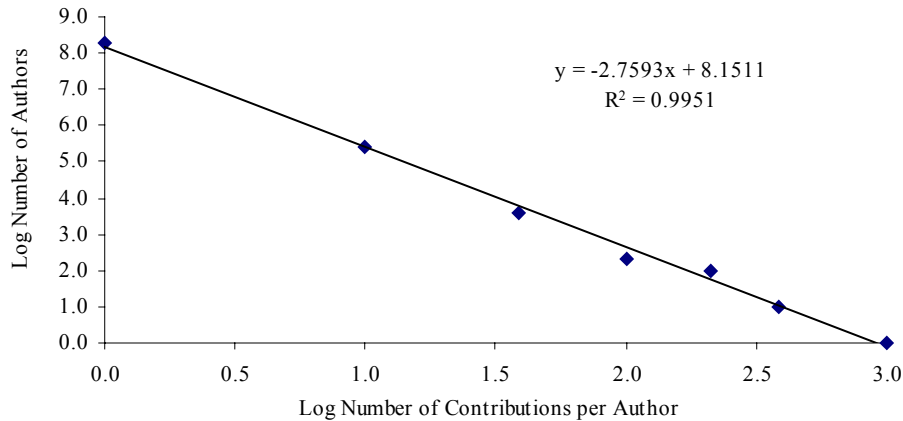
Lotka's distribution of authors for all the contemporary Canadian voluntary sector research serial articles, 1974-2003/f., when complete credit is assigned to each author



This is a slightly disappointing result. Instead of approximating a straight line linking all the points as Lotka's Law predicts it should, the resulting curve is more like a hockey stick; and its coefficient of determination or R^2 is 0.9471, rather than nearly 1.0 as it would be ideally (in which case 100% of the variance would be attributable to the expected relationship between the less and more prolific authors). However, this could be largely attributable to the fact that this first graph is based upon what is known as a "normal count" method of assigning a complete publication credit to each author (including co-authors), which some (e.g., Nicholls, 1989) endorse. There are two major alternatives to this: a more nuanced approach, which assigns a fraction of a credit to co-authors, which some recommend (e.g. Rousseau 1992); or a more heavy-handed approach, which confines the authorship credit to the first-listed authors alone in a "straight count," as Lotka himself did originally (Nicholls, 1989).

Unfortunately, the fractional credit method is quite cumbersome to carry out within this database, and a related program to be described below only works with whole numbers. But if we adopt the latter method and assign the full credit to first-cited authors alone, the resulting curve on the first-listed authors alone *is* much straighter, and nearly 100% of the variance in the number of titles per author can be explained in terms of its being the type of Lotka's Distribution expected from a scientific field. (See next Figure)

Lotka's distribution for only the first-listed authors of all the Canadian contemporary voluntary sector research serial articles, 1974-2003/forth.



Moreover, according to the generalized “power law” form of Lotka’s Law introduced in subsequent, more sophisticated versions of this line of inquiry, it turns out that even the previous “normal count” distribution of all the authors qualifies as a Lotka’s distribution. This is evidenced by a method spelled out by Pao (1985) and carried out by a “Lotka Program” developed by Rousseau & Rousseau (2001), which makes it easy to calculate.

The latter is a simple computer program which uses a law of the form: $f(y) = C/y^{\text{beta}}$, where “f” represents the number of authors with a given number of articles (“y”) each, and the *C* and the *beta* are a constant and an exponent for the power law, which must be calculated using a “maximum likelihood approach” to estimate the parameters to fit each distribution. The results are then subjected to the “Kolmogorov-Smirnov goodness-of-fit test” (K-S) to rule out whether it is just a coincidence.¹⁸

To actually apply all this, one simply enters the data on the number of authors with a given number of publications, each, into the program, and presses “Analyze” to get the results. And as long as the *beta* or exponent in those results does not exceed 3.29, and the maximum deviation

¹⁸ In the documentation for this free program, available through a link in the article, Rousseau & Rousseau (2001) write: “This program determines the best fitting parameters for a Lotka distribution of the form $f(y) = C/y^{\text{beta}}$ ”. Here $f(y)$ denotes the relative number of sources with production y . In Lotka's original formulation this means: the relative number of authors with y publications. The parameters C and beta are determined using the maximum likelihood method as described by Paul Nicholls. The program uses the tables published in the *Journal of Documentation* 49(4), 1993, pp. 409-12, and in *Introduction to Informetrics* by L. Egghe and R. Rousseau, p. 357. The beta -values must lie between 1.27 and 3.29. If this is not the case, it is signalled by the program.”

among the entries is within the bounds of the threshold for the K-S test for a sample of that size, then the program will generate the values and register “OK” if the distribution in question passes the power law and qualifies as a Lotka distribution. (Otherwise, it indicate “Fails.”)

Fortunately, the results for the Canadian voluntary sector research serial articles do pass: both for the “straight count” of the first-listed authors taken alone; and for the “normal count” of all the authors taken together, with co-authors assigned complete credit for the works (which is fairer than only crediting the first one, since in many cases, the listing may simply have been determined in alphabetical order¹⁹). The results for these two tests are presented here:

Results of the Successful Lotka Power Law Program Tests of all the Canadian contemporary voluntary sector research serial articles, 1974-2003/forth., by method of assigning authorship credit

	Value of Constant	Beta	Maximum (absolute) deviation	Critical KS value at 0.01 level of sig.
Straight count: including first-listed authors only²⁰	0.8344	3.0176	0.0085	0.0837
Normal count: including all authors, assigning complete credit to coauthors²¹	0.8205	2.919	0.0095	0.0644

When the entire database’s English-language holdings (including all the other types of research items such as dissertations, working papers, etc.) are subjected to the same test, they, too, “pass”:

Results of the Successful Lotka Power Law Program Tests of all the English-language contemporary Canadian voluntary sector research publications, 1974-2003/forth., by method of assigning authorship credit

	Constant	Beta	Max. dev.	K-S value at 0.01
Straight count: including first-listed authors only	0.7577	2.5581	0.0101	0.0544
Normal count: including all authors, assigning complete credit to coauthors	0.7489	2.5157	0.0117	0.044

¹⁹ Apparently different disciplines have different conventions in deciding which order the authors are to be listed in, in their publications (Fisher *et al.*, 1998): sometimes it is strictly alphabetical (as in the field of Economics); sometimes in order of the extent of their contribution; sometimes simply for the relative academic seniority of the author. The evidence on whether the Canadian voluntary sector research articles are following any set convention is ambiguous. To a certain degree, it seems to depend upon how many authors there are in total. Nearly two-thirds of the 123 articles with only two authors listed them in alphabetical order. Of course, there is no way of telling what portion of those were only accidentally alphabetical in listing the authors in terms of their relative contribution or on another basis. On the other hand, none of the 16 articles with more than four authors listed the authors alphabetically; and only about a fifth of the 24 articles with 4 authors did so; and 25% of the 51 articles with 3 authors. All told, 46% of the multiply-authored articles listed their authors in alphabetical order, but there were differences by scope: only about 35% of the sub-sector and regional titles did so, but 68% of the cross-cutting ones did, even though they all had a similar portion (about 25%) with only two authors.

²⁰ Based on the distribution set out in Table 8 of the main text.

²¹ Based on the distribution set out in Table 10 of the main text.

Appendix 10: The Relative Contributions of the Private Sector and Certain Occupational Roles

Quite apart from their role as contractors for the studies commissioned by government or voluntary sector organizations, it turns out that private sector workers have been responsible for almost eight percent of the works (as shown in Table 4 of the main text). Many of these are articles in the Canadian journal, *The Philanthropist*, by lawyers, consultants or financial advisors explaining emerging issues; some are articles in commercial publications; and there's been the occasional book by a journalist. Similarly, even within academe, the lead authors may be occupying several different roles in producing this research: paid faculty; unpaid graduate student; paid fund-raiser/Development officer; or 'moonlighting' as a paid consultant.

In order to help keep track of the different contributions of the sectors sponsoring or fostering this research and the principal affiliations of the investigators carrying it out, and to help the intended end-users of the database locate subsequent works by these contractors when those affiliations differ, I introduced a field in the database to identify several main roles of the initial authors: *Ad hoc* committee; Consultant; Fellow (for those receiving a Muttart or Atkinson Foundation sponsored sabbatical); Fundraiser; Journalist; independent Lawyer; Student; or regular Employee (either staff or management, in which case the field is left blank).

An analysis of the distribution of these roles indicates an increasing role for paid consultants (including academics and voluntary sector workers) as opposed to regular employees for Canadian voluntary sector research. They – about 100 individual and 25 institutional lead authors – account for 12.6%, of all the works, altogether, and almost a quarter of the works produced by or for the government, as indicated in these next few Tables and the accompanying Chart.

Table 1: Summary Statistics on the Distribution of Canadian voluntary sector research publications by the Occupational Roles of their first-listed Authors for these works, 1974-2003/f. combined

	Cross-Cutting	%	Regional	%	Sub-Sectors	%	Total	%
Academic Faculty	248	29.1%	48	24.1%	279	37.9%	575	32.2%
Ad hoc committee	5	0.6%	5	2.5%		0.0%	10	0.6%
Consultant	119	14.0%	26	13.1%	80	10.9%	225	12.6%
Fellow	15	1.8%	1	0.5%	2	0.3%	18	1.0%
Fundraiser	3	0.4%		0.0%		0.0%	3	0.2%
Journalist	6	0.7%	3	1.5%	5	0.7%	14	0.8%
Lawyer	52	6.1%	2	1.0%	11	1.5%	65	3.6%
Student	64	7.5%	11	5.5%	96	13.0%	171	9.6%
Presumed Staff or Management	340	39.9%	103	51.8%	264	35.8%	707	39.5%
Total	852	100.0%	199	100.0%	737	100.0%	1788	100.0%

Table 2: Occupational Role of the first-listed Authors within each Economic Sector employing them for their Canadian voluntary sector research publications, by Scope, 1974-2003/forth.

Economic Sector	Role of first-listed author within Sector	Cross-Cutting	%	Regional	%	Sub-Sectors	%	Total	%
Academic	Fundraiser	2	0.6%		0.0%		0.0%	2	0.3%
	Student	63	20.1%	11	18.6%	94	25.2%	168	22.6%
	Faculty	248	79.2%	48	81.4%	279	74.8%	575	77.2%
Academic Total		313	100.0%	59	100.0%	373	100.0%	745	100.0%
Private	Consultant	30	33.7%	2	25.0%	25	61.0%	57	41.3%
	Journalist	6	6.7%	3	37.5%	5	12.2%	14	10.1%
	Lawyer	51	57.3%	2	25.0%	11	26.8%	64	46.4%
	Public Rel'ns/CSR officer, or other staff	2	2.2%	1	12.5%		0.0%	3	2.2%
Private Total		89	100.0%	8	100.0%	41	100.0%	138	100.0%
Public	Ad hoc committee	2	0.9%	3	10.0%	0	0.0%	5	1.2%
	Consultant	61	28.5%	15	50.0%	29	18.4%	105	26.1%
	Civil Servant	151	70.6%	12	40.0%	129	81.6%	292	72.6%
Public Total		214	100.0%	30	100.0%	158	100.0%	402	100.0%
Voluntary	Ad hoc committee	3	1.3%	2	2.0%		0.0%	5	1.0%
	Consultant	28	11.9%	9	8.8%	26	16.0%	63	12.6%
	Fellow	15	6.4%	1	1.0%	2	1.2%	18	3.6%
	Fundraiser	1	0.4%		0.0%		0.0%	1	0.2%
	Staff or Mgmt.	187	79.6%	90	88.2%	133	81.6%	410	82.0%
	Student	1	0.4%		0.0%	2	1.2%	3	0.6%
Voluntary Total		234	100.0%	102	100.0%	164	100.0%	502	100.0%

Figure 1: Number of Canadian voluntary sector research publications by the occupational role of the first-listed authors, by Year

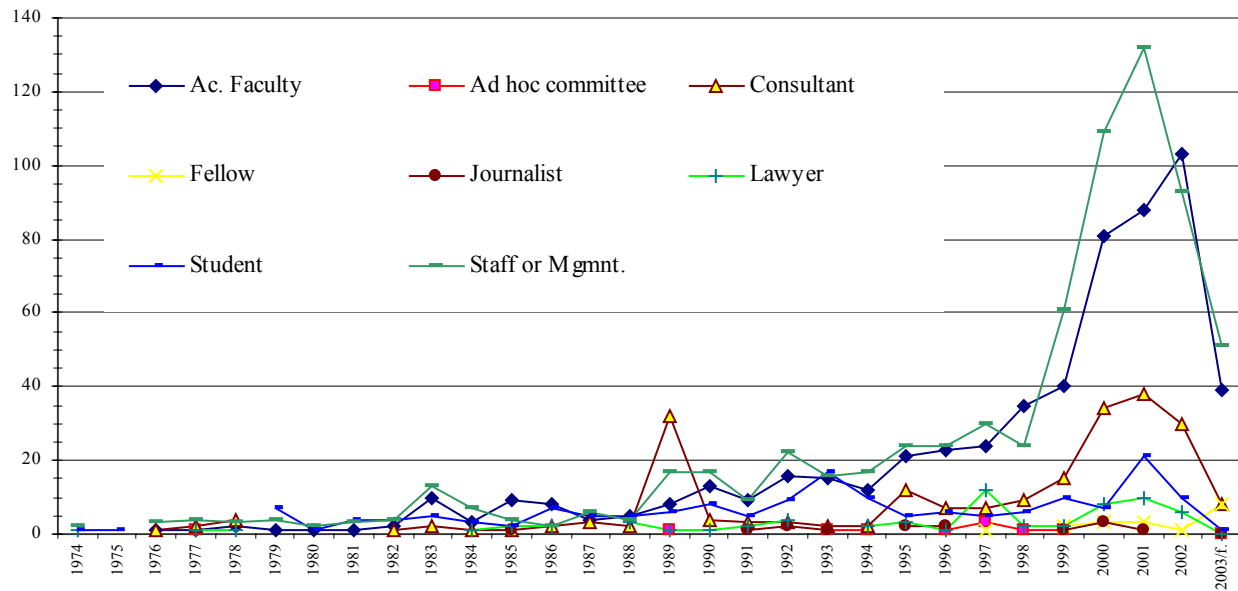


Table 3: Summary Statistics on the Production of English-language contemporary Canadian Voluntary Sector Research by Lead Authors in a Consultant Role, by Scope, for 1974-2003/forth. combined

	Cross-Cutting	Regional	Sub-Sectors	Total	% all Titles
Total titles by first-listed authors in a consulting role, incl. institutional authors	119	26	80	225	12.6%
Number of consultants, incl. institutional	81	25	58	147	
Average number of titles	1.5	1.0	1.4	1.5	0.1%
Maximum number of titles	11	2	11	24	1.3%
Total titles by first-listed authors in a consulting role, not incl. institutional authors	96	21	72	189	10.6%
Number, not incl. institutional authors	65	20	51	121	
Average number of titles	1.5	1.1	1.4	1.6	0.1%
Maximum number of titles	11	2	11	24	1.3%

Appendix 11: Institutional Factors in the Production of all the Canadian Voluntary Sector Research Literature and Number of Academic Disciplines Involved

This Appendix will set out the production statistics for the organizations and/or academic disciplines that the first-listed authors based in Canada were associated with. To profile those Canadian voluntary sector research works carried out or commissioned by **public sector** institutions, first, Table 1 provides a listing of the major Departments, Ministries, or Initiatives involved and their production statistics. It indicates that at least a dozen types of ‘major’ institutions (with at least three works) are involved (with some – Heritage, Health and the Auditor-Generals – collapsing the provincial and federal counterparts together), accounting for nearly 90% of the public sector works, and a fifth of all the English-language Canadian voluntary sector research, altogether.

Table 1: Distribution of the main Government Departments involved in the Production of Canadian Voluntary Sector Research, by Scope, for 1974-2003/forth. combined

Departments or Ministries (some combined fed. & prov.)	Cross-Cutting	Regional	Sub-Sectors	Total	% of all titles	% of govt. titles	Rank of major
Auditors-General	4	1	2	7	0.4%	1.7%	8
CCRA/Revenue Canada	5		1	6	0.3%	1.5%	9
CMHC (Housing)			14	14	0.8%	3.5%	4
Co-Op Secretariat			3	3	0.2%	0.7%	12
Finance	10		1	11	0.6%	2.7%	6
Health	2	1	11	14	0.8%	3.5%	4
Heritage*	34	12	31	77	4.3%	19.2%	2
Human Resources Dev. Can.	8			8	0.4%	2.0%	7
Industry Canada	5	1		6	0.3%	1.5%	9
Statistics Canada	103	3	77	183	10.2%	45.5%	1
Status of Women	1	2	3	6	0.3%	1.5%	9
Voluntary Sector Initiative ²²	22		1	23	1.3%	5.7%	3
Other, with only one title each, or not clearly allocated to a specific Dept. or Ministry	19	13	15	47	2.6%	11.7%	
Total Public Sector commissioned or produced works	213	30	159	402	22.5%	100.0%	
Sub-Total for these major Depts. or Ministries	194	20	144	358	20.0%	89.1%	
Number of major Depts. or Ministries involved	10	6	10	12			
Average production by these major Depts. or Ministries	19.4	3.3	14.4	29.8	1.7%	7.4%	
Max. among these major depts	103	12	77	183	10.2%	45.5%	

* Including the former Departments of the Citizenship and the Secretary of State, and the Canada Council for the Arts, and provincial Heritage departments consolidated together.

²² Some of the reports commissioned by the Voluntary Sector Initiative have been included here because it is funded entirely by federal monies and its research contracts all come through federal departments (mostly HRDC and now Heritage Canada) and ultimately the Ministry of Public Works. These totals do not include four titles carried out by the VSI's own secretariat, working groups or committees (which are comprised by voluntary sector employees), or the three reports for it by the CCRA.

Turning now to the Canadian voluntary sector research works carried out by first-listed authors employed by **voluntary sector** institutions (including contract employees, but not including those titles where the organization itself was contracted to do the work for others), Table 2 sets out both the production statistics and a listing of the more prolific organizations involved. It shows that at least 26 (types of²³) voluntary sector organizations are affiliated with several works, each, accounting almost 81% of the voluntary sector works, and about 23% of all the Canadian voluntary sector research. Among these, the Canadian Centre for Philanthropy emerges as the leading voluntary sector producer, by far, with about five times as many as its nearest competitors: 123 items, for almost a quarter of the voluntary sector works, and 6.9% of all the Canadian voluntary sector research.

Table 2: Top Voluntary Sector Institutions involved in the Production of Canadian voluntary sector research (not including its works commissioned by other sectors), by Scope, for 1974-2003/forthcoming combined

Name and standard acronym (if any)	Cross-Cutting	Regional	Sub-Sectors	Total	% of all titles	% of Vol. Sec. Titles	Rank of major ones
Big Brothers & Sisters		3	2	5	0.3%	1.0%	18
Caledon Inst. of Social Policy	3	1	2	6	0.3%	1.2%	17
Canada West Foundation	15	7	4	26	1.5%	5.2%	2
Canadian Centre for Business in the Community (CCBC)	7			7	0.4%	1.4%	16
Canadian Centre for Philanthropy (CCP)	72	40	11	123	6.9%	24.6%	1
Canadian Centre(s) for Policy Alternatives (CCPA)	3	2	4	9	0.5%	1.8%	12
Canadian Council for International Co-Operation (CCIC)	3		5	8	0.4%	1.6%	13
Canadian Council on Social Development (CCSD)	8	2	7	17	1.0%	3.4%	9
Canadian Policy Research Networks (CPRN)	13		6	19	1.1%	3.8%	7
Captain Spry Community Centre	2	1	1	4	0.2%	0.8%	22
Christian Commitment Research Institute	1		19	20	1.1%	4.0%	6
Cndn. Assoc. of Food Banks			13	13	0.7%	2.6%	10
Coalition of National Voluntary Organizations (NVO)	8			8	0.4%	1.6%	13
Community Foundations of Canada (CFC)			5	5	0.3%	1.0%	18
Fraser Institute	7		3	10	0.6%	2.0%	11
Genuine Progress Index Atlantic (GPI Atl.)	1	4		5	0.3%	1.0%	18
Institute for Media, Policy and Civil Society (IMPACS)	4		1	5	0.3%	1.0%	18
Institute On Governance (IOG)	4			4	0.2%	0.8%	22
Manitoba Voluntary Sector Initiative (MVSI)	7	8	11	26	1.5%	5.2%	2
Muttart Foundation	15	2	2	19	1.1%	3.8%	7

²³ Some of these organizations listed in the table – Social Planning Councils, United Ways, Volunteer Centres, and the Canadian Centre[s] for Policy Alternatives – have had a number of affiliated organizations collapsed together as types.

Name and standard acronym (if any)	Cross-Cutting	Regional	Sub-Sectors	Total	% of all titles	% of Vol. Sec. Titles	Rank of major ones
North-South Institute (NSI)	1		7	8	0.4%	1.6%	13
Public Policy Forum (PPF)	2			2	0.1%	0.4%	26
Social Planning Councils	6	19	1	26	1.5%	5.2%	2
United Ways	1	2		3	0.2%	0.6%	25
Volunteer Centres	17	3	2	22	1.2%	4.4%	5
VSI Secretariat, Joint Tables, or Working Groups	4			4	0.2%	0.8%	n/a
Sub-Total for these major ones	204	94	106	404	22.6%	80.8%	
No. of voluntary sector institutions with 3+ titles in dbase	23	13	19	26			
Average production by these major VS institutions per scope	8.9	7.2	5.6	15.5	0.9%	3.1%	
Maximum among these instns.	72	40	19	123	6.9%	24.6%	
Other orgs. w. 1 or 2 titles each	31	9	57	96	5.4%	19.2%	
Total Voluntary Sector Works	235	102	163	500	28.0%	100.0%	

Turning to the number of institutions and disciplines the academic lead authors have been working within, next, a considerable number of Canadian academic institutions have had faculty and/or graduate students producing Canadian voluntary sector research: at least fifty post-secondary institutions, in all, for an average of fourteen titles, each (Table 3).

Table 3: Summary statistics on the full-time Canadian academic affiliations of the first-listed authors of the English-language contemporary Canadian voluntary sector research for 1974-2003/forth., combined

	Cross-Cutting	Regional	Sub-Sectors	Total	% All titles	% Ac. titles
Total (non-commissioned) titles by individual Canadian academic first-listed authors based at Canadian post-secondary institutions	289	57	343	689	38.5%	92.5%
No. of Cndn. Post-Sec. Instns. the Cndn. Academic first-listed authors are affiliated with	40	22	44	50	n/a	
Ave. production per "	7.2	2.6	7.8	13.8	0.8%	1.8%
Max. titles per Cndn. Post-Sec. Affil.	42	7	32	75	4.2%	10.1%

* combining several branches of the University of Quebec [the Universités du Québec à Montréal (UQAM); Rimouski (UQAR); Hull, later renamed Outaouais (UQO/H) and Trois-Rivières (UQTR)] as one.

The distribution of all the titles associated with academic lead authors based in Canadian academic institutions among those institutions follows below, in Table 4.

Table 4: Distribution of the full-time Canadian Post-Secondary Affiliations of the first-listed authors of Canadian voluntary sector research titles, by Scope, for 1974-2003/forth.

Name and province of Cndn. Post-Secondary Institution	Cross-Cutting	Regional	Sub-Sectors	Total	% All	% Ca. Ac.	Rank Ca. Ac. Inst.
Acadia U., NS	1			1	0.1%	0.1%	44
Brock U., ON	1		1	2	0.1%	0.3%	37
Carleton U., ON	17	2	22	41	2.3%	6.0%	3
Concordia U., QC	1		1	2	0.1%	0.3%	37
Dalhousie U., NS	5		6	11	0.6%	1.6%	19
HEC of Montréal (École des Hautes Études Com-merciales, Montréal), QC			1	1	0.1%	0.1%	44
Humber College, ON			1	1	0.1%	0.1%	44
Lakehead U., ON	1	1		2	0.1%	0.3%	37
Laurentian U., ON	1	1	5	7	0.4%	1.0%	24
Malaspina U. College, BC			1	1	0.1%	0.1%	44
McGill U., QC	4	1	10	15	0.8%	2.2%	16
McMaster U., ON	11	1	26	38	2.1%	5.5%	6
Memorial U., NF	2			2	0.1%	0.3%	37
Mt. Allison U., NB	2			2	0.1%	0.3%	37
Mt. Royal College, AB	1		3	4	0.2%	0.6%	34
Mt. St. Vincent U., NS	1		3	4	0.2%	0.6%	34
Providence College, MB			1	1	0.1%	0.1%	44
Queen's U., ON	19	1	7	27	1.5%	3.9%	8
Royal Roads U., BC	9		1	10	0.6%	1.5%	20
Ryerson U., ON	16	5	6	27	1.5%	3.9%	8
SAIT (Southern Alberta Inst. Tech.), AB	2			2	0.1%	0.3%	37
Simon Fraser U., BC	1	2	4	7	0.4%	1.0%	24
St. Francis Xavier U., NS			1	1	0.1%	0.1%	44
St. Mary's U., NS	4		3	7	0.4%	1.0%	24
Trent U., ON	4		1	5	0.3%	0.7%	30
U. Alberta, AB	4	2	20	26	1.5%	3.8%	10
U. British Columbia, BC	12	4	23	39	2.2%	5.7%	4
U. Calgary, AB	4	4	13	21	1.2%	3.0%	12
U. College Cape Breton, NS	2		3	5	0.3%	0.7%	30
U. Guelph, ON	8		8	16	0.9%	2.3%	13
U. Laval, QC	1		6	7	0.4%	1.0%	24
U. Lethbridge, AB	2	1	2	5	0.3%	0.7%	30
U. Manitoba, MB	9	5	20	34	1.9%	4.9%	7
U. Montréal, QC	5	7		12	0.7%	1.7%	18
U. New Brunswick, NB	1		4	5	0.3%	0.7%	30
U. Northern BC, BC			2	2	0.1%	0.3%	37
U. Ottawa, ON	8		7	15	0.8%	2.2%	16
U. Prince Edward Island, PE			1	1	0.1%	0.1%	44
U. Québec (sev. branches), QC		2	7	9	0.5%	1.3%	21
U. Regina, SK	2	4	10	16	0.9%	2.3%	13
U. Saskatchewan, SK		2	6	8	0.4%	1.2%	23

Name and province of Cndn. Post-Secondary Institution	Cross-Cutting	Regional	Sub-Sectors	Total	% All	% Ca. Ac.	Rank Ca. Ac. Inst.
U. Sherbrooke, QC	4		2	6	0.3%	0.9%	28
U. Toronto, ON	39	4	32	75	4.2%	10.9%	1
U. Victoria, BC	19	3	17	39	2.2%	5.7%	4
U. Waterloo, ON	4	1	11	16	0.9%	2.3%	13
U. Western Ontario, ON	16	3	6	25	1.4%	3.6%	11
U. Windsor, ON	1		5	6	0.3%	0.9%	28
U. Winnipeg, MB			3	3	0.2%	0.4%	36
Wilfrid Laurier U., ON	3		6	9	0.5%	1.3%	21
York U., ON	42	1	25	68	3.8%	9.9%	2

* combining several University of Quebec branches (UQAH/O, UQAM, UQAR, and UQTR) as one.

Finally, Table 5 sets out which disciplines the first-listed authors based at Canadian academic institutions have been working within. Several *dozen* disciplines are involved – even with some more recent variants being collapsed into more standard forms and a number of Health or Medicine faculties being included together.

Table 5: Distribution of the Canadian first-listed Authors' Disciplines for the academically affiliated Canadian voluntary sector research titles, by Scope, for 1974-2003/forth.

Name of Discipline (recasting some in more standard forms)	Cross-Cutting	Regional	Sub-Sectors	Total	% ID'd Ca. Ac. Disc	Rank Ca. Ac. Disc
Accounting	1		1	2	0.3%	27
Agriculture	1			1	0.2%	32
Anthropology	1	1	4	6	1.0%	18
Business Administration/ Commerce/Management	45	7	30	82	13.1%	1
Canadian Studies			1	1	0.2%	32
Communications			2	2	0.3%	27
Continuing Ed.	5			5	0.8%	20
Co-Operative Studies			1	1	0.2%	32
Design			1	1	0.2%	32
Economics ²⁴	47	2	16	65	10.4%	2
Education	11		12	23	3.7%	10
Environmental Studies			6	6	1.0%	18
Geography		2	11	13	2.1%	11
Gerontology	1		4	5	0.8%	20
Health (including health promotion as well as various medical faculties together as one)	3	10	33	46	7.4%	6
History			3	3	0.5%	23
Home Economics/ Family & Consumer Sciences	1		2	3	0.5%	23

²⁴ Note, this includes the titles by Femida Handy, who actually teaches (economics) in the Faculty of Environmental Studies at York, but whose voluntary sector studies use the methods and techniques of the economic discipline.

Voluntary Sector Research in Canada Since the Mid-1970s and Mid-1990s

Name of Discipline (recasting some in more standard forms)	Cross-Cutting	Regional	Sub-Sectors	Total	% ID'd Ca. Ac. Disc	Rank Ca. Ac. Disc
Information Technology	2		1	3	0.5%	23
International Development			3	3	0.5%	23
Journalism			1	1	0.2%	32
Law	30	1	8	39	6.3%	8
Nonprofit Studies	7		3	10	1.6%	12
Northern Studies	1	1		2	0.3%	27
Nursing	1	1	7	9	1.4%	14
Organizational studies			1	1	0.2%	32
Peace & Conflict Studies			1	1	0.2%	32
Philosophy	1	2	2	5	0.8%	20
Political Science	19	8	17	44	7.1%	7
Psychiatry			2	2	0.3%	27
Psychology	8		2	10	1.6%	12
Public Administration	34		19	53	8.5%	5
Recreation	2		26	28	4.5%	9
Religion			7	7	1.1%	16
Rural Planning	1		1	2	0.3%	27
Social Work	9	10	41	60	9.6%	4
Sociology	24	7	32	63	10.1%	3
Tourism Development			1	1	0.2%	32
Urban Planning/Studies	1	1	6	8	1.3%	15
Women's Studies	5		2	7	1.1%	16
Total titles with ID'd disciplines for Cndn. Ac. first-listed authors	261	53	310	624	100.0%	
Number of distinct Disciplines with some Works in each Scope	25	13	36	39		
Average per Ca. Ac. Disciplines with some Works in each Scope	10.4	4.1	8.6	16.0	2.6%	
Max. Titles per Ca. Ac. Discipline	47	10	41	82	13.1%	

Appendix 12: Distribution of the Subject-Matter of the Contemporary English-Language Canadian Voluntary Sector Research, 1974-2003

The five tables in this Appendix profile the main topic areas of all the contemporary English-language Canadian voluntary sector research publications in the database, for each of the three main scopes of application. They form the basis for the consolidated Table 20 in the main text.

Table 1: Distribution of the Broad Subject Areas Covered by the Cross-Cutting Canadian Voluntary Sector Research Publications alone, for 1974-2003/f. combined

	No.	%	Rank
Accountability, Evaluations, Social Impact, & Public Opinion	48	5.6%	9
Board Governance & Leadership	50	5.9%	7
Corp. Volunteering, Donations, or Partnerships	49	5.8%	8
(non-corp.) Donations & Fundraising, incl. Legal Aspects & Gaming	193	22.7%	2
Government Relations/ Cutbacks	91	10.7%	5
Human Resources Management	44	5.2%	10
Legal Framework or Other Legal issues	125	14.7%	4
Organizational Development, incl. Commercial Ventures, Collaborations, & Information Mgmt/Tech.	132	15.5%	3
Overview of Sector, including Research Issues	62	7.3%	6
(non-corporate) Volunteering issues	210	24.6%	1
Totals (actual: not including double-counts of overlapping entries)	852	100.0%	

Table 2: Distribution of the Provinces as the Primary Subjects or Source of Data for all the English-language contemporary Regional Canadian Voluntary Sector Research Publications, for 1974-2003/forth. combined

Provincial Subject of Regional titles	No. of titles	%	Rank among reg. titles	% of Cndn. population per province
Alberta	28	14.1%	2	9.9%
British Columbia	28	14.1%	2	13.2%
Manitoba	21	10.6%	5	3.7%
New Brunswick	1	0.5%	9	2.4%
Newfoundland/Lab.	3	1.5%	8	1.7%
Nova Scotia	5	2.5%	7	3.0%
Ontario	80	40.2%	1	38.4%
Prince Edward Island	1	0.5%	9	0.4%
Québec	26	13.1%	4	23.7%
Saskatchewan	16	8.0%	6	3.2%
Total (actual: excluding double-counts of overlapping entries)	199	100.0%		99.7%

Table 3: Distribution of the Broader Topics Addressed by the English-language contemporary Regional Canadian Voluntary Sector Research items (apart from the Provinces they are based in), 1974-2003/forth. combined

Main Topic	# Titles	% Reg.	Rank	Main Topic	# Titles	% Reg.	Rank
Advocacy	2	1.0%	14	Legal Issues	6	3.0%	9
Arts	1	0.5%	17	Organizational Development	4	2.0%	12
Collaborations	1	0.5%	17	Overview of a Provincial Sector	10	5.0%	7
Donations & Fundraising	37	18.6%	3	Research	2	1.0%	14
Evaluation, incl. of Social Impact	6	3.0%	9	Social Services	20	10.1%	5
Gaming	5	2.5%	11	Social Economy	11	5.5%	6
Governance	3	1.5%	13	Sports/Rec.	1	0.5%	17
Gov't Relations or Cutbacks	44	22.1%	2	Volunteering	58	29.1%	1
Health	34	17.1%	4	Total (actual: excl. double-counts of overlapping entries)	199	100%	
Housing	2	1.0%	14				
Human Resource Management	10	5.0%	7				

Table 4: Distribution of the Major Sub-Sectors Addressed among the English-language Canadian Voluntary Sector Research Sub-Sector Titles, for 1974-2003/forth. combined

Main Sub-Sectors Studied	No.	% of S-S titles	Rank	ICNPO Group ²⁵
Advocacy & Justice	72	9.8%	4	7: Law, Advocacy and Politics
Arts/Culture	89	12.1%	3	1: Culture and Recreation
Community Economic Development	11	1.5%	13	6: Development and Housing
Co-ops, Social Economy	40	5.4%	9	6: (as above); and 11: Business and Professional Associations, Unions
Education	16	2.2%	11	2: Education and Research
Environment	15	2.0%	12	5: Environment
Foundations or Funds, or Volunteer Centres	29	3.9%	10	8: Philanthropic Intermediaries and Voluntarism Promotion
Health	159	21.6%	2	3: Health
Housing	64	8.7%	5	6: Development and Housing
INGOs (Int'l Dev.)	42	5.7%	8	9: International
Religion	50	6.8%	6	10: Religion
Social Services	160	21.7%	1	4: Social Services
Sports/Recreation, Service & Member-Benefit Clubs	46	6.2%	7	1: Culture and Recreation
Other/N.E.C.	5	0.7%	14	12: Not Elsewhere Classified
Total (actual)	737	100.0%		All groups, 1 through 12, represented

²⁵ *The International Classification of Non-Profit Organizations (ICNPO), Rev. 1*, by Lester Salamon and Helmut Anheier (Baltimore: Johns Hopkins Comparative Nonprofit Sector Project, 1996, www.jhu.edu/~ccss/pubs/pdf/icnpo.pdf). See also their *In Search of the Nonprofit Sector II: The Problem of Classification* (Baltimore: Johns Hopkins CNSP, 1992, www.jhu.edu/~ccss/pubs/pdf/sector2.pdf)

Finally, concerning the subject-matter of those publications which have only drew on a limited number of sub-sectors for their evidence base or topic of analysis, Table 5 counts how many of them address the types of broader themes which most of the cross-cutting literature falls under (even though these particular studies may lack a broad enough research base to know whether their findings generalize to many other sub-sectors, as well).

Table 5: Distribution of the Theme Areas covered in the English-language Canadian Voluntary Sector Research Sub-Sector Titles (abstracting away from the particular sub-sectors they relate to), for 1974-2003/forth. combined

Broader Theme Areas* of Sub-Sector Titles	No.	%	Rank
Accountability, Evaluations, Social Impact, & Public Opinion	86	11.7%	4
Board Governance & Leadership	31	4.2%	7
Corp. Volunteering, Donations, or Partnerships	5	0.7%	10
(non-corp.) Donations & Fundraising, incl. Legal Aspects & Gaming	20	2.7%	9
Government Relations/ Cutbacks	106	14.4%	2
Human Resources Management	34	4.6%	6
Legal Framework or Other Legal issues	30	4.1%	8
Organizational Development, incl. Commercial Ventures, Collaborations, & Information Mgmt/Tech.	152	20.6%	1
Overview of a Sub-Sector, or Research Issues	101	13.7%	3
(non-corp.) Volunteering issues	69	9.4%	5
Sub-Total of Sub-Sector titles with broader themes (actual: not including double-counts of the items above with overlapping themes)	538	73.0%	

Appendix 13: Number of Cross-Cutting Canadian Voluntary Sector Research items by Format, 1994-2003/forth., and explanation of why some types are filtered out

Format or Media	Total titles	% of titles	Nature of the Research Format or Media and Explanation of Why it may be Excluded (X) from the Subsequent Analyses
Articles (X)	32	4.9%	Generally, shorter pieces in non-peer reviewed media such as news-letters, or a think-tank's house journal; or they are very short (1 or 2 page) notices even in peer reviewed journals. Are usually 'teasers' for the real report and too short to provide much detail.
Articles in Books	70	10.7%	Generally, these are primary research studies which were presented at conferences and then packaged as <i>Proceedings</i> , or which appear in compilations of studies, either on a single theme or along with other studies commissioned by a single funding competition.
Books	14	2.1%	Generally, they are a large study or series of articles by a single author published initially in hardcover by a commercial or academic publisher.
Book, Anthol. (X)	8	1.2%	See "Articles in Books," above. The role of the credited authors for these is as Editors rather than as authors. If they have contributions as authors as well, these are included separately as "Articles in Books," along with any other relevant articles within it.
Brief Reports (X)	9	1.4%	Generally, these are essentially Executive Summaries of the longer <i>Reports</i> , which are already counted separately.
Datafiles (X)	11	1.7%	These are computerized records of survey responses, such as the National Survey(s) on Giving, Volunteering, and Participating, or other sets of data such as on individuals' tax records (incl. donations). They form the basis of much voluntary sector research, but only the digestible outputs are being measured in this exercise – the analyses, applications, or at least presentations of the data, rather than just the raw data itself.
Fact Sheets (X)	23	3.5%	Generally, these are 2 page offshoots of a larger study – with the results from a large national study being broken down into separate two-page reports for individual regions or demographic groups, for example.
Journal Articles	104	15.9%	These "Feature-Length" articles appear in peer-reviewed scholarly journals and are over 10 pages in length: they constitute the 'gold-standard' of research.
Manuals with data (X)	10	1.5%	Most 'how-to' manuals (on fundraising, e.g.) have been excluded from the database altogether because the basis for their recommendations is usually left unstated. A few which are heavily and explicitly infused with survey or case study data have been included, but in each case, they constitute secondary rather than primary research.
Periodical articles	34	5.2%	These are intermediate-length pieces (under 10, but over two pages) appearing in peer-reviewed periodicals, including government ones.
Reports	240	36.6%	These are official, finalized reviews or studies intended for public consumption, and they have often been commissioned. Usually they are not independently peer-reviewed, with certain notable exceptions.
Reviews (X)	2	0.3%	These are Book Reviews: but only a few are included which have additional Canadian empirical content or commentary, but they are not primary research.
Theses	33	5.0%	Master's theses or Doctoral dissertations from post-secondary institutions, reviewed and accepted by an academic committee.
Working Papers	66	10.1%	Also known as research manuscripts, occasional papers, preprints, technical reports or memoranda. Usually 10-30 page primary research papers produced for a conference or intended for eventual publication, but remain a departmental or personal product.
Total	656	100%	Only 55% of these remain in the 'distilled' set when the secondary formats and items with duplicated content are eliminated.

Appendix 14: Distribution of Peer-Reviewed Articles among the Serials, for selected types of cross-cutting Canadian Voluntary Sector Research, 1994-2003/forth.

Name of Journal or Periodical	Journal Article	Periodical Article	Total	% of these articles	Rank of Serials
<i>American Behavioral Scientist</i>	1		1	1.0%	14
<i>American Sociological Review</i>	1		1	1.0%	14
<i>Annals of Public and Cooperative Economics</i>	1		1	1.0%	14
<i>Applied Economics</i>	1		1	1.0%	14
<i>Canadian Journal of Urban Research</i>	1		1	1.0%	14
<i>Canadian Journal on Aging/ Revue canadienne du vieillissement</i>	2		2	2.0%	9
<i>Canadian Public Policy/ Analyse de politiques</i>	1		1	1.0%	14
<i>Canadian Social Trends</i>		8	8	7.9%	2
<i>Canadian Tax Journal</i>	1		1	1.0%	14
<i>Charity Law and Practice Review</i>	1		1	1.0%	14
<i>Children and Youth Services Review</i>	1		1	1.0%	14
<i>Estates Trusts and Pensions Journal</i>	1		1	1.0%	14
<i>Experimental Economics</i>	1		1	1.0%	14
<i>Financial Accountability and Management</i>	1		1	1.0%	14
<i>Health Reports</i>		1	1	1.0%	14
<i>International Journal of Migration and Integration</i>	1		1	1.0%	14
<i>International Journal of Nonprofit and Voluntary Sector Marketing</i>	1		1	1.0%	14
<i>Isuma: Canadian Journal of Policy Research</i>		5	5	5.0%	6
<i>Journal for the Scientific Study of Religion</i>	1		1	1.0%	14
<i>Journal of Canadian Studies/ Revue d'études canadiennes</i>	2		2	2.0%	9
<i>Journal of Comparative Economics</i>	1		1	1.0%	14
<i>Journal of Consumer Research</i>	1		1	1.0%	14
<i>Journal of Economic Behavior and Organization</i>	2		2	2.0%	9
<i>Journal of Nonprofit & Public Sector Marketing</i>	2		2	2.0%	9
<i>Journal of the Community Development Society</i>	1		1	1.0%	14
<i>Journal of Public Economic Theory</i>	1		1	1.0%	14
<i>Journal of Urban Affairs</i>	1		1	1.0%	14
<i>Journal of Volunteer Administration</i>	4	2	6	5.9%	4
<i>La revue canadienne de sociologie et d'anthropologie/ The Canadian Review of</i>	1		1	1.0%	14

Voluntary Sector Research in Canada Since the Mid-1970s and Mid-1990s

Name of Journal or Periodical	Journal Article	Periodical Article	Total	% of these articles	Rank of Serials
<i>Sociology and Anthropology</i>					
<i>Leadership and Organization Development Journal</i>	1		1	1.0%	14
<i>Nonprofit and Voluntary Sector Quarterly</i>	7		7	6.9%	3
<i>Nonprofit Management & Leadership</i>	5	1	6	5.9%	4
<i>Optimum</i>		1	1	1.0%	14
<i>Perspectives on Labour and Income</i>		3	3	3.0%	7
<i>Politique et sociétés</i>	1		1	1.0%	14
<i>Queen's Law Journal</i>	1		1	1.0%	14
<i>Resources for Feminist Research/ Documentation sur la recherche féministe</i>	1		1	1.0%	14
<i>Revue internationale d'action communautaire / International Review of Community Development</i>	1		1	1.0%	14
<i>Social Marketing Quarterly</i>	1		1	1.0%	14
<i>Social Policy and Administration</i>	1		1	1.0%	14
<i>The Academy of Management Journal</i>	1		1	1.0%	14
<i>The Canadian Journal of Economics / Revue canadienne d'économique</i>	2	1	3	3.0%	7
<i>The Journal of Economics and Management Strategy</i>	1		1	1.0%	14
<i>The Journal of Public Economics</i>	2		2	2.0%	9
<i>The Philanthropist/ Le philanthrope</i>	14	5	19	18.8%	1
<i>Voluntas: International Journal of Voluntary and Nonprofit Organizations</i>	1		1	1.0%	14
<i>Youth and Society</i>	1		1	1.0%	14
Total Serial Articles	74	27	101	100.0%	
Count of individual Serials for each type	42	9	47		
Average Titles per Serial with articles of each type	1.76	3.00	2.15	2.1%	
Maximum Titles per Serial	14	8	19	18.8%	

Appendix 15: Distribution of individually credited works by the Number of Authors, for selected types of cross-cutting Canadian Voluntary Sector Research, 1994-2003/forthcoming

	Article in Book	Book	Journal Article	Periodi- cal Art.	Report	Thesis	Working Paper	Total
Total items with at least one credited Individual Author	37	11	74	27	108	16	38	311
# with only One Author	17	7	32	19	57	15	14	161
% of each type solo-authored	45.9%	63.6%	43.2%	70.4%	52.8%	93.8%	36.8%	51.8%
# with exactly Two Authors	14	3	26	7	42	1	17	110
% of each that is Co-Authored	37.8%	27.3%	35.1%	25.9%	38.9%	6.3%	44.7%	35.4%
# with exactly Three Authors	3	1	8	0	4	0	7	23
% of each Type Tri-Authored	8.1%	9.1%	10.8%	0.0%	3.7%	0.0%	18.4%	7.4%
# with exactly Four Authors	3	0	5	1	1	0	0	10
% of each Type with exactly Four authors	8.1%	0.0%	6.8%	3.7%	0.9%	0.0%	0.0%	3.2%
# with exactly Five Authors	0	0	0	0	3	0	0	3
% of each Type w. Five authors	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	1.0%
# with exactly Six Authors	0	0	2	0	1	0	0	3
% of each Type with exactly Six Authors	0.0%	0.0%	2.7%	0.0%	0.9%	0.0%	0.0%	1.0%
# with exactly Seven Authors	0	0	1	0	0	0	0	1
% of each Type w. 7 Authors	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.3%

Appendix 16: Top Ten Individual Authors producing selected types of cross-cutting Canadian Voluntary Sector Research, 1994-2003/forth.

Name and affiliations (incl. some past, present, and secondary affiliations not coded in the database) of indiv. Authors	Total as First-listed Author	Total as Second or Other	Total Titles	Share of individual Titles	Rank among indiv. auth.
Reed, Paul; Statistics Canada; Carleton University Centre for Applied Social Research	29	4	33	10.6%	1
Selbee, L. Kevin; as above	3	20	23	7.4%	2
Hall, Michael; Cndn. Centre for Philanthropy	15	1	16	5.1%	3
Meinhard, Agnes; Ryerson Polytechnic U.	6	3	9	2.9%	4
Murray, Victor; University of Victoria; Royal Roads University; York University	2	7	9	2.9%	4
Foster, Mary; Ryerson Polytechnic University	3	4	7	2.6%	6
Handy, Femida; York University	7		7	2.3%	7
Phillips, Susan; Carleton University, ON; Centre for Voluntary Sector Research & Development	7		7	2.3%	7
Slivinski, Al; U. Western Ontario	3	4	7	2.3%	7
Devlin, Rose Anne; University of Ottawa; and Human Resources Development Canada	2	4	6	1.9%	10
Laforest, Rachel; Carleton University, Queen's University	3	3	6	1.9%	10
Macpherson, Laura; the Canadian Centre for Philanthropy	2	4	6	1.9%	10
McMullen, Kathryn; Canadian Policy Research Networks, HRDC	5	1	6	1.9%	10

Appendix 17: Distribution of publications among all the major institutions the Canadian first-listed Authors (including institutional authors) are affiliated with, for selected types of cross-cutting Canadian Voluntary Sector Research, 1994-2003/forth.

Name of Canadian Post-Secondary Public, Private or Voluntary Sector Institution with at least two eligible items attributable to them each	Article in Book	Book	Feature Length Journal Article	2-9 pp. Periodical Article	Report	Thesis	Working Paper	Total	% All	Rank Major Ca. Instl.
Statistics Canada	2		2	12	40			56	15.6%	1
Canadian Centre for Philanthropy			1		25			26	7.3%	2
York University	6		11			2	2	21	5.9%	3
Carleton University	2		4	1	4		4	15	4.2%	4
University of Toronto	6	1	4			3		14	3.9%	5
Muttart Foundation					13			13	3.6%	6
Ryerson Polytechnic University	1	1	1				9	12	3.4%	7
Voluntary Sector Initiative					12			12	3.4%	7
University of Victoria	2	2	2	1	3			10	2.8%	9
EKOS Research Assoc.				1	7			8	2.2%	10
University of Ottawa	1		3	1	1	1	1	8	2.2%	10
University of Western Ontario			4				4	8	2.2%	10
Queen's University	1		3	1			2	7	2.0%	13
Canada West Foundation					6			6	1.7%	14
Canadian Policy Research Networks					5			5	1.4%	15
McMaster University	1		4					5	1.4%	15
Royal Roads University						5		5	1.4%	15
University of Manitoba	1		1				3	5	1.4%	15
Volunteer Centres (several indiv. ones)				1	4			5	1.4%	15
Canadian Centre(s) for Policy Alternatives	1	1			2			4	1.1%	20
Human Resources Development Canada					4			4	1.1%	20
University of Sherbrooke			4					4	1.1%	20
Canadian Centre for Business in the Community					3			3	0.8%	23
Industry Canada					3			3	0.8%	23
Institute On Governance					2		1	3	0.8%	23

Voluntary Sector Research in Canada Since the Mid-1970s and Mid-1990s

Name of Canadian Post-Secondary Public, Private or Voluntary Sector Institution with at least two eligible items attributable to them each	Article in Book	Book	Feature Length Journal Article	2-9 pp. Periodical Article	Report	Thesis	Working Paper	Total	% All	Rank Major Ca. Instl.
University of British Columbia			2				1	3	0.8%	23
University of Guelph	1					2		3	0.8%	23
University of Montréal			2	1				3	0.8%	23
Auditor-General of Canada	2							2	0.6%	29
Canadian Council for Social Development					2			2	0.6%	29
Dalhousie University	1				1			2	0.6%	29
Environics Research	1						1	2	0.6%	29
Finance Ministry					1		1	2	0.6%	29
Fraser Institute					2			2	0.6%	29
Genuine Progress Index Atlantic					2			2	0.6%	29
Heritage Ministry			2					2	0.6%	29
Institute for Media, Policy and Civil Society			1		1			2	0.6%	29
McGill University	2							2	0.6%	29
NVO (Coalition of National Voluntary Organizations)					2			2	0.6%	29
Public Policy Forum					1		1	2	0.6%	29
Social Planning Councils (several indiv. ones)		1			1			2	0.6%	29
Total Titles (actual: not the sum of the above)	39	12	74	27	150	16	40	358	100.0%	
Count of indiv. major Ca. Instl. Affils.	16	5	17	8	25	5	12	41		
Average per major Canadian Institutional Affiliation participating in each type	1.94	1.20	3.00	2.38	5.88	2.60	2.50	7.24	2.0%	
Max. per indiv. major Ca. Instl. Affil.	6	2	11	12	40	5	9	56	15.6%	

Appendix 18: Distribution of Academic Disciplines the first-listed authors were working in, for those selected types of cross-cutting Canadian Voluntary Sector Research which had an Academic Affiliation for the Canadian Academic first-listed Authors, 1994-2003/forth., by Publication Format

Discipline	Article in Book	Book	Journal Article	Periodical Article	Report	Thesis	Working Paper	Total	% ID'd Ca. Disc.	Rank
Anthropology			1					1	0.7%	12
Business/Commerce/Management	3		10			1	13	27	19.1%	2
Economics	4		19	3		1	6	33	23.4%	1
Education		1				2		3	2.1%	9
Gerontology			1					1	0.7%	12
Health	1				2			3	2.1%	9
Home Economics /Family & Consumer Sciences	1							1	0.7%	12
Information Technology	1							1	0.7%	12
Law	8		4				1	13	9.2%	4
Nonprofit Studies	1							1	0.7%	12
Northern Studies	1							1	0.7%	12
Nursing		1						1	0.7%	12
Political Science	1	1	2	1			1	6	4.3%	6
Psychology	1							1	0.7%	12
Public Administration	3	2	3	1	4	5	4	22	15.6%	3
Recreation			1			1		2	1.4%	11
Rural Planning							1	1	0.7%	12
Social Work	1		3	1				5	3.5%	7
Sociology	2		5			3	2	12	8.5%	5
Women's Studies	1		3			1		5	3.5%	7
(Unknown Discipline)					1		1	2		
Total titles with known disciplines of Ca. Ac. Authors	29	5	51	6	7	14	29	141	100.0%	
Count of ID'd Disciplines of Canadian Academic PAs	14	4	11	4	2	7	7	20		
Ave. per ID'd Disciplines of Ca. Ac. PAs participating in each type	2.07	1.25	4.64	1.50	3.00	2.00	4.00	6.95	4.9%	
Max per ID'd Disc. of Ca. Ac. PAs	8	2	18	3	4	5	13	32	22.7%	

Appendix 19: Distribution of More Detailed Subject-Matter for selected types of cross-cutting Canadian voluntary sector research, 1994-2003/forth.

Subject(s) covered in work	Total	%	Subject(s) covered in work	Total	%
Accountability	5	1.4%	Media Relations, Public Opinion	2	0.6%
Advocacy	1	0.3%	Organizational Development (OD)	15	4.2%
Business Ventures	7	2.0%	OD, Collaborations	1	0.3%
Business Ventures, Legal Framework	2	0.6%	OD, Foundations, Evaluation	1	0.3%
Collaborations	5	1.4%	OD, Foundations, Gov't Relations, Evaluation. Accountability	1	0.3%
Corp. Partnerships	4	1.1%	OD, Governance	1	0.3%
Corp. Partnerships, CRM	3	0.8%	OD, Government Relations	3	0.8%
Corp. Partnerships, Donations, Cause Related Marketing (CRM)	1	0.3%	OD, HRM	3	0.8%
Donations	31	8.7%	OD, HRM, Religion	1	0.3%
Donations, Corp.	6	1.7%	OD, Volunteering	2	0.6%
Donations, Legal Aspects	1	0.3%	Overview	6	1.7%
Donations, Legal Framework	5	1.4%	Overview, Research	1	0.3%
Evaluation	3	0.8%	Public Opinion	5	1.4%
Fundraising	9	2.5%	Public Opinion, Accountability	4	1.1%
Fundraising, CRM	1	0.3%	Research	7	2.0%
Gaming	6	1.7%	Research, Volunteering	1	0.3%
Governance	17	4.7%	Social Impact	2	0.6%
Governance, OD	4	1.1%	Trends	1	0.3%
Government Cutbacks	3	0.8%	Volunteering	42	11.7%
Government Relations (Gov't Rel'ns)	23	6.4%	Volunteering, Corp.	6	1.7%
Gov't Rel'ns -VSI Process	9	2.5%	Volunteering, Donations	15	4.2%
Gov't Rel'ns, Advocacy	1	0.3%	Volunteering, Economic Benefits	5	1.4%
Gov't Rel'ns, Corp. Partnerships	1	0.3%	Volunteering, HRM	2	0.6%
Gov't Rel'ns, OD	1	0.3%	Volunteering, HRM, OD	1	0.3%
Gov't Rel'ns, Social Impact	1	0.3%	Volunteering, Recruitment-Promo.	10	2.8%
Human Resources Management (HRM)	13	3.6%	Volunteering, Religion	1	0.3%
HRM, Organizational Development	1	0.3%	Volunteering, Research	1	0.3%
Information Management/ Information Tech. (IM/IT)	7	2.0%	Volunteering, Service Learning	3	0.8%
Leadership	3	0.8%	Volunteering, Social capital, IM/IT	9	2.5%
Legal Framework	13	3.6%	Volunteering, Workfare	4	1.1%
Legal Framework, Advocacy	10	2.8%	Total Titles	358	100.0%
Legal, Other	5	1.4%	Count of topic headings used	62	n/a
			Average among topics	5.77	1.6%
			Max. per topic headings	42	11.7%

Appendix 20: Selected statistics on the breadth, diversity, and overlap of the more detailed topics covered in the cross-cutting Canadian voluntary sector literature both pre- and post-1994

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003/f.	Total post-1994 Core	Total pre-1994 Core
Number of more detailed topics covered during this period	7	11	14	13	14	16	23	32	33	29	62	51
Total publications for interval	10	14	28	19	20	34	46	71	71	45	358	131
Ave. per more detailed topic	1.4	1.3	2.0	1.5	1.4	2.1	2.0	2.2	2.2	1.6	5.8	2.6
Max. per more detailed topics for the core post-94	2	2	4	4	3	8	5	7	7	7	42	19
" as % of pubs. that interval	20%	14%	14%	21%	15%	24%	11%	10%	10%	16%	12%	15%
Top subject category (sometimes tied ; or in combination , with others)	Volunteering	Donations	Volunteering, donations	Gov't Rel'ns	Volunteering	Volunteering	Volunteering	Research	Legal framework , advocacy	Volunteering	Volunteering	Donations, etc.
Second most prevalent detailed topic (if over two items: otherwise there are too many ties and not enough coverage to worth noting)	n/a	n/a	n/a	Legal framework	n/a	Gov't Rel'ns	Volunteering, Recruitment-Promo.	Volunteering	Donations	Volunteering, donations	Donations, etc.	Volunteering
No. of items on second most prevalent detailed topic w. 3+	n/a	n/a	n/a	3	n/a	6	4	6	5	4	31	12
As % of the pubs. that interval	n/a	n/a	n/a	16%	n/a	18%	9%	8%	7%	9%	9%	9%
No. of more detailed topics not covered in other period of lit.	2	3	3	3	5	7	10	13	14	14	37	27
Total pubs. on more detailed topics not in other major period	2	4	3	3	6	8	11	23	27	18	105	29
Ave. per "	1.0	1.0	1.0	1.0	1.2	1.1	1.1	1.8	1.9	1.3	2.8	1.1
Max. per "	1	1	1	1	2	2	2	5	7	3	14	2
" as % of the pubs. that interval	10%	7%	4%	5%	10%	6%	4%	7%	10%	7%	4%	2%

Table 1: Number of core Canadian voluntary sector research publications covering ten broad subject areas per year, for 1994-2003/f.

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003/f.	Total
Volunteering issues (excluding corporate volunteering)	3	1	5	3	7	8	15	21	19	14	96
Donations (by individuals), Fundraising, & Gaming	3	2	5	1	4	5	11	21	8	9	69
Organizational Development , including Business Ventures, Collaborations, & Info. Tech.	1	3	4	4	2	3	10	9	15	14	65
Analysis of Legal issues	0	2	2	4	0	1	3	10	13	1	36
Government Relations/ Funding/ Cutbacks issues	0	4	2	5	2	6	3	10	7	5	44
Descriptive Overview of sector, incl. basic research issues	3	0	2	2	1	1	2	2	2	2	17
Corporate Volunteering, Donations, or Partnerships	1	1	2	1	2	4	0	4	1	6	22
Accountability, Evaluation, Social Impact, Public Opinion	0	0	2	0	1	3	2	5	7	3	24
Human Resources Management , incl. managing volunteers	0	1	1	0	2	2	1	4	3	7	21
Governance or Leadership	1	1	4	2	2	2	2	5	3	3	25
Sub-Total / sum of above*	12	15	29	22	23	35	49	91	78	64	419
No. of overlapping entries*	2	1	1	3	3	1	3	20	7	19	61
Total publications in interval	10	14	28	19	20	34	46	71	71	45	358

* Note, the content of some entries overlap, so there are double counts of some studies, which are reflected in the last two rows from the bottom.

Table 2: Percent of core Canadian voluntary sector research publications covering ten broad subject areas per year, for 1994-2003/f.

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003/f.	Total
Volunteering issues (excluding corporate volunteering)	30	7	18	16	35	24	33	30	27	31	27
Donations (by individuals), Fundraising, & Gaming	10	21	14	21	10	9	22	13	21	20	19
Organizational Development, including Business Ventures, Collaborations, & Info. Tech.	30	14	18	5	20	15	24	30	11	31	18
Analysis of Legal issues	0	29	7	26	10	18	7	14	10	2	10
Government Relations/ Funding/ Cutbacks issues	30	0	7	11	5	3	4	3	3	11	12
Descriptive Overview of sector, incl. basic research issues	0	14	7	21	0	3	7	14	18	4	5
Corporate Volunteering, Donations, or Partnerships	0	0	7	0	5	9	4	7	10	13	6
Accountability, Evaluation, Social Impact, Public Opinion	0	7	4	0	10	6	2	6	4	7	7
Human Resources Management , incl. managing volunteers	10	7	14	11	10	6	4	7	4	16	6
Governance or Leadership	10	7	7	5	10	12	0	6	1	7	7
Total for interval	100	100	100	100	100	100	100	100	100	100	100

Table 3: Rank of ten broad subject areas covered per year in core Canadian voluntary sector research publications, for 1994-2003/f.

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003/f.	Total
Volunteering issues (excluding corporate volunteering)	1	5	1	4	1	1	1	1	1	1	1
Donations (by individuals), Fundraising, & Gaming	1	3	1	7	2	3	2	1	4	3	2
Organizational Development, including Business Ventures, Collaborations, & Info. Tech.	4	2	3	2	3	5	3	5	2	1	3
Analysis of Legal issues	7	3	5	2	10	9	4	3	3	10	5
Government Relations/ Funding/ Cutbacks issues	7	1	5	1	3	2	4	3	5	6	4
Descriptive Overview of sector, incl. basic research issues	1	9	5	5	8	9	6	10	9	9	10
Corporate Volunteering, Donations, or Partnerships	4	5	5	7	3	4	10	8	10	5	8
Accountability, Evaluation, Social Impact, Public Opinion	7	9	5	9	8	5	6	6	5	7	7
Human Resources Management , incl. managing volunteers	7	5	10	9	3	7	9	8	7	4	9
Governance or Leadership	4	5	3	5	3	7	6	6	7	7	6