

## An Exploration of Faculty Experiences With Open Access Journal Publishing at Two Canadian Comprehensive Universities

Barbara McDonald  
McLaughlin Library  
University of Guelph  
[barbara.mcdonald@uoguelph.ca](mailto:barbara.mcdonald@uoguelph.ca)  
(Brock University 2010 to 2015)

Ian Gibson  
James A. Gibson Library  
Brock University  
[igibson@brocku.ca](mailto:igibson@brocku.ca)

Elizabeth Yates  
James A. Gibson Library  
Brock University  
[eyates@brocku.ca](mailto:eyates@brocku.ca)

Carol Stephenson  
Council of Prairie and Pacific University Libraries  
[carol@coppul.ca](mailto:carol@coppul.ca)  
(Wilfrid Laurier University 2006 to 2016)

### **Abstract**

**Introduction:** This exploratory study was intended to shed light on Canadian academics' participation in, knowledge of and attitudes towards Open Access (OA) journal publishing. The primary aim of the study was to inform the authors' schools' educational and outreach efforts to faculty regarding OA publishing. The survey was conducted at two Canadian comprehensive universities: Brock University (St. Catharines, Ontario) and Wilfrid Laurier University (Waterloo, Ontario) in 2014.

**Methods:** A web-based survey was distributed to faculty at each university. The data was analyzed using descriptive statistics. **Limitations:** Despite the excellent response rates, the results are not generalizable beyond these two institutions. **Results:** The Brock response rate was 38%; the Laurier response rate was 23% from full-time faculty and five percent from part-time faculty. Brock and Laurier faculty members share common characteristics in both their publishing practices and attitudes towards OA. Science/health science researchers were the most positive about OA journal publishing; arts and humanities and social sciences respondents were more mixed in their

perceptions; business participants were the least positive. Their concerns focused on OA journal quality and associated costs. **Conclusion:** While most survey respondents agreed that publicly available research is generally a good thing, this study has clearly identified obstacles that prevent faculty's positive attitudes towards OA from translating into open publishing practices.

## **Keywords**

Scholarly communications; Open Access; scholarly publishing; journals; faculty; gold OA

## **Introduction**

Despite the growing dissemination possibilities presented by technology over the past two decades, scholarly publishing has not been radically transformed. From the point of view of authors, what *has* evolved is a complex and confusing scholarly publishing environment when trying to decide where to publish.

The past decade has seen a proliferation of new OA journals. The Directory of Open Access Journals (DOAJ) grew from 2,514 journals in 2006 to 10,963 at the end of 2015 (Morrison, 2015). Many of these journals are now receiving the traditional marks of respectability, such as the 1,200 OA titles with an impact factor designation in Thomson Reuters' Journal Citation Reports or the many OA titles that are now included in major abstracting services. For example, Scopus indexes more than 4,000 OA titles (Steiginga & Evans, 2015).

This increase in OA journals has been accompanied by conflicting voices, proclamations, and perceptions about OA publishing, creating an atmosphere of uncertainty and confusion for authors. Government policies calling for open dissemination of publicly funded research (Open Science Initiative Working Group, 2015) coexist with concerns about "predatory" OA publishers (Beall, 2014). Concerns about OA are exacerbated by the perception that all OA journals impose article processing charges (APCs) (Beall, 2015). The reality is that OA is "...like the Wild West; some OA journals are great, while others are fly-by-night" (Dowdy, Crotty, Bernhardt, Smith & Mayo, 2014, p. 190).

In defining OA for the purposes of the survey, the authors excluded "green" OA (wherein a version of an article is deposited in a subject or institutional repository) and "hybrid" OA (wherein selected articles from a single issue may be made OA). The decision to focus on "gold" OA journals was made, since much of the controversy shaping faculty's publishing behaviours—such as concerns about APCs and the fear of predatory publishers—is centred on OA journals. In addition, many Canadian universities have a financial stake in gold OA through their open access author funds, which cover the costs of APCs for institutional researchers (CARL Open Access Working Group, 2016).

The definition provided to survey participants was based on Suber (2004):

A journal which makes all of its content immediately available for free to its readers. Readers do not pay any subscriptions or other fees to access any articles in an Open Access journal. In today's information ecosystem, open access (or OA) journals co-exist with traditional, subscription-based scholarly journals.

## **Canadian Context**

Canada's major public funding agencies—the Social Sciences and Humanities Research Council (SSHRC), Canadian Institutes of Health Research (CIHR), and the Natural Sciences and Engineering Research Council of Canada (NSERC), collectively known as the Tri-Council or Tri-Agency—only recently adopted OA. Though SSHRC “took the position of supporting open access in principle” in 2004, prior to 2015 only CIHR actually had a mandate requiring publicly funded research to be made publicly accessible (SSHRC, 2004). Initial consultations around a new Tri-Agency policy on Open Access in late 2013 were the impetus behind the research presented here. The Tri-Agency Open Access Policy on Publications, released in February 2015—by which time our study had been completed—was met with vocal concern during the consultation phase. Canadian scholars and journal editors/publishers expressed worries regarding the effects OA journal publishing in general—and the Policy in particular—would have on Canadian scholarly publishers. There were fears that the Policy would “undermine scholarly publishing in Canada” (NSERC, 2014, p. 6). A 2011 report by the Canadian Association of Learned Journals cautioned that Canadian scholarly publishing, already at risk due to lack of ongoing funding, faced further threats from the emerging OA business model (2011, p. 23). In finalizing the Policy, the Tri-Agency was challenged with balancing the public policy OA imperative with calls to ensure that the government—and the new Policy—would guarantee sufficient ongoing funding for Canadian scholarly publishers (Canadian Association of Learned Journals, 2015).

## **Local Context**

The new Canadian Policy heightens the need for librarians to understand researcher practices, behaviours, and attitudes in order to support them effectively. As librarians, the authors were keen to understand how faculty at their institutions were dealing with and thinking about OA journal publishing. Better understanding faculty's experiences would help to tailor scholarly publishing support programs and outreach efforts to university stakeholders.

This exploratory study was intended to shed light on Canadian academics' participation in, knowledge of and attitudes towards OA journal publishing. The primary aim of the study was to inform the educational and outreach efforts to faculty regarding OA publishing at two medium-sized Canadian comprehensive universities: Brock University in St. Catharines, Ontario and Wilfrid Laurier University in Waterloo, Ontario.

## **Literature Review**

In the Canadian and international literature reviewed, surveys and interviews were found to be the predominant methodologies employed by researchers seeking to understand OA author practices. There is strong evidence that “authors’ understanding and practices concerning OA have changed over time” (Togia & Korobili, 2014, p.229; Xia, 2010), although some, such as Kleinman (2011), have expressed frustration at the lack of theoretical grounding and “disregard for basic statistical principles” in many OA research studies (p. 19). However, Kleinman also recognizes “the study of open access practices among research faculty is quite new, and methodologies and conceptual frameworks for understanding them are still under development” (p. 4).

Canadian studies at the University of Toronto, University of Saskatchewan, and York University found that faculty had considerable awareness of OA (Moore, 2011; Dawson, 2014; Nariani & Fernandez, 2012). Moore (2011) and Dawson (2014) furthermore noted a high degree of support for the principle of OA among their respective respondents. However, the studies reviewed also demonstrated a wide range of faculty participation in OA journal publishing, from a low of 33% to a high of 71% (Fowler, 2011, Table 7; Wiley, 2012; Dallmeier-Tiessen et al., 2011). In some cases, academic discipline may also play a role: in one major Canadian study conducted by Phase 5 Consulting on behalf of the not-for-profit scholarly publisher Canadian Science Publishing, researchers from the fields of biology and the life sciences were more likely than any other discipline to report having published in an OA or hybrid journal (55%).

Xia’s (2010) meta-analysis of literature published between 1991 and 2008 found that while academics increased their awareness of, and participation in OA, concerns about quality, reputation, and a perceived lack of peer review remained constant. Togia and Korobili’s (2014) meta-synthesis of 15 articles published between 2002 and 2013 reveals that “although academic researchers are aware of the fact that OA journals can bring many advantages in research visibility and impact, OA publishing is not yet fully understood; neither has it reached its full potential”, highlighting the issues of quality, reputation, and impact of OA journals as significant researcher concerns (p. 229).

The 2010 Study of Open Access Publishing (SOAP) surveyed researchers in 162 countries and reported “an overwhelming support for the idea of open access, while highlighting funding and (perceived) quality as the main barriers to publishing in open access journals” (Dallmeier-Tiessen et al., 2011). Publisher Taylor & Francis ran two large-scale OA surveys, publishing results in 2013 and 2014. In the 2014 report, 35% of respondents agreed or strongly agreed that OA journals were of lower quality than subscription-based journals, showing little change from 34% in 2013 (Frass, Cross & Gardner, 2014. p. 7). In May 2012, Wiley conducted a survey of its authors; of the 10,000 authors who responded, one third indicated having published in an OA journal. Participants also expressed concerns about the lack of prestige (“profile”), funding, and quality barriers (Wiley, 2012).

Despite the above-mentioned apprehensions, the authors nonetheless noted the widespread perception that, in principle, OA journal publishing is good for research dissemination. Eighty-nine percent of SOAP respondents “considered open access publishing beneficial for their research field”, with some disciplinary variations: 90% in most of the social sciences and humanities; 80% in the fields of chemistry, astronomy, physics, and engineering (Dallmeier-Tiessen et al., 2011, p. 87). The Phase 5 Research Study (2014) found that while researchers were positive about OA in principle (83%), there was a disconnect between their beliefs that OA is good and their actual practices. Fewer than half had published in an OA or hybrid journal in the past two years and “the availability of open access as a publishing option was not an important decision criterion when selecting a journal in which to publish.” (p. 5). The SOAP study also revealed an incongruence between positive views of OA and the number of articles published via OA: approximately 8% of articles published by respondents were published in OA journals in 2008 (Dallmeier-Tiessen et al., 2011).

The quality of OA journals emerges as a theme in many studies (Dallmeier-Tiessen et al., 2011; Fowler, 2011; Moore, 2011; Reinsfelder, 2012; Wiley, 2012; Xia, 2010). A 2014 Taylor and Francis study found that “researchers are positive but some uncertainty still remains” (Frass, Cross & Gardner, 2014, n.p.). The study revealed mixed perceptions about quality, with responses split almost evenly between those who perceived OA journals being of lower quality, those who had no opinion (“neutral”), and those who perceived OA journals as being of higher quality than subscription journals. Concern and confusion about APCs also permeate researchers’ responses in a variety of studies (Fowler, 2011; Moore, 2011; Togia & Korobili, 2014). As noted in the introduction, many players in the scholarly publishing world conflate OA journals with APCs, leading researchers to assume that all OA journals charge APCs. Studies report substantial resistance to paying the APC’s required by some OA journals, either because researchers are unable to pay or are unwilling to do so. In Fowler’s 2010 study, which involved more than 600 mathematicians worldwide, respondents expressed “substantial philosophical opposition to OA journal models that charge author fees” (para. 1). Forty-three percent of Canadian science researchers agreed that the “financial cost of open access is not worth the argued benefits” while only 22% agreed that publishing in OA or hybrid journals is affordable. (Phase 5 Consulting, 2014, p.28). Just over one third of NSERC recipients and one fifth of CIHR recipients did not know whether Canadian granting agencies even support researchers in publishing open access (Phase 5 Consulting, 2014, p. 6). In summary, while faculty participation in OA journal publishing appears to be growing, they continue to express significant concerns and confusion about this emerging scholarly publishing model.

## ***Methodology***

### **Data Collection**

A survey instrument (Appendix A), partly based on a questionnaire created by Dawson (2014), was developed to explore three questions:

1. Do faculty participate in OA journal publishing?

2. What do faculty know about OA journals?
3. What are their general attitudes toward OA journals?

The survey was presented to participants in four sections:

- Part 1: Publishing Practices (questions 1-3)
- Part 2: Knowledge of OA Journal Publishing (questions 4-7)
- Part 3: Attitudes Toward OA (questions 8-10)
- Part 4: Demographics (questions 11-14)

In addition, participants were invited to submit comments on questions 2, 3, 5, 7, 8, 9 and any “final comments” in question 10.

Ethics clearance for this study was obtained from Brock University (SREB #13-153) and Wilfrid Laurier University (Ethics #4212).

The online survey was created using the Fluid Surveys tool and was deployed for approximately a month at Brock University in March and April of 2014 and in October and November of 2014 at Wilfrid Laurier University. At Brock University, personalized survey invitations were emailed to 547 Brock faculty members in all departments and to all ranks (Assistant Professor, Associate Professor, Full Professor, Limited Term Appointment, Emeritus). At Laurier University, survey invitations were distributed via email listservs to full-time and part-time faculty. Participants were guaranteed anonymity and were able to exit the 10-minute survey at any time. Incomplete survey responses were discarded. No incentives were provided to participate in the survey.

## **Data Analysis**

Data was analyzed using descriptive statistics. The anonymized raw data is available online at the Scholars Portal Dataverse Network: <http://hdl.handle.net/10864/11168>. Responses were downloaded into Excel spreadsheets and analyzed with the use of pivot tables and comment coding. To facilitate comparison across both institutions, disciplines were assigned to one of five broad categories: arts and humanities, business, health science/science, social sciences, and unknown.

The survey generated substantial textual responses: 116 Brock respondents and 67 Laurier respondents provided comments. Comments on questions 2, 3, 5, 7, 8, 9 and 10 (See Appendix A for survey questions) were gathered, analyzed, and categorized per the broad survey questions (participation in OA journal publishing; knowledge about OA journal publishing; attitudes towards OA journal publishing – negative, neutral, or positive).

## **Limitations**

Despite the excellent response rates, the results are not generalizable beyond these two institutions.

Hindsight reveals the need to thoroughly revamp the survey instrument for future iterations, including: reducing the overall number of questions, moving some questions

to different sections of the survey, and using more precise language (i.e.: OA Publishing vs. OA Journal Publishing). In addition, Question 2 (factors influencing decisions on where to publish) should be revised to include an option for “fit” (journal selection based on reaching a specific target audience) and to allow respondents to indicate that many of the listed factors are interrelated. Moreover, an error in the survey at Laurier allowed participants to pick more than four factors in Question 2 and to rate more than one factor as “most important”. Finally, offering the option of comments for Question 6 would have been helpful to clarify some confusing responses.

## Results

At Brock, 208 surveys were completed for a response rate of 38%, while a total 138 respondents completed the survey at Laurier, with a response rate of approximately 23% from full-time faculty and five percent from part-time faculty. Because participants were not required to answer every question, less than a 100% response rate was recorded on some questions.

### Part 1. Publishing Practices

Brock and Laurier faculty share common characteristics in their publishing practices.

#### Question 1: How many articles have you published as primary author in scholarly journals over the span of your academic career?

# articles	Brock		Laurier	
	n=206	%	n=137	%
0-9	78	37%	58	42%
10-19	61	29%	36	26%
20-29	27	13%	10	7%
30+	46	22%	33	24%

#### Question 2: What factors influence your decisions on where to publish? Please select the four factors most important to you and rank in order of importance from 1 (most important) to 4 (least important)

An error in the survey at Laurier allowed participants to pick more than four responses and to rate more than one factor as most important. For the purposes of this analysis, surveys that contained more than four answers to this question were excluded. Participants at both schools identified the same top three factors: peer review, prestige, and Impact Factor (see Table 2).

Publication Factor	Brock (n=204)	Laurier (n=80)
Journal is peer reviewed	44%	51%
Journal prestige within my discipline	29%	33%
Impact factor (IF)	14%	8%
Quality of editor / editorial board	6%	3%
Impact on my promotion / tenure process	2%	5%
My work is more likely to be cited if published here	2%	0%
Articles in the journal are available to the general public	2%	0%
Speed of review process	1%	1%

Fifty-five Brock and 22 Laurier faculty members commented on Question 2. Social science and business faculty commented on the absence of a factor for journal “fit” (selecting journals to reach a specific target audience). Impact factor (IF) received a range of comments demonstrating the problem with this traditional metric. Humanists did not view it as relevant. Social scientists felt that IF was a problematic metric to use in isolation but noted their views on journal prestige would consider IF and quality of the editorial board. Business faculty noted the importance of professional external rankings of journals. Science faculty comments were the strongest voice for making publishing decisions on IF and the importance of it for research funding and student scholarships.

## Part 2: Knowledge of OA Journal Publishing

For the purposes of this study, a fully OA journal was defined as “a journal which makes all of its content immediately available for free to its readers and for which readers do not pay any subscriptions or other fees to access any articles.”

### Question 4: Have you published an article in an OA journal?

Most faculty at both institutions (Brock, 58%,  $n=121$ ; Laurier, 55%,  $n=76$ ) reported no previous OA publishing experience or were uncertain (see Table 3).

	Yes		No		Don't Know	
	Brock	Laurier	Brock	Laurier	Brock	Laurier
Arts & Humanities	55%	29%	40%	61%	7%	11%
Business	25%	25%	64%	75%	11%	0%
Science / Health Science	37%	57%	52%	43%	10%	0%
Social Science	45%	46%	49%	44%	7%	10%

### Question 5: Do you plan to pursue publication in an OA journal?

Nearly half of the respondents (42% at Brock and 48% at Laurier) indicated that they would pursue publication in an OA journal within the next five years. Business faculty were the least likely to do so, with only 11% of Brock and 25% of Laurier business respondents indicating such intentions.

A very small number of participants (13 at Brock and 9 at Laurier) reported they would “never” publish in an OA journal. A higher percentage of business faculty at both Brock (29%) and Laurier (36%) reported they “never” planned to pursue publication in an OA journal than in other disciplines (see Table 4).

	Within 5 Years				Uncertain				Never			
	Brock		Laurier		Brock		Laurier		Brock		Laurier	
	n	%	n	%	n	%	n	%	n	%	n	%
Arts & Humanities	18	43%	10	36%	22	52%	17	61%	2	5%	1	4%
Business	3	11%	3	25%	17	61%	4	36%	8	29%	4	36%
Science / Health Science	25	42%	14	47%	31	53%	15	50%	3	5%	1	6%
Social Science	40	54%	31	60%	33	45%	18	35%	0	0%	3	7%
Total	86	42%	58	48%	103		54		13		9	

Fifty-five comments were received from Brock faculty and 16 from Laurier faculty for Question 5. The majority of comments were negative, expressing concerns about OA journals’ low prestige and quality, potentially negative implications for tenure and promotion, poor past experiences with the OA publication process, and costs as a significant deterrent to publishing in an OA journal.

The positive comments indicated that participants might consider OA publication if OA became more prevalent and there was help with any associated costs. Faculty who had previously published in OA journals noted the benefits of increased exposure and article view metrics.

### Question 6: OA journals have the following characteristics...

In Question 6, participants were offered a list of potential characteristics of OA journals and asked whether they “always”, “often”, “sometimes”, or “never” had a characteristic. The respondent could also answer “I don’t know.” Responses for three specific characteristics—“peer reviewed” (see Table 5), “increase the “likelihood of being cited” (see Table 6) and “can count toward tenure/promotion” (see Table 7)—are reported because they align with results from other studies.

	Brock					Laurier				
	Always	Often or Sometimes	Never	Don't Know	Total Responses	Always	Often or Sometimes	Never	Don't Know	Total Responses
Arts & Humanities	12%	66%	0%	22%	41	4%	82%	4%	11%	28
Business	11%	68%	0%	21%	28	0%	100%	0%	0%	12
Science / Health Science	10%	71%	0%	19%	59	13%	77%	0%	10%	30
Social Science	9%	73%	0%	18%	74	15%	71%	0%	13%	52

	Brock					Laurier				
	Always	Often or Sometimes	Never	Don't Know	Total Responses	Always	Often or Sometimes	Never	Don't Know	Total Responses
Arts & Humanities	8%	34%	11%	47%	38	0%	71%	4%	25%	28
Business	8%	38%	19%	35%	26	0%	50%	8%	42%	12
Science / Health Science	5%	49%	7%	39%	59	13%	47%	3%	37%	30
Social Science	4%	60%	0%	36%	70	8%	59%	4%	29%	51

	Brock					Laurier				
	Always	Often or Sometimes	Never	Don't Know	Total Responses	Always	Often or Sometimes	Never	Don't Know	Total Responses
Arts & Humanities	23%	38%	5%	35%	40	18%	43%	11%	29%	28
Business	0%	43%	21%	36%	28	0%	58%	17%	25%	12
Science / Health Science	25%	36%	2%	37%	59	37%	43%	0%	20%	30
Social Science	25%	57%	0%	18%	72	18%	51%	2%	29%	51

### Part 3: Attitudes Toward OA

#### Question 8: These questions explore your attitudes towards OA

Overall, most respondents were positive about making their research freely available to all readers (see Table 8).

	Brock		Laurier	
	n	%	n	%
Arts & Humanities	42	76%	28	82%
Business	28	57%	11	64%
Science / Health Science	58	84%	30	77%
Social Science	69	93%	52	87%

Arts and humanities as well as social science respondents were more positive about OA journals as an important research dissemination strategy than business and science/health science respondents (see Table 9).

	Brock		Laurier	
	n	%	n	%
Arts & Humanities	42	52%	29	62%
Business	27	26%	11	36%
Science / Health Science	59	41%	30	50%
Social Science	69	70%	52	60%

In terms of OA journals broadening research impact, business respondents were the least positive while social scientists the most positive (see Table 10).

	Brock		Laurier	
	n	%	n	%
Arts & Humanities	42	52%	28	64%
Business	27	30%	11	27%
Science / Health Science	59	42%	30	40%
Social Science	68	65%	51	65%

Most faculty respondents at both institutions did not want to spend their grant funds on open access publishing fees (see Table 11).

<b>Table 11</b>				
<b>Respondents Who “Strongly Agree” or “Agree” with the Statement: “I do not want to spend my grant funds on publishing fees” (Q8e)</b>				
	Brock		Laurier	
	n	%	n	%
Arts & Humanities	42	83%	28	71%
Business	28	71%	11	91%
Science / Health Science	59	78%	30	83%
Social Science	66	89%	53	68%

Twenty-five percent of faculty agreed that current promotion and tenure standards discourage OA. Business faculty were the outliers, with approximately 50% of faculty (Brock 46%,  $n=13$ , Laurier 50%,  $n=6$ ) agreeing that promotion and tenure standards discourage OA publishing (see Table 12).

<b>Table 12</b>				
<b>Respondents Who “Strongly Agree” or “Agree” with the Statement: “My current tenure and promotion standards discourage me from making my publications OA” (Q8f)</b>				
	Brock		Laurier	
	n	%	N	%
Arts & Humanities	41	12%	28	25%
Business	28	46%	12	50%
Science / Health Science	56	7%	29	21%
Social Science	68	21%	52	21%
Total	193		121	

Comments received for Question 8 raised concerns about OA journal quality, cost, and recognition in promotion and tenure. For example, a health sciences professor at Brock University remarked: “[t]here is a debate in my field regarding the ranking (value) of peer reviewed open access journals vs traditional peer reviewed journals. Therefore, with respect to tenure and promotion, depending on the review committee, some publications may not be recognized and “acceptable and credible” if a fee was paid to publish the article—i.e., that the publication was ‘bought’ not ‘earned’.”

### **Question 9: OA journals are of higher, similar, or lower quality than subscription/pay-per-view journals.**

Brock’s 199 responses revealed a lower view of the quality of OA journals in comparison to the 132 responses received from Laurier faculty. Only 45% of Brock faculty ( $n=90$ ) indicated that OA and subscription journals were of similar or higher quality to subscription journals, compared to 56% at Laurier ( $n=74$ ). The most

notable negative responses were from business faculty, where over 85% of respondents felt OA journals were of lower quality. In the social sciences, 60% of faculty at both institutions viewed OA as similar or higher quality to subscription journals (see Tables 13 and 14).

<b>Table 13</b>			
<b><i>OA Journals Compared with Subscription/Pay-Per-View Journals (Brock Q9)</i></b>			
	Higher Quality	Similar Quality	Lower Quality
	% of Total Responses	% of Total Responses	% of Total Responses
Arts & Humanities	3%	49%	49%
Business	0%	15%	85%
Science / Health Science	0%	36%	64%
Social Science	0%	62%	38%

<b>Table 14</b>			
<b><i>OA Journals Compared with Subscription/Pay-Per-View Journals (Laurier Q9)</i></b>			
	Higher Quality	Similar Quality	Lower Quality
	% of Total Responses	% of Total Responses	% of Total Responses
Arts & Humanities	0%	40%	60%
Business	0%	92%	8%
Science / Health Science	0%	50%	50%
Social Science	2%	37%	61%

#### **Part 4: Profile of Survey Respondents**

<b>Table 15</b>				
<b><i>Completed Survey Responses by Broad Subject Area (Q11)</i></b>				
	Brock ( <i>n</i> =208)		Laurier ( <i>n</i> =138)	
	<i>n</i>	%	<i>n</i>	%
Arts & Humanities	42	20%	28	20%
Business	28	13%	12	8%
Science & Health Science	59	28%	30	22%
Social Science	69	33%	52	37%
Not answered	10	5%	16	11%

## ***Discussion***

### **Publishing Practices**

Faculty at each institution had similar publishing histories: 66% (*n*=136) of Brock faculty had published from zero to 20 articles, compared to 69% (*n*=95) at Laurier. The

institutions also had a similar number of faculty who had published more than 30 articles in their career (22% at Brock and 24% at Laurier).

### **Peer Review, Journal Prestige, Impact Factor most Important Factors in Choosing a Journal**

This study's results are like others in demonstrating that researchers submit articles to journals based on "traditional" standards. Per the Phase 5 Research Study, Canadian scientists choose a publication venue according to journal reputation and impact factor (Phase 5 Consulting, 2014). Studies at University of Toronto, University of Saskatchewan, and York University found, rather than whether a journal is available via OA, that the embedded traditions of peer review, journal reputation, and journal relevance to the manuscript were key criteria faculty members used in determining a journal's suitability for publishing their article (Moore, 2011; Dawson, 2014; Nariani & Fernandez, 2012). This too is true at Brock and Laurier, where, like at the University of Toronto, "conventional practices...continue to dominate" (Moore, 2011, p. 15).

The percentage of respondents (41% at Brock and 51% at Laurier) that ranked peer review as the most important criterion for selecting a journal in which to publish may understate its true importance to participants. In the comments section for this question, nine participants from Brock and three from Laurier commented that peer review is assumed and therefore not worth rating. In addition, the interrelatedness of peer review to other factors was noted—for instance, while promotion/tenure ranked low, comments indicated the tight relationship of this category to peer review. Several faculty noted that publishing in peer-reviewed journals was key to consideration of those articles in promotion and tenure.

### **Knowledge of OA Journal Publishing**

Most business faculty members had not published in an OA journal. On the other hand, over 50% of Brock's humanists and Laurier's science faculty responded that they had previously published via OA. (see Table 3).

When asked whether they would consider publishing in an OA journal, Brock and Laurier faculty responded similarly, with fewer than 50% of respondents (Brock, 42%,  $n=85$ ; Laurier, 49%,  $n=67$ ) indicating they would consider publishing in an OA publication at some point. Only 6% of faculty at both institutions responded that they would never consider publishing in an OA journal. Notably, many respondents were "uncertain" (Brock, 52%,  $n=106$ ; Laurier, 45%,  $n=61$ ). The most positive responses for future OA publication plans came from the social science faculty, while business faculty expressed the least interest.

The survey also revealed some uncertainty regarding the characteristics of OA journals. Only 45% ( $n=19$ ) of Brock humanists responded "always" to the statement "OA journals are always free to read". In contrast, 77% ( $n=23$ ) of Laurier scientists responded "always" to the same statement.

Comments made it clear that many faculty are struggling with the concept of OA and how to differentiate it from subscription publishing. As one Brock scientist put it: “[t]o be honest, even after you defined what OA is, I’m still not sure if some of the journals in which I’ve published are OA.” Several commenters referred to “print” versus “online” journals, further muddying the waters.

Some themes were repeated by a number of participants. For example, many respondents mentioned predatory publishers or described predatory publisher behaviour. An analysis by Crawford (2014) shows that predatory publishers as defined by Beall’s List (2014) comprise fewer than 10% of the listings in the DOAJ. This presents an obvious opportunity for education of faculty and other potential OA authors. Another commonly stated view is that OA journal publishing is very expensive for authors. However, this again presents an opportunity for education, given that data shows two thirds of the journals in the DOAJ did not charge a fee (DOAJ, 2015).

Answers to Question 6 (OA Journals have the following characteristics...) reflected minor differences between the two institutions, with Brock participants indicating higher levels of uncertainty than Laurier participants (see Table 2). Uncertainty, though, was the major result from this question. Even characteristics we assumed would be common knowledge, for example, that OA journals are “always free to read”, were met with uncertainty. Merely 115 of 200 Brock respondents (58%) and 92 of 137 Laurier respondents (67%) affirmed that OA Journals were “always free to read”.

### **The Value of Open Access**

Respondents were generally positive about the potential for OA journals to disseminate research. More than 75% of arts and humanities, science and health science, and social science faculty felt their research findings should be freely available to all readers. Less support was demonstrated by Brock and Laurier business faculty. While more than 60% of social science faculty members viewed OA as important in either disseminating or broadening the impact of research, fewer than 30% of business faculty were of like mind. Overall, arts and humanities faculty were more positive than science and health science faculty regarding OA and research dissemination/impact.

This study confirmed what previous studies (e.g., Coonin, 2011; Coonin & Younce, 2010; Harley, Acord, Earl-Novell, Lawrence & King, 2010; Kozak & Hartley, 2013; Lyons & Booth, 2011; Moore, 2011) have noted: that disciplinary differences exist in attitudes to OA journal publishing. While arts and humanities, science and health science and social science participants conveyed a range of knowledge and attitudes about OA journal publishing, business faculty displayed a level of certainty and negativity that stood out. Business researchers were most likely to feel that they would never publish in an OA journal, that current tenure and promotion guidelines discouraged publication in OA journals, and were almost unanimous in their belief that OA journals were of lower quality than subscription journals. Interestingly, several business researchers commented that a key factor in choosing a publication venue was a journal’s standing on an external ranking of business journals (Financial Times, 2012). If further

investigation demonstrated that all business faculty value these rankings and that none of the ranked journals are OA, this might explain how business faculty responded to this survey.

One clear theme is the endurance of disciplinary culture and publishing traditions that influence tenure, funding decisions and other career rewards. Broad access to scholarship—one of the OA benefits heavily promoted by librarians—is not one of the things that matter most to faculty. As noted by Eve and Willinsky (2015), “academics will not, overnight, submit to new journals and new publishers unless the underlying incentives (usually financial for their institution and their own careers, mediated through prestige) also change” (pp. 88-89). Librarians may find more success reaching faculty by highlighting the IF of an OA journal, or demonstrating how a particular OA publication could be a good “fit” for an author’s work. Librarians must be able to address issues vital to researchers: prestige, impact, and participating in relevant scholarly conversations.

In response to the question about the quality of OA journals the most frequent comment (“it depends”) highlighted the complexity of the current scholarly publishing landscape. There were lengthy thoughtful comments in the 60 Brock and 39 Laurier general comments (Question 10), about the current scholarly dissemination environment. Concerns about predatory OA journals and cost were mentioned, but most comments expressed positive visions for the future:

“Open-access journals are variable - undoubtedly some of the variation will wash out eventually, but currently it is a bit like the wild west out there.” (Brock scientist)

“I think that open access publishing is extremely important today, due to globalization and interdisciplinary/international research this means of publication bring researchers and collaborative research closer”. (Brock humanist)

“We have the responsibility to make the product of our publicly funded research available to those who paid for it (Canadians) as well as those who can use it.” (Laurier social scientist)

## **Conclusion**

The survey provided a significant amount of useful information on a wide range of topics which can help us, as librarians, to communicate more effectively with researchers about scholarly publishing. While most survey respondents at both institutions agreed that publicly available research is generally a good thing, this study has clearly identified obstacles which prevent faculty’s positive attitudes towards OA from translating into open publishing practices.

The results of this exploratory study demonstrate that Brock and Laurier faculty members share common characteristics in both their publishing practices and attitudes towards OA. Science and health science researchers were the most positive about OA

journal publishing; arts and humanities along with social sciences respondents were more mixed; and business participants were the least positive. These findings, in addition to specific researcher concerns about OA (particularly cost and quality), provide evidence to inform institutional OA educational efforts. Combining these insights about OA with the knowledge of key publishing factors for faculty—peer review, prestige, and impact factor—will allow librarians to address the priorities of researchers at their institutions.

Given the rapidly changing nature of OA scholarly publishing, characterized by one of our survey respondents and others as “a wild west”, it is important to document faculty members’ experiences by examining their changing behaviours and perceptions.

To effectively develop services to support publishing in gold OA journals, librarians should employ a variety of educational strategies (websites, seminars, consultations) to work with faculty members. By positioning ourselves as facilitators of effective research dissemination (rather than Tri-Agency compliance agents) librarians can facilitate conversations, tailored to disciplinary publishing practices to:

- encourage colleagues to judge the quality of a journal separately from its business model (OA, subscription, hybrid, APCs)
- demonstrate how OA journals can meet peer review and other quality standards
- directly address concerns and present realities about APCs and “predatory” journals

Canada’s Tri-Agency OA Policy on Publications (Tri-Agency, 2015) provides impetus for these efforts: the policy encourages all Canadian researchers (regardless of funding) to make their research publicly accessible – a directive that brings Canada in line with other major nations including the U.K., the U.S., and Australia.

This study underscores the need for focused, open discussions on our campuses about the facts and fears surrounding OA journal publishing.

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## Appendix A

### Survey instrument

#### Part 1: Publishing practices

These questions address your experiences with and attitudes towards scholarly journal publishing.

1. How many articles have you published as primary author in scholarly journals over the span of your academic career?
  - a. 0-9
  - b. 10 - 19
  - c. 20 - 29
  - d. 30+
  
2. What factors influence your decisions on where to publish? Please select the four factors most important to you and rank in order of importance from 1 (most important) to 4 (least important): \* Please choose ONLY 4 factors \*

Impact factor  
Journal is peer reviewed  
My work is more likely to be cited if published here  
Journal prestige within my discipline  
Impact on my promotion/tenure process  
Articles in the journal are available to the general public  
Speed of review process  
Quality of editor/editorial board

Comments:

3. When you sign an agreement to publish your work in a journal, do you usually: *(please select all that apply)*
  - a. read the copyright terms in the publishing contract thoroughly before signing
  - b. sign the publishing contract without reading the copyright terms
  - c. negotiate with the publisher to change the contract and preserve more **author** rights over your article (for example, for you to post on a website)
  - d. negotiate with the publisher to change the contract and preserve more **reader** rights over your article (for example, for readers to share it widely online)

Comments:

## Part 2: Knowledge of OA journal publishing

For the purposes of this study, a fully OA journal is defined as a journal which makes all of its content immediately available for free to its readers. Readers do not pay any subscriptions or other fees to access any articles in an OA journal.

4. Have you published an article in an OA journal?
  - a. Yes
  - b. No
  - c. Don't know
  
5. Do you plan to pursue publication in an OA journal within:
  - a. the next 6 months
  - b. the next 12 months
  - c. the next 1 to 5 years
  - d. never
  - e. uncertain

Comments:

6. OA journals have the following characteristics:

	Always	Often	Sometimes	Never	I don't know
a. are peer reviewed					
b. charge fees for authors to publish in them					
c. are free to anyone to read					
d. have an impact factor					
e. increase the likelihood of being cited					
f. increase the exposure of your research because articles can					

be read by anyone					
g. can count towards tenure / promotion					
h. allow author more ability to reuse/post content without restrictions					
i. allow copyright to reside with the author					

7. Hybrid journals are subscription journals that offer an option to authors to make their individual articles OA for a fee. Other articles in the journal issue are not freely available and can only be read by subscribers. For example, see [Taylor & Francis Open Select](#) journals.

- a. I am aware of this option
- b. I am somewhat aware of this option
- c. I was not aware of this option

Comments:

### Part 3: Attitudes toward OA

8. These questions explore your attitudes towards OA:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
a. My research should be freely available to all readers					
b. OA journals are an important way to disseminate research in my discipline					
c. Publishing in OA journals					

broadens the impact of my research					
d. Researchers should retain the copyright to their published articles					
e. I do not want to spend my grant funds on publishing fees					
f. My current tenure and promotion standards discourage me from making my publications OA					

Comments:

9. OA journals are (*select one which best matches your opinion*):
- a. of higher quality than subscription/pay-per-view journals
  - b. of similar quality to subscription/pay-per-view journals
  - c. of lower quality than subscription/pay-per-view journals

Comments:

10. Do you have any final comments or concluding thoughts about the topic of OA publishing?

#### Part 4: Demographics

These last questions will help us better understand the relationship between researcher characteristics such as discipline and rank and your publishing practices and attitudes.

11. What is your home department?

##### **Applied Health Sciences**

Community Health Sciences  
 Kinesiology  
 Nursing  
 Recreation & Leisure Studies  
 Sport Management

##### **Business**

Accounting  
 Finance, Operations, and Information Systems  
 Marketing, International Business, and Strategy

Organizational Behaviour, Human Resources, Entrepreneurship, and Ethics

**Education**

Adult Education  
Graduate & Undergraduate Studies in Education  
Teacher Education  
Tecumseh Centre for Aboriginal Research and Education

**Humanities**

Applied Linguistics  
Canadian Studies  
Centre for Digital Humanities  
Centre for Medieval and Renaissance Studies  
Classics  
Dramatic Arts  
English Language & Literature  
History  
Intercultural Studies  
Liberal Arts  
Modern Languages / Literatures & Cultures  
Music  
Philosophy  
Visual Arts

**Mathematics and Science**

Biological Sciences  
Biotechnology  
Chemistry  
Computer Science  
Earth Sciences  
Mathematics & Statistics  
Physics

**Social Sciences**

Applied Disability Studies/ABA  
Child & Youth Studies  
Communication, Popular Culture & Film  
Economics  
Geography  
Labour Studies  
Political Science  
Psychology  
Social Justice and Equity Studies  
Sociology  
Tourism and Environment

## Women's and Gender Studies

**Other:** \_\_\_\_\_

11. What is your age?

- a. 25-34
- b. 35-44
- c. 45-54
- d. 55-64
- e. 65+

12. What is your gender?

- a. Male
- b. Female
- c. Other

13. # years since completing highest degree?

- a. 0-5
- b. 6-10
- c. 11-15
- d. 16-20
- e. 20-25
- f. 25+

14. What is your rank?

- a. Assistant Professor
- b. Associate Professor
- c. Full Professor
- d. Lecturer
- e. LTA Contract Faculty
- f. Professor Emeritus
- g. Other-please specify

EXIT

Thank you for participating in this research project.