Keep the Change: Clusters of Faculty Opinion on Open Access

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The authors discovered faculty opinions about open access by employing Q methodology, a research method combining qualitative and quantitative methods to analyze subjects' attitudes about a given topic. Q methodology, using three main steps, identifies and isolates opinion types. The first step is the collection of subjective statements, largely from qualitative interviews. The next step, called the Q-sort, involves subjects sorting these statements along a continuum. Finally, Q-sort results are analyzed using a statistical technique called factor analysis. Using specialized software, factor analysis generates clusters of opinions. In this Q study, factor analysis revealed three distinct factors that outlined clusters of faculty opinions about open access. The authors described these factors as "Evangelists," "Pragmatists," and "Traditionalists." Each of these factors represents a group of faculty on Miami University's Oxford campus who hold specific attitudes and opinions regarding open access. Implications for future library initiatives implementing open access programs, services, and policies are discussed, as are directions for additional research.

Introduction

Open access—literature that is digital, online, free of charge, and free of most copyright and licensing restrictions[1]—is one of the most promising strategies for academic libraries and universities continuing the transition from print to digital. The adoption of open access may be inevitable in the long-term, however open access initiatives—and how nuances of open access impact a discipline or an academic department—can still be points of controversy, debate, or confusion on many campuses. Some universities have successfully passed open access policies, yet simply establishing and maintaining productive cross-campus conversations about open access challenge other universities.

As we further strategized about implementing open access initiatives on Miami University's Oxford (Ohio) campus, we encountered anecdotal evidence of faculty acceptance, interest, confusion, and resistance. Motivated by a need to better understand our community, we decided to examine our faculties' attitudes about open access in a more formal manner, including the degrees of their confusion and resistance. We believed that a better understanding of our faculties' opinions across the University's divisions could inform our leadership initiatives in implementing open access programming, services, and policies on our campus. Additionally, we thought components of faculty confusion about open access could guide other library services related to open access—from

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enhancements we make to our institutional repository to the inclusion of open access topics in library instruction and outreach.

Literature Review

Attitudinal studies of open access extend back to 1991,[2] yet there has been little research on open access that systematically examines the variety and groupings of subjective viewpoints that academic faculty may have. In a large-scale survey of nearly 4000 international researchers, Rowlands, et al. reported views and attitudes toward open access publishing and also used factor analysis to group their respondents into the three following opinion types: "opportunists" who have published in an open access medium, yet are very negative about open access publishing; "utopians" who believe open access will "lead to publishers to improving their services to authors," and "pessimists" who think open access will "result in the death of the printed journal."[3] Swan and Brown's large-scale survey examined authors who had published in open access journals and authors who had published in traditional subscription journals. They found that faculty authors who had not published in open access journals perceived open access publishing to be a slower process compared to publishing in subscription based journals and that journal prestige and reputation were of major importance when deciding against open access publishing. However, lack of knowledge about open access publications in their respective disciplines was the primary reason this group of faculty chose not to submit manuscripts to open access publishers.[4] After surveying 1368 scholars in the United Kingdom, Morris and Thorn found their concerns about open access included "possible cost to authors, possible reduction in quality, and negative impacts on existing journals, publishers, and societies."[5] Harley, et al. carried out case studies that helped them identify the criteria that influence "attractiveness, viability, and financial sustainability of different methods of scholarly communication for various participants in the publication/communication system, including authors (producers)…" Their analysis of responses to questions about open access determined that faculty across five disciplines at University of California Berkeley had "minimal, if any, understanding of open-access models" and "a good understanding that the high cost of journals is problematic." On the negative side, they found their faculty had "the perception that open-access models had little or no means of quality control." They also found universally negative response to author-pays models of publishing.[6]

Warlick and Vaughn identified factors that motivated biomedical faculty to publish in open access journals and found that publication quality was of primary concern. Free public availability and increased exposure "were not strong enough incentives for authors to choose open access over subscription publications, unless the quality issue was also addressed."[7] It is important to note that their study surveyed faculty who had already published in open access journals. More recently, Coonin[8] and Coonin and Younce[9] studied attitudes of scholars across several disciplines (Business, Education,[10] Social Sciences, and Humanities). Yet again, respondents in these three studies had already published in open access journals, as had those surveyed in a study by Shen.[11] Conversely, barriers to participation in open access journals and especially institutional repositories have been well researched, and some of this literature is concerned with faculty attitudes. The Repositories Support Project reported attitudinal survey data from 1676 academic faculty across the United Kingdom. Among other questions, scholars were asked to characterize their feelings about publishing in open access journals and depositing their work into institutional repositories. Barriers to participation included copyright concerns, lack of time, and lack of knowledge.[12]

Much of the literature addresses the reasons why authors' choose to publish in open access journals and their use (or non-use) of institutional repositories. Fewer studies describe faculty opinions about the many dimensions of open access. Our study builds upon existing research through the use of a methodology not currently well known in the field of academic librarianship, Q methodology. To date, we have not found any research using Q Methodology to examine faculty attitudes toward open access. Most importantly, there is no literature that describes our particular community. We could not assume that findings from other campuses represented faculty opinions on our own campus.

Q Methodology

Q methodology is a research method used to study human subjectivity. At its most basic level, a Q study involves three procedures. First, researchers collect a set of opinion statements about a topic of inter-

est. Investigators typically accomplish this by conducting interviews, although there are other ways in which they can collect statements. Next, individuals are asked to read a collection of the gathered opinion statements, react to them, and sort them along a continuum of preference (e.g., from most disagree to most agree). This sorting operation is known as a Q-sort. It is in the ranking of these statements from individuals' own points of view that subjectivity is captured and brought into focus. Lastly, completed Q-sorts are analyzed using a statistical technique called factor analysis. Traditional survey research is interested in patterns across variables, while Q methodology is interested in patterns across individuals. Because Q methodology looks at patterns across individual Q-sorts, factors that are discovered in the analysis indicate segments of subjectivity and represent distinct points of view on a particular topic. Consequently, people who load highly on a particular factor reveal a high level of commonality with one another and a dissimilarity with people who load highly on other factors. Factor scores are also calculated to aid in the interpretation of each factor type.

William Stephenson, a British physicist and psychologist, first introduced Q methodology in 1935.[13] Since its introduction, it has become a widely used method to investigate human subjectivity, most notably in the fields of communication, political science, and health sciences. A Q bibliographic database maintained at Q-Method, a website devoted to the practice of Q methodology, has well over 2,500 entries.[14] In recent years, scholars in marketing, religion, and women's studies have begun using Q methodology in their research, thereby broadening this method's reach. In the field of academic librarianship, however, there are only a few published studies that have applied Q methodology. Dick and Edelman published an article that reports how a Q-sort was used as a technique to prioritize journal titles for possible cancellation.[15] Shrimplin and Hurst used Q methodology to investigate reference librarians and their perceptions toward virtual reference.[16] Shrimplin, et al. conducted a study using Q methodology to identify opinion types about e-books.[17]

This particular study uses Q methodology to investigate faculty at the Oxford (Ohio) campus of Miami University and to discover how they think about open access. As a preliminary study, the researchers are interested in the following questions: 1) What types of faculty opinions exist regarding open access on Miami University's Oxford campus? 2) What are these faculties' points of resistance and support for the adoption of open access initiatives? 3) How can Miami University Libraries and librarians provide best services and enhanced initiatives regarding open access?

Methods

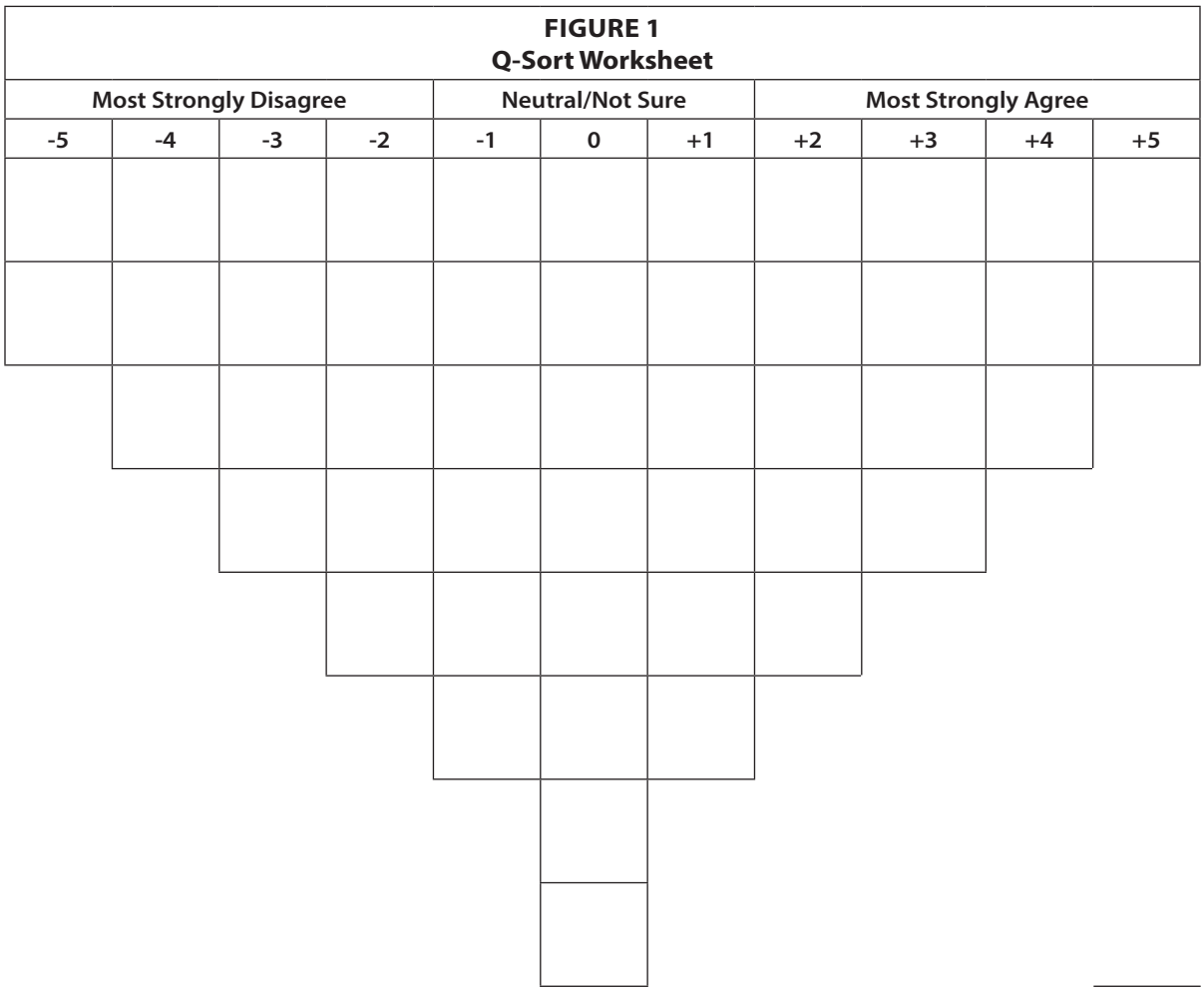
The opinion statements selected for a Q-sort are drawn from what is called a "concourse." A concourse can be understood as the complete conservation that surrounds a topic or issue. There are a number of ways to capture a concourse, and interviews are the most common approach. Investigators in this study conducted five in-person, open-ended interviews with faculty who talked about issues related to open access. These interviews lasted from 20-minutes to one and a half hours and were conducted in January and February of 2013. A concourse can also be gathered from the literature about the topic of interest. Literature is understood to include traditionally published journal articles and books, but its definition can expand to include comments and opinions published in traditional media, blog posts, social media, and other non-academic outlets. Investigators in this study included the review of 34 articles, and—together with the in person interviews—161 opinion statements were extracted. Of these 161 statements, 63 were drawn from faculty during the interviews, and 98 were drawn from the literature. To reduce the opinion statements to a manageable number yet ensure that those selected were representative of the overall collection of statements, 48 statements were chosen by using unstructured sampling—a basic technique in which statements presumed to be relevant to the topic at hand are chosen in such a way that all possible subissues are represented in the sample.

In February 2013, Miami faculty were invited to participate in the next stage of research, the Q-sort. An email invitation was sent to faculty, and librarians were also encouraged to help identify faculty willing to participate in the study. Individuals who were interested in participating in a Q-sort on open access were scheduled for a 30 to 45 minute appointment in a location of their choosing. At the beginning of the Q-sort, participants were given a description of the study, an informed consent form to sign and return, and a deck of the 48 selected statements about open access (see Table 1—"48 Selected Statements About Open Access").

TABLE 1 48 Selected Statements About Open Access
1. Self-archiving takes too much time.[18]
2. It bugs me a little bit when I realize I give up my copyrights to somebody else.
3. To make large advances in the overall levels of open access we need large concessions from publishers.[19]
4. I don't know if open access obviates copyright, but I think if it does it's a major problem.
5. Front loading the open access costs to academics is really problematic for me.
6. Open access is usually implemented on an "author pays" model which means journals have an incentive to accept papers which aren't very good, just to get more money.[20]
7. If they don't sell the content of the journal, professional societies will have to triple their dues.
8. Author publication fees are equated with 'vanity' publishing.[21]
9. If authors have to pay, this will restrict the views presented in journals to a controlling elite.[22]
10. Open access helps readers but not authors.[23]
11. I think making this available internationally is very important.
12. All who need access to scholarly literature already have it.[24]
13. Information should be as widely and freely available as possible.
14. Why should I put my work in a repository if nobody will know it's there?[25]
15. Open access repositories are content ghettoes where content is difficult for users to find.[26]
16. Nobody searches for work by the institutional affiliation of the author rather than by field or topic.[27]
17. Open access mandates limit our freedom to submit work to the journals of our choice.[28]
18. There is always the risk that open access will, in some way, impede the authors' rights down the road to generate a royalty or generate a publication.
19. Open access mandates violate academic freedom.[29]
20. Publishing in an open access journal will affect my chance of winning research grants.[30]
21. Enabling the reuse of research maximizes its potential for innovation.[31]
22. Open access articles will be more frequently cited.[32]
23. I think open access is a way to get more people to read your stuff.
24. Open access mandates are simply not feasible. There aren't enough open access journals to absorb the volume.[33]
25. The rise of open access mandates proves that researchers oppose open access and must be forced.[34]
26. I am frustrated by commercial publishers' inability to adopt an open access model.[35]
27. Open access to data is risky. It's risky that somebody is going to find it and do something with it.
28. I think open access of data is a wonderful development.
29. Open access to data helps me a whole lot as a teacher, because my students can work with real data.
30. My promotion and tenure committee would never give weight to a journal charging author-side fees.[36]
31. I don't think universities in their tenure and promotion system have completely got on board with how you judge an online journal. There are still many gaps there.
32. I fear this is leading us down the path of further limiting of high quality peer reviewed publication.
33. Open access journals are not less prestigious than subscription based journals.[37]
34. With the greater availability of open access articles, it's going to be harder and harder to track student plagiarism.
35. Putting my work out there will just invite rip-offs.[38]
36. Open access journal articles will not be properly archived.[39]

TABLE 1 48 Selected Statements About Open Access
37. We can't convert our journal to open access because we need the revenue.[40]
38. I have sympathy with the person from outside my field that says, "I bought and paid for that. I want to see it" (regarding taxpayer funded research).
39. Open access journals are of lower reputation and prestige.[41]
40. First-rate work doesn't need the alleged boost it would get from open access.[42]
41. Open access is good for research, but all the incentives in the system make scholars choose prestige instead.[43]
42. I like to support open access when I can, but I couldn't pass up the chance to publish in a very prestigious journal.[44]
43. If I put my ideas out there in open access, it's going to inhibit my ability to publish down the road.
44. Open access to cutting edge research is unnecessary. Most lay readers don't care to read it and wouldn't understand it.[45]
45. The advantage of having open access is that you can get some of this material a lot faster. I think that is important.
46. The academic publishing business model, as it currently stands, is heading for disaster.[46]
47. I like the idea of posting to the repository, but it's more work than I want to do.
48. If I had a choice between publishing in an open access or a non-open access journal that were roughly equivalent, I would choose open access.[47]

FIGURE 1
Q-Sort Worksheet



Also included in the Q-sort packet was a step-by-step guide on how to sort the statements and a score sheet to record the order of the statements (see Figure 1—"Q-Sort Worksheet").

Q-sort participants also completed a short questionnaire. A total of ten Q-sorts were completed; however, one of the Q-sorts was incomplete and had to be excluded from the data analysis. At the end of the Q-sorting exercise all participants were asked if they would be willing to be interviewed at a later date. These follow up interviews are sometimes arranged with one participant from each of the identified factors, and they are conducted to help verify the interpretation of the results. Follow up interviews consist of open-ended questions designed to solicit a narrative used to confirm or refute the investigators' findings. At the conclusion of the interview, the interviewees are shown the relevant factor description and asked to respond to it. For the purposes of this preliminary study, no follow up interviews were conducted.

Data Analysis

Using PQMethod, a statistical program tailored to the requirements of Q studies and written by Peter Schmolck,[48] each Q-sort was intercorrelated with the others and a 9 x 9 correlation matrix was factor analyzed using the Principal Component method. Three unrotated factors were extracted and rotated using a varimax rotation. Factor scores were then computed for the three factors to reveal clusters of faculty opinion on open access. In this context, a factor represents a group of individuals who have Q-sorted the 48 statements in a similar way, thus demonstrating a distinct viewpoint toward open access.

Observations

Nine people sorted the 48 statements into a predetermined distribution grid according to the degree to which they agreed or disagreed with each statement. The grid resembled a bell-shaped curve. Table 2 ("Subjects' Factor Loadings") presents the rotated factor matrix.

This table indicates that a three-factor solution is adequate, as all nine of the Q-sorts loaded significantly on only one factor. Therefore, this study is conclusive that these three opinions do in fact exist and that the study participants fall strongly into one of these three groups. However, this study is not able to make the claim that these are all the opinions on open access that exist on Miami's Oxford campus.

The factor analysis process revealed three distinct opinion groups: "Evangelists" (Factor 1), "Pragmatists" (Factor 2), and "Traditionalists" (Factor 3). We generated these labels and a narrative descrip-

TABLE 2
Subjects' Factor Loadings

	Factor Loadings			Selected Characteristics		
Subject	Evangelists	Pragmatists	Traditionalists	Division*	Rank	Gender
1	05	70*	37	CAS	Assistant	Female
2	-11	-06	92*	FSB	Associate	Male
3	84*	26	-05	CAS	Associate	Male
4	-09	81*	-09	SEAS	Associate	Male
5	18	33	59*	FSB	Full	Male
6	35	71*	09	CAS	Assistant	Female
7	78*	11	-07	SEHS	Assistant	Male
8	88*	10	09	SCA	Full	Male
9	82*	-16	13	SEHS	Full	Male

***Miami University—Academic Divisions**
CAS: College of Arts and Science
FSB: Farmer School of Business
SEAS: School of Engineering and Applied Science
SEHS: School of Education, Health, and Society
SCA: School of Creative Arts

tion of each opinion group by analyzing the Q-sorts that helped define each factor. PQMethod software can also generate a Q-sort for each factor that represents how a hypothetical person loading 100% on any particular factor would order the 48 statements. By examining these hypotheticals, the narrative descriptions and labels were generated to aid our understanding of the opinions about open access that each group holds. In the following narrative descriptions, the first number in the parentheses represents the statement used to derive that portion of the opinion; the second number indicates that factor types' ranking of the statement (see Table 3—"Statement Scores for Each Factor").

Evangelists (Factor 1)

This opinion type mirrors many of the standard arguments made in favor of open access by the open access community. Evangelists believe that "information should be as widely and freely available as possible (13, +5). They also believe in open data (28, +4) and in the reuse of research to further its potential (21, +4). They trumpet the increased access to research articles afforded by open access models (23, +4), especially to global audiences that may not have access to research otherwise (11, +3). Another primary advantage of open access to this group is the speed at which articles are available (45, +5). This group feels very strongly that open access will not have a negative impact on

TABLE 3
Statement Scores for Each Factor

Statements	Factor Arrays		
	Evangelists	Pragmatists	Traditionalists
1. Self-archiving takes too much time.	0	0	1
2. It bugs me a little bit when I realize I give up my copyrights to somebody else.	1	2	1
3. To make large advances in the overall levels of open access we need large concessions from publishers.	2	-2	0
4. I don't know if open access obviates copyright, but I think if it does it's a major problem.	0	0	0
5. Front loading the open access costs to academics is really problematic for me.	0	4	0
6. Open access is usually implemented on an "author pays" model which means journals have an incentive to accept papers which aren't very good, just to get more money.	-4	4	-2
7. If they don't sell the content of the journal, professional societies will have to triple their dues.	-2	0	-3
8. Author publication fees are equated with 'vanity' publishing.	-2	2	4
9. If authors have to pay, this will restrict the views presented in journals to a controlling elite.	1	3	-3
10. Open access helps readers but not authors.	-4	2	-2
11. I think making this available internationally is very important.	3	-2	-3
12. All who need access to scholarly literature already have it.	-5	-4	4
13. Information should be as widely and freely available as possible.	5	1	2
14. Why should I put my work in a repository if nobody will know it's there?	1	0	1
15. Open access repositories are content ghettoes where content is difficult for users to find.	-2	0	1
16. Nobody searches for work by the institutional affiliation of the author rather than by field or topic.	1	3	4

TABLE 3
Statement Scores for Each Factor

Statements	Factor Arrays		
	Evangelists	Pragmatists	Traditionalists
17. Open access mandates limit our freedom to submit work to the journals of our choice.	-1	2	-4
18. There is always the risk that open access will, in some way, impede the authors' rights down the road to generate a royalty or generate a publication.	1	-3	2
19. Open access mandates violate academic freedom.	-2	-1	-4
20. Publishing in an open access journal will affect my chance of winning research grants.	-3	-2	-2
21. Enabling the reuse of research maximizes its potential for innovation.	4	1	-1
22. Open access articles will be more frequently cited.	3	-2	-1
23. I think open access is a way to get more people to read your stuff.	4	0	0
24. Open access mandates are simply not feasible. There aren't enough open access journals to absorb the volume.	0	0	0
25. The rise of open access mandates proves that researchers oppose open access and must be forced.	-2	-5	-2
26. I am frustrated by commercial publishers' inability to adopt an open access model.	2	-2	-4
27. Open access to data is risky. It's risky that somebody is going to find it and do something with it.	-1	-1	0
28. I think open access of data is a wonderful development.	4	1	-1
29. Open access to data helps me a whole lot as a teacher, because my students can work with real data.	2	-3	2
30. My promotion and tenure committee would never give weight to a journal charging author-side fees.	-1	-1	2
31. I don't think universities in their tenure and promotion system have completely got on board with how you judge an online journal. There are still many gaps there.	3	3	3
32. I fear this is leading us down the path of further limiting of high quality peer reviewed publication.	-1	1	0
33. Open access journals are not less prestigious than subscription based journals.	0	-4	-5
34. With the greater availability of open access articles, it's going to be harder and harder to track student plagiarism.	0	-4	2
35. Putting my work out there will just invite rip-offs.	-3	-5	1
36. Open access journal articles will not be properly archived.	-4	1	-1
37. We can't convert our journal to open access because we need the revenue.	-3	0	-3
38. I have sympathy with the person from outside my field that says, "I bought and paid for that. I want to see it" (regarding taxpayer funded research).	0	3	1

TABLE 3
Statement Scores for Each Factor

Statements	Factor Arrays		
	Evangelists	Pragmatists	Traditionalists
39. Open access journals are of lower reputation and prestige.	-1	5	3
40. First-rate work doesn't need the alleged boost it would get from open access.	-1	-1	-3
41. Open access is good for research, but all the incentives in the system make scholars choose prestige instead.	1	2	5
42. I like to support open access when I can, but I couldn't pass up the chance to publish in a very prestigious journal.	2	5	3
43. If I put my ideas out there in open access, it's going to inhibit my ability to publish down the road.	-5	-3	-1
44. Open access to cutting edge research is unnecessary. Most lay readers don't care to read it and wouldn't understand it.	-3	-1	5
45. The advantage of having open access is that you can get some of this material a lot faster. I think that is important.	5	-1	0
46. The academic publishing business model, as it currently stands, is heading for disaster.	3	1	-5
47. I like the idea of posting to the repository, but it's more work than I want to do.	0	-3	3
48. If I had a choice between publishing in an open access or a non-open access journal that were roughly equivalent, I would choose open access.	2	4	-1

the archiving (36, -4) or plagiarism of their work (35, -3). They also don't believe that "author-pays" models of open access will lead to journals publishing lower quality works due to monetary incentives (6, -4).

Pragmatists (Factor 2)

This group generally supports open access, but they are not willing to pay any cost to achieve it. They refuse to pass up prestigious publishing opportunities in favor of open access (42, +5); however, if there were no differences between two publishing opportunities, they would choose the open access option (48, +4). Pragmatists are very concerned about the costs of open access. They feel that the "front loading the open access costs to academics is really problematic" (5, +4). They also feel that requiring authors to pay for publication will result in lower quality works being published (6, +4), yet they also believe that author-side payments may exclude the views of less-established researchers who may not be able to pay (9, +3). Pragmatists are not concerned about open access contributing to a rise in student plagiarism (34, -4) or their own work being "ripped-off" (35, -5). They are also not concerned about open access publishing's potential to impact future publication of their work (18, -3). They feel that institutional open access policies limit their academic freedom by not allowing them to publish where they wish (17, +2), but they don't think the existence of an institutional policy demonstrates broad resistance to open access on the part of faculty (25, -5).

Traditionalists (Factor 3)

This group feels that the publishing model as it currently stands is not heading for disaster (46, -5), and they are not frustrated by commercial publishers reluctance to adopt open access models (26, -4). Traditionalists believe that all who need access to scholarly research have access to it (12, +4) and that all interested parties lie within the academic community (44, +5). They feel that promotion and tenure committees will not give weight to work published in open access journals operating on an author-pays model (30, +2). Although they like the idea of making their work available in an open access repository, they feel that the additional work necessary to make that happen is

an undue burden (47, +3). The traditionalists are also the only group that gave positive ranking to concerns about open access leading to plagiarism, both of their own work (35, +1) and by their students (34, +2).

Common Statements

Of the 48 statements, all three opinion types assessed 13 of statements more or less the same. All three groups believe that universities have not figured out how to appraise online journals when it comes to promotion and tenure (statement 31, +3, +3, +3). They also believe that even first-rate work needs the citation advantages afforded by open access (statement 40 -1, -1, -3). None of the groups are comfortable signing over their copyright to publishers (statement 2, +1, +2, +1). No group feels strongly that open access will increase professional society dues (statement 37, -3, 0, -3), and in any case the finances of societies are not a reason for them to resist the transition to open access (statement 37, -3, 0, -3).

Discussion

The three opinion clusters isolated by our study—evangelists, pragmatists and traditionalists—have wide reaching implications for the advancement of open access in our community. By designing our outreach initiatives to specifically address the concerns of each of these groups, we might more effectively advocate for broad open access adoption across the campus academic divisions.

Evangelists may act as faculty allies to the librarians who strive to promote and institute open access. Evangelists may already be active members of the open access community or, at the very least, have internalized the open access messages. Sometimes, hearing the arguments in favor of open access from a departmental colleague instead of from a librarian can make a big difference to faculty considering making their work available via open access. Additionally, Evangelists can serve as early adopters for new open access tools, such as new repository features or websites designed to act as a resource and promote open access issues. For these reasons, it is important for librarians to engage this group as we coordinate our efforts in support of open access.

Knowing the particular points of resistance presented by Traditionalists can be of assistance in attempting to change their attitudes towards open access. For example, education and awareness campaigns focused on the economics of the publishing industry and library budgets might encourage Traditionalists to reassess their belief that the current conventional system of academic publishing is sustainable. Also, by demonstrating that there are additional audiences who may be interested in Traditionalists' works but who can't currently access it, could make Traditionalists more amenable to open access as a way to expand their readership.

The most important finding of this preliminary study was discovering the isolation of the opinion type of the Pragmatists. When we began our research, it was a relatively safe assumption that two groups (one for open access and one against open access) existed. The finding of the Pragmatist group, one that would support open access but for their resistance to pay a number of identifiable but addressable costs, presents open access advocates with a group to actively target. Making the repository easy and seamless to use would eliminate some of their resistance to open access archiving. Additionally, providing some assistance with open access fees may go a long way towards making this group supporters of open access.

Conclusion

Knowing the positions of our campus community on open access is, of course, useful in planning our promotion and outreach efforts. But also, it is interesting on its own as a snapshot of faculty attitudes towards scholarly communication in general. Most librarians agree that the current system of journal publishing is simply not sustainable, but knowing that there is a portion of our faculty that feel otherwise is eye opening. However, knowing there is a group of faculty towards which we can actively target our energy and messages is promising.

The investigators' next major step is to conduct more Q-sorts. We are certain of the existence of the three opinion groups identified and highlighted here, but we believe there may be other opinion groups. Additional Q-sorts will reveal them if they, in fact, do exist. Additional Q-sorts will also serve to confirm our current findings. In addition to knowing which opinion groups exist among our faculty community, it will also be interesting to discover what determines the group into which one falls: academic discipline, status, level of participation in professional societies or some other as of now unforeseen factor. We cannot determine these pieces of information from the

results of this Q study due to the small sample size and therefore plan on conducting a large *n*-survey. This *n*-survey will be based on the 48 statements generated from our concourse and may also include questions relating to publication patterns, roles played in professional societies, and positions on editorial boards of academic journals.

Notes

1. Suber, *Open Access*, 4.
2. Xia, "A Longitudinal Study of Scholars Attitudes and Behaviors Toward Open-access Journal Publishing," 618.
3. Rowlands, Nicholas, and Huntington, "Scholarly Communication in the Digital Environment," 27.
4. Swan and Brown, "JISC/OSI Journal Authors Survey Report," 2.
5. Morris and Thorn, "Learned Society Members and Open Access," 221.
6. Harley, "The Influence of Academic Values on Scholarly Publication and Communication Practices.," 5.
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12. Repositories Support Project, "Unlocking Attitudes to Open Access—Survey Results," 7.
13. Stephenson, *The Study of Behavior; Q-technique and Its Methodology*.
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