

SELF-ARCHIVING IN PRACTICE: WHAT DO THE RESEARCHERS SAY AND IS THERE ANY PAIN ALLEVIATION?

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Abstract

The purpose of the study was to increase self-archiving of scientific articles in Swedish open archives and thus contribute to the dissemination and increased visibility of Swedish research and to a greater impact for the individual researcher. We wanted to find out what obstacles may occur in the self-archiving process and how the database SHERPA/RoMEO functions as support for control of the publishers' conditions. We engaged 40 researchers at 7 Swedish institutes of higher education to self-archive their peer-reviewed journal articles from the last 5 years. The result was that 140 publications were self-archived in the open archives of these universities and university colleges. After the self-archiving was carried out we followed up on the researchers' experiences and viewpoints in the form of oral interviews. We have found several imperfections and problems in the process of self-archiving. These issues are discussed and then we conclude with suggestions for measures to take, which we believe are crucial to making self-archiving generally accepted in the world of research and therefore increasing the dissemination of research results.

Keywords: self-archiving; Open Access; user studies; SHERPA/RoMEO.

1. Introduction

Self-archiving is, of course, very desirable, but the issue is quite simple: Publishers are not really going to allow authors to self-archive in an easy way, and authors are not going to do it unless it is completely painless. Vitek Tracz [1]

Freely available articles results in faster and wider dissemination. They can be read by more people which may lead to increased citation [2, 3, 4, 5, 6]. Self-archiving means that you publish your article in a scientific journal and also make a copy of your article freely available in an open archive. Close to 60% of the international journal publishers allow self-archiving according to the Sherpa/RoMEO information on publishers' policies and a steadily growing number of universities offer self-archiving in an institutional archive. Even so, the increase of self-archived articles in institutional repositories is generally very slow and seems to validate Vitek Tracz's statement above.

Today almost all Swedish institutes of higher education have open archives where the publications of the respective institute are collected and made accessible. The open archives have had great success when it comes to disseminating and making visible publications with a very high number of visitors and a high number of downloads of separate publications. The contents of the open archives increases steadily and the dominating publication types are dissertations and other unpublished material such as research reports and conference material. However, full-text published scientific articles constitute a very small share of the actual production in open archives. An inquiry study carried out in 2007 at Swedish universities and university colleges shows that less than 10 % of the number of scientific articles produced at Swedish universities and university colleges are accessible in full text via these open archives [7]. We have no reason to believe that these numbers are exceptional but rather that they reflect on an international situation in regard to self-archiving in open archives.

For everyone involved in administrating institutional repositories there is the curiosity and need to know the reasons behind the slow influx of self-archived articles in order to increase the inflow. In 2005 Alma Swan and Sheridan Brown published their study "Open Access self-archiving: an author study" [8] where they used questionnaires to examine researcher attitudes towards self-archiving. They found that a majority of researchers were either ignorant of the possibility of self-archiving or hesitant to make it a priority. On the other hand, most of the researchers that answered the questionnaire were positive about the idea of making their articles freely available. In the same year (2005) Leslie Carr and Stevan Harnad made their study on how much time actually was consumed doing self-archiving and reached the conclusion of 10 minutes per paper [9].

Both these studies inspired our project, but we wanted to take it a step further and actually see how the researchers acted in the real-life struggle of self-archiving their own documents, including checking journal policies towards Open Access, filling out cover pages, creating PDF files, etc.

Since most publishers only allow self-archiving of the final draft author manuscript, which has been peer-reviewed and accepted for publication but not yet undergone copyediting and proof corrections, the process of self-archiving has to be adapted to this fact. In our project we try to look at the practical parts of self-archiving from the researchers' point of view. We want to find out more about the difficulties researchers experience when trying to self-archive; ranging from the usability of the institutional repositories offered to issues concerning using the right version of the article and permission from the publisher to self-archive.

2. Aim

The overall purpose of our study is to increase self-archiving of scientific articles in Swedish open archives and in that way contribute to the dissemination and increased visibility of Swedish research, which can also contribute to greater impact for the individual researcher.

We want to examine the various steps that are involved in the process of self-archiving research articles by letting researchers participate and carry out self-archiving in an open archive at some Swedish universities and university colleges. By practically carrying out self-archiving in close cooperation with researchers we can get more knowledge of self-archiving from a researcher's perspective. For this reason we also want to do oral interviews with participating researchers in order to better capture and understand the researchers' experiences, viewpoints and possible suggestions for improvement. At the same time the collaboration and the contact with researchers will lead to the possibility of increased awareness in researchers regarding open access and self-archiving.

The purpose is, furthermore, to examine how the database SHERPA/RoMEO functions as support for control of the publishers' conditions and to identify imperfections, tools and services that are lacking in a well-functioning workflow for self-archiving.

2.1. Concepts in SHERPA/RoMEO

The database SHERPA/RoMEO contains unified information about the journal publishers' policies and conditions for making scientific articles accessible. To de-

scribe what version of an article can be made freely accessible the following concepts are used in SHERPA/RoMEO:

- Postprint is defined as an article that has been accepted for publication and that has been peer-reviewed. A postprint also contains possible changes after the review.
- Preprint is defined as an article that has not yet been accepted for publication or been quality reviewed.

There are two different concepts for a postprint, namely the publisher's published PDF file and the author's final accepted manuscript. The publisher's PDF is the PDF file that is published in the journal. The author's last version is generally identical from the point of view of content, but unformatted and does not contain the journal's pagination or logotype. Today most major publishers only allow self-archiving of the author's version and not of the publisher's PDF.

In SHERPA/RoMEO colour coding is used as the classification to divide the publishers on the basis of different conditions and policies applied to make articles freely accessible:

- Green = permits self-archiving of postprints and preprints.
- Blue = only permits self-archiving of postprints.
- Yellow = only permits publishing of preprints.
- White = generally permits neither self-archiving of postprints nor of preprints.

SHERPA/RoMEO contains information about 500 journal publishers (2009-03-31). According to statistics from the database 51 % of the publishers allow publishing of postprints. At the level of journals the numbers are somewhat higher. According to Eprints.org 62 % of the journals permit self-archiving of postprints. The reason for the difference in numbers between publishers and journals is that several of the publishers that permit self-archiving of postprints are very large and publish a considerable amount of journals. A description of the logic behind the colour coding used in SHERPA/RoMEO can be found in RoMEO Studies 8: *self-archiving. The logic behind the colour-coding used in the Copyright Knowledge Bank.*

3. Method

The goal of each participating university and university college has been to engage 10 researchers as test persons for self-archiving of journal articles or conference papers in the open archive of the respective institute. Together we have striven towards a breadth of subject range with participating researchers within medicine, natural science, social science as well as the humanities. Self-archived publications

need to have been peer-reviewed or evaluated by some other external expert and should be published in 2004 or later.

The contact with the researchers has taken place in different ways – either through information meetings for a research group or through individual contacts with researchers via e-mail or telephone.

Within the project we worked out information material in the form of Power-Point presentations and Word documents which were then adapted and employed in accordance with local needs at the separate university and university college. There has also been information on local Web pages which the participating researchers have been able to use as support for self-archiving. The project participants have been offered personal support and assistance during the entire process. In separate cases, and when necessary, researchers have also received help and support to carry out parts of the uploading process in the local publishing system.

The participating researchers were asked to do the following:

- 1) Select at least 5 of his or her articles for self-archiving.
- 2) Check on the publishers' conditions for self-archiving, first of all by searching on the journal's title or publisher in SHERPA/RoMEO and, secondly, by going directly to the journal's homepage.
- 3) Get the right version of the article for self-archiving. For an author's version of an article the researcher was asked to use a front endpaper where information about the article is filled in according to a template. The adjusted cover page is converted to a PDF and then placed as the title page of the article.
- 4) Upload the article in PDF format in the local open archive. If the publication was not registered earlier in the open archive, it is also entered as a bibliographic reference.

After the self-archiving was carried out we followed up on the researchers' experiences and viewpoints in the form of oral interviews. As support at the interviews we used a common set of interview questions to facilitate comparisons in the results report (See Appendix 1). Via the interviews we wanted, among other things, to find out how the researcher experienced the self-archiving, what worked well and what worked less well, but we also wanted to gather viewpoints on the work flow or suggestions to facilitate self-archiving.

4. Results

4.1. Participating researchers

In all, 40 researchers from the different universities and university colleges have participated in the study.

Together the participating researchers represent a great variation in terms of breadth of subject range. A majority of the researchers represent the social sciences (16 researchers). Other groups were natural scientists (7 researchers), technicians (7 researchers) and humanists (6 researchers). The lowest number for subject representation was 4 researchers from medical faculties (Appendix 2). The distribution between the researchers' titles and employment was 14 professors, 7 docents (associate professors) and 12 senior lecturers. The remaining 7 researchers represent the group of other researchers, research assistants and doctoral candidates.

It became obvious early during the course of the project that extensive work contributions and repeated contacts were required to engage researchers to participate in the study. In all, close to 200 researchers have been contacted in different ways and informed about the project, through information meetings, telephone calls and e-mail. Several researchers showed great interest at information meetings but in the final stage, when it came to completing the participation and the publishing process, many researchers declined.

In itself this is an observation on the fact that self-archiving does not form part of the prioritization list of particularly many researchers.

4.2. Self-archived publications

The 40 participating researchers have, in all, self-archived 140 publications in the open archives of the local universities and university colleges. Out of these, 108 were journal articles, 28 were conference papers and 4 were book chapters.

	Number of publishers	Number of journals	Publisher version	Author version	Number of self-archived articles
Green publishers	20	53	10	54	64
Blue publishers	4	4	3	3	6
Yellow publishers	5	23	2	25	27
White publishers	1	1	1	-	1
Publishers missing from SHERPA/RoMEO	9	9	1	9	10
Total	39	90	17	91	108

Table 1. Number of self-archived journal articles divided into publishers and journals according to the colour coding used in SHERPA/RoMEO together with publishers missing from SHERPA/RoMEO.

Table 1 shows publishers and journals where self-archiving has been possible to carry out. A total of 39 publishers and 90 journals are represented among the self-archived articles in the study. In our results the distribution is 20 green publishers, 4 blue publishers, 5 yellow publishers and 1 white publisher. Totally 30 publishers were searchable in SHERPA/RoMEO, while 9 publishers were missing from the database.

Out of the 108 self-archived articles all of them have been published as post-prints, which means articles that have been peer-reviewed. Of these articles, 91 have been published with the author version and 17 with the publisher version.

The two publishers in the category of green publishers where most of the journal articles were published were Elsevier with 22 articles (divided into 20 journal articles) and Springer with 21 articles (divided into 12 journal titles). The yellow publisher with the majority of self-archived articles in the study is Taylor & Francis with 16 articles divided into 13 journal titles.

Out of the 9 publishers missing in SHERPA/RoMEO, 10 articles have been self-archived as a result of the researchers themselves having sought permission for publishing via the journal's Web site or after writing to the publisher and asking for permission. This was granted on condition that the author version was used.

Besides journal articles, 28 conference papers and 4 book chapters were also self-archived. The majority of these were conference papers within the subject of technical science. The dominating publications are conference proceedings produced and published by IEEE and Springer. The four book chapters are self-archived by humanists at Stockholm University.

4.3. Publications which could not be self-archived

The number of articles that the researchers stated that they were not able to self-archive for different reasons amounted to 48 articles.

The reasons given for why it was not possible to self-archive are that the publishers do not permit this, that the publisher has an embargo, problems with the author version and unclear and insufficient information.

There are publishers who forbid self-archiving in open archives. John Wiley is an example of a publisher that allows self-archiving but sets the condition "Not allowed on institutional repository". The prohibition affected researchers who had articles which they wanted to self-archive in the following journals:

Biometrical Journal, Business Strategy and the Environment, Journal of Research in Science Teaching, Microwave and Optical Technology Letters, Proteins: Structure, Function, and Bioinformatics and Statistics in Medicine.

Another big obstacle is constituted by the publishers' regulations on embargo. Taylor & Francis has an embargo of 12 months for STM journals and 18 months for SSH journals, and Blackwell has embargos of 6-12 months. The embargo requirement has affected some twenty of the project's parallel publications.

The publishers' demand for the author version constitutes another obstacle. Authors, who are not the "corresponding author", do not always have access to the latest author version. Another problem is that the authors sometimes have had problems guaranteeing which version was submitted last.

An obstacle which caused irritation and hesitation from the researchers was unclear and insufficient information about rules for self-archiving. Obscurities and imperfections exist both on the side of the publishers and on the side of separate journals.

4.4. SHERPA/RoMEO

Out of the 40 participating researchers, 19 stated that they had received much help and 17 researchers stated that they had some help from SHERPA/ROMEO to find out about the publishers' conditions for self-archiving. Only 4 researchers were of the opinion that they had had no help or almost no help from the service.

The most important advantage of SHERPA/RoMEO, which is mentioned throughout, is that there is a unified search service where you can search on everything so that you do not have to search on separate publishers' different Web pages. One researcher phrases it this way:

For me to self-archive there must be a service like SHERPA/RoMEO. It's too difficult to find the information on the publisher's homepage.

Several researchers commented that it was easy to search in the service, easy to find information and that SHERPA/RoMEO "contains clear and distinct information about the publishers' and separate journals' policy." A quicker survey through the colour coding is made possible: "The colour coding is good for a quick survey, once you've learnt it".

In the comments several researchers point out that a service like SHERPA/RoMEO is good, but that there are also problems and that they lacked functions which would improve the service. Among other things, the information may, at times, be difficult to interpret with many abbreviations and special terminology. One researcher asks "What is repository?" Nor are the meanings of acronyms like STM and SSH self-evident.

The problem was only in the beginning, to understand and interpret words and concepts as for example "restrictions" which were sometimes

easy to understand but sometimes more difficult. When it says that on the cover page there should be a link to a homepage, which page should one then link to, via ScienceDirect or Ingenta etc.

What many researchers lack in SHERPA/RoMEO are journals in which they publish, above all this concerns the Swedish journals. 11 researchers in comments pointed out that they were unable to find one or several of the journals that they were looking for.

However, only two of the four journals that I was looking for were found in SHERPA/RoMEO. I sent suggestions for additions of the other two and they added one of them. As they add more publishers and journals it will become increasingly useful.

The fact that the database does not contain information about conferences is considered as negative by several researchers.

Some researchers have also had problems with searching certain journals; it was difficult to understand what search words to use. This concerns journals where abbreviations are commonly used, for example PNAS, Proceedings of the National Academy of Sciences, and SIAM, Society of Industrial and Applied Mathematics. If you search on the abbreviations of the journals you do not get any hits in SHERPA/RoMEO.

Some researchers have commented that it would be desirable to obtain direct information for separate journals instead of merely information on the level of the publisher:

Can you trust the information? You still have to go to the journal's page to check. One would of course rather have the information on journal level. But still it's good that there is a service like this.

It would be better if they went deeper at journal level to show what applies to that very journal, and not in general for the publisher.

4.5. Other aids

It is evident that a large share of the researchers (18) has also used the publishers' own homepages to find policies for self-archiving. This was done for principally two reasons, either because the publishers are missing from SHERPA/RoMEO or to get more clarity of the conditions for publishing that are described in SHERPA/RoMEO.

11 researchers responded that they had had much or some help from the guidelines to SHERPA/RoMEO that we produced within the project, above all to get help with the interpretation of the concepts that are used in SHERPA/RoMEO. 24

researchers were, however, of the opinion that they had had no help from the guidance, generally because they already had received information at the information meetings.

4.6. Time consumption

In the time consumption for the self-archiving we include the entire work flow consisting of checking on the publishers' conditions, finding the author version and possible revision of it, the production of a cover page and the registration and uploading in the local system.

The amount of time consumed for the self-archiving varied greatly among the researchers. About half of the researchers estimated that it took up to 20 minutes per article, while for the other half it took from 30 minutes to 5 hours. One researcher was of the opinion that it could vary tremendously from one article to another, principally due to how long it took to find the author version. The time consumption, this researcher believed, could be everything between five minutes to five hours. Here are some comments from the researchers:

It took about 10-15 minutes. Depended on if you had the file easily accessible, otherwise it could take longer. The cover page took time as well.

The first article took a long time, perhaps 2-3 hours, then about 30 minutes. But as so much time passes between the self-archivings, one forgets the operations.

On average 1 hour but it varied depending upon what the article looked like, for example if the Tables are separate. To be sure I keep the files in order but it's still not always completely obvious which is the "right" version to self-archive. Besides, a certain starting time and learning are included.

Several researchers commented that the first article took more time as it took them time to get into how self-archiving is done, how SHERPA/RoMEO works etc.

It took a rather long time, in all probably almost a whole working day. Mostly because it took time to understand how to do everything. If you get into the routine and had to do it again it would perhaps take maximum a quarter of an hour per article.

Nine of the researchers thought that the work with the file took the most time. Partly it took time to find the right file, partly it took time to reformat and put together figures, tables and text to one file. Some participants worked with other word processing formats than Word, in which the cover page to the author version

was produced. Two of these researchers spent four hours each to create cover pages in BibTeX or LaTeX. Other stages that took time included finding the publishers' conditions, registering the article in the local system and filling in the information on the cover page.

4.7. Researchers' attitudes to self-archiving

Only a few of the researchers had self-archived earlier in an open archive. However, several of the researchers had put up publishers' copies of their articles or conference contributions on their own or the research group's homepage. Some researchers are aware of the fact that they are not permitted to put up the publications on their homepages but still do so.

The attitude to self-archiving is positive with most of the researchers. Out of the 40 participating researchers 37 can imagine self-archiving again.

The most common reason for why they could imagine self-archiving again is the increased dissemination:

You make the material accessible to everyone. Possibly this leads to more citations, but the most important thing is that others get hold of the publications.

It gives increased visibility, and sticking out from the crowd becomes more and more important. It's also important that those who don't have access to the journals might still get hold of the articles. It's also good that you can increase the visibility faster. Because early in the process you can often put up an author version. Self-archiving is quick and in the long run you probably get back the time you spent as the articles can be used more and more people can find the articles.

Considering that it takes about 40-60 hours to write an article an hour for self-archiving is nothing! Good to make the article accessible to many more people. I'll continue to self-archive and it's going to be fun to refer to the articles.

One researcher says: "Bigger impact – for separate researchers, research and departments!"

Another advantage which is mentioned is the gathering of one's publications in one place. This makes things easier when referring others to your publications and furthermore you will find them easily yourself that way.

A problem with self-archiving which several of the researchers mention is the usage of the author version. Several of the researchers bring up the difficulty of self-archiving afterwards, when you as the author often have not kept the last version or are unsure of which is the latest version. Several researchers pointed out,

however, that if you know in advance that you will self-archive you can make sure that you save the last author version of the article. Using the publisher version would, however, be preferable.

A couple of the researchers also brought up the fact that they do not want to spread author versions of their articles, as in this manner they may spread erroneous formulations and that the citation becomes difficult as the page references are not the same in the publisher version as in the author version. One researcher pointed out that it should be in the interest of the publisher that it is the publisher version which is spread. They get better advertising and will know that only one version of the article is spread.

4.8. How to facilitate?

The two main wishes from the researchers in terms of what might facilitate the self-archiving was automatic generation of cover pages and automatic look-up against SHERPA/RoMEO.

The best thing would of course be to automatically get information about this specific article right when you upload, what's permitted. Not having to check and try to interpret all the copyright rules and conditions.

They wish that the information from SHERPA/RoMEO would be in the system to save on the time it takes to search for information for each article. One researcher was of the opinion that it is difficult to get a survey of the conditions as there are small differences between all the publishers. The desirable thing would be to automatically get information about what applies to exactly this article when you register it in the local system. If this is not possible links are in any way desired together with more and easily accessible information from SHERPA/RoMEO in the system. The researchers want to be spared the looking up and interpreting of conditions.

Several researchers pointed out that it took time to fill in the cover pages and to make sure that this information was correct. Here as well were desires for more automatization:

Automatization of the making of cover pages. The information is already available. A cover page can therefore be made automatically in PDF format and also automatically be put up as the first page in the attached author version file.

There have been several wishes for the library to be more involved and to provide self-archiving as a service to its researchers. One researcher suggested that it should be enough to submit the file. The checking up on conditions and the mak-

ing of a cover page would then be managed by the library. Another researcher, who also suggests that the library manage a great part of the self-archiving process, points out that it would make things easier if the library conducts negotiations with the publisher about self-archiving in the more difficult cases where the conditions can not be found in SHERPA/RoMEO. For this to work the library would need legal competence but the researcher says that if self-archiving is something that one wants to invest in this might be necessary.

One researcher is of the opinion that support from the library is important but that a reminder of self-archiving also would be good. One researcher wished to have "a librarian by my side!".

There are also wishes for improvements in the local systems to facilitate the self-archiving. Among the wishes was to have more pre-marked boxes in the registration form and increased possibilities for retrieving information from other databases.

The issue of publisher version and author version reappears again. It is time-consuming to look for an author version that is correct and the possibility of using the publisher version would therefore make the process of self-archiving smoother.

Lack of time is a recurrent factor and to overcome this obstacle researchers would like to alleviate some of the things he or she has to do. On the whole there is a desire for a more automatized process for self-archiving and increased assistance from the library. "The more that can be done fully automatically, the likelier it is that you will get full texts", was the comment of one researcher.

5. Discussion

The project has resulted in valuable knowledge and increased insights into the different parts of self-archiving which now can be used to develop self-archiving in our open archives. It is true that we did not reach the project goal of a total of 70 participating researchers, but we can nevertheless declare that through the participating researchers, we have gained valuable viewpoints and that the project also has resulted in increased self-archiving. It proved possible to self-archive slightly more than 70 % of the publications which the participating researchers have tried to self-archive in this project.

The researchers in our study are, in general, positive to the idea of self-archiving. They emphasize the advantages of the increased dissemination and the idea that everyone will have access to the articles. Despite the fact that the researchers in our study, with some exception, did not have previous experience of self-archiving and that extensive work efforts were sometimes required; there was a

willingness to self-archive also in the future. We can observe that SHERPA/RoMEO, in general, has worked as support for the researchers, though several suggestions to improve the service have also been presented with information on journal level and the addition of more publishers.

5.1. Automatization and simplification

Like earlier studies of self-archiving ours also shows that the time consumption for publishing is a recurrent problem. What we principally can do to reduce the time it takes to self-archive is, of course, to develop the local publishing systems with increased automatization. In particular, this applies to the control of conditions in SHERPA/RoMEO which usually is experienced as time-consuming and difficult to interpret. The possibility of structuring and supplementing data from SHERPA/RoMEO in order to create a Web-accessible service, which can be implemented in open archives, is at present in progress within the framework of another project funded by the National Library of Sweden. The project title is "OA-published domain models regarding scientific publishing and group structure: partial project II Domain modelling of rights and collateral conditions for self-archiving scientific articles."¹⁰ In this project the aim is to collect, structure and supplement the information that regards rights and conditions for self-archiving scientific articles. Our project experiences indicate that systems of this type, which can be incorporated in the local systems, are in demand and necessary if self-archiving is to become a vigorous alternative.

As the publishers make different conditions depending on which article it is that will be self-archived it is, furthermore, important that the systems are adapted to manage this situation. At the self-archiving of the author version of an article this is particularly important. It is in the researcher's own interest that there is a cover page which clearly indicates the citation of the original publication and it is, in addition, and in most cases, also a requirement from the publisher. Therefore, in the local systems it is of the highest priority to automatically implement generated cover pages that get information from the bibliographic description of the publication.

5.2. The role of the libraries

It is important to keep discussing the extension of the libraries' role in the future in regard to self-archiving, particularly in relation to the resources that the libraries dispose of today. There have been several wishes from researchers concerning a library that is more involved and which provides self-archiving as a service to its researchers. Several researchers point out that it would make things easier if the

library conducts negotiations with the publishers about self-archiving, particularly in the more difficult cases where the conditions can not be found in SHERPA/RoMEO. For this to work the library would need legal competence. There are also researchers who suggest that it should be sufficient to submit the file to the library and that the rest then would be managed by the library. One may notice that this division of roles for self-archiving would bring about extensive needs of extra resources to the libraries.

Throughout our experiences we have seen that increased information work is needed. It was common for self-archiving to be questioned or misunderstood by researchers. A frequent misunderstanding was to regard self-archiving as an alternative to publishing in journals instead of as a complement and that the self-archiving would exclude the peer-review. The old structure with its qualifying system is still the dominant one. Therefore, and besides informing the researchers about how to proceed to self-archive and providing clear instructions, it is also a question of information about the possibility and the advantages of self-archiving. Increased pedagogic work is a prerequisite for increased self-archiving and something which is important to prioritize for the libraries. Moreover, the difficulty to involve researchers in the project has been an important experience. It is important for the libraries to be aware of the difficulty of creating systems for the users when we lack suitable forums for discussion and contacts with the researchers. Even if we develop fully automated systems there have to be informed and conscious researchers.

5.3. Open Access policy

To attain lasting change to increase the accessibility and visibility of research publications at Swedish universities and university colleges, research funders and universities need to work out clear requirements and guiding principles for self-archiving. Such requirements from funders and the university leadership would mean:

- Support to the separate researcher who will know which demands are made for the dissemination of funded research results.
- Support to the libraries that can more easily weigh up possibilities and investments on decisions regarding the development of local publishing systems and pedagogic work.

6. Recommendations

Vitek Tracz's words in the introductory paragraph are still relevant, but we believe that with the experience of the viewpoints that the researchers have presented in our study, we can formulate the following recommendations in order to lessen the pain of researchers to self-archive:

- Automatic generation of cover pages in the local systems.
- Automatic lookup service against SHERPA/RoMEO incorporated in the local systems.
- Simplified registration in the local systems.
- Increased work from the library, both regarding information work and support to researchers who self-archive.
- Clear requirements and guidelines for self-archiving from research funders and the universities and university colleges.
- National or international coordination of contacts vis-à-vis SHERPA/RoMEO to improve lookup information.

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Notes and References

- [1] POYNDR, R. Interview with Vitek Tracz, *Information Today*, January 2005, Vol. 22, no 1. [<http://www.infotoday.com/it/jan05/poynder.shtml>].
- [2] LAWRENCE, S. Free online availability substantially increases a paper's impact, *Nature*, 31 May 2001, Vol. 411, p. 521.
- [3] HARNAD, S. and BRODY, T. Comparing the Impact of Open Access (OA) vs. Non-OA Articles in the Same Journals, *D-Lib Magazine* June 2004, Vol. 10 No. 6.
- [4] ANTELMAN, K. Do Open-Access Articles Have a Greater Research Impact? *College and Research Libraries*, September 2004 65(5), p. 372-382.
- [5] EYSENBACH, G. Citation Advantage of Open Access Articles, *PLoS Biology*, May 2006, Volume 4, Issue 5.
- [6] NORRIS M., OPPENHEIM C. and ROWLAND F. The Citation Advantage of Open-Access Articles, *Journal of the American Society for Information Science and Technology* 2008, Vol. 59(12), p. 1963-1972.
- [7] Kartläggning av högskolans elektroniska publicering och rekommendationer för nationell samverkan. Återrapportering till SUHF:s Forum för bibliotek-

- schefer [Mapping of the university college's electronic publishing and recommendations for national co-operation. Report back to the SUHF Forum for library managers]. 2008 Accessible from the SUHF Web site, January 2008 http://www.suhf.se/web/Arbetsgrupper_inom_Forum_for_bibliotekschefer.aspx.
- [8] SWAN, A. and BROWN S. Open access self-archiving: An author study (2005). Key Perspectives Limited. www.keyperspectives.co.uk.
- [9] CARR, L. and HARNAD, S. Keystroke Economy: A Study of the Time and Effort Involved in Self-Archiving. 2005, <http://eprints.ecs.soton.ac.uk/10688/>.
- [10] OA-publicerade domänmodeller avseende vetenskaplig publicering och gruppstruktur: delprojekt II Domänmodellering av rättigheter och bivillkor vid parallellpublicering av vetenskapliga artiklar [OA-published domain models regarding scientific publishing and group structure: partial project II Domain modelling of rights and collateral conditions at self-archiving of scientific articles] <http://www.kb.se/OpenAccess/projekt/#OA-publicerade>.

ANNEX I

ASSESSMENT QUESTIONS AS SUPPORT AT ORAL INTERVIEWS WITH RESEARCHERS WHO PARTICIPATE IN PAVA [SELF-ARCHIVING OF SCIENTIFIC ARTICLES]

1. Have you self-archived earlier, i.e., before this pilot study?
 - a) Yes, on my own homepage.
 - b) Yes, in an open archive.
 - c) Yes, in another way.
 - d) No.
2. Did you find Sherpa/Romeo helpful as a tool for self-archiving in the pilot study?
 - a) Yes, a lot of help.
 - b) Yes, partly.
 - c) No, none or almost no help at all.
 - 2.1 If Yes: Which help/support of Sherpa/Romeo was helpful? What advantages did you find with the service? Is anything missing?
 - 2.2 If No: Why didn't you use Sherpa/Romeo? What was lacking? How should the service be designed in order for you to use it?
3. Did you find the guidelines to Sherpa/Romeo in the information package helpful?
 - a) Yes, a lot of help.
 - b) Yes, partly.
 - c) No, not at all or almost no help.
 - 3.1 What was good/ less good?
4. Have you used another/other tool(s) to look into the conditions for self-archiving?
 - a) Yes, I went directly to the information on the journal's homepage.
 - b) Yes, I contacted the publisher to ask for permission to self-archive.
 - c) Yes, I had already received permission to self-archive in the agreement at the time of publication.
 - d) Yes, other.
 - e) No.
5. How much time do you estimate that the self-archiving took per article?
6. Would you consider self-archiving again?
 - a) Yes.
 - b) No.
 - 6.1 If Yes, why? What advantages do you find with self-archiving?
 - 6.2 If No, why not?
7. What tools/what support do you desire to facilitate the self-archiving?
8. Other comments.

ANNEX II

DISCIPLINE AFFILIATION OF PARTICIPATING RESEARCHERS

Social Science – 16 researchers

Business Economics and Management (3)
Economics (6)
Psychology (3)
Education Science (4)

Natural Science – 7 researchers

Computational Biology and Biological Physics (1)
Ecology (2)
Mathematics (2)
System Biology (2)

Technical Science – 7 researchers

Building Material (1)
Physical Electronics (1)
Information Technology (1)
Software Systems (2)
Signal Processing (1)
Telecommunication Systems (1)

Medicine – 4 researchers

Research and Bioethics (1)
Medical Cell Biology (2)
School for Health (1)

Humanities – 6 researchers

General Linguistics (1)
Latin (1)
Nordic Languages (2)
Theoretical Philosophy (2)

The researchers in the project come from the following universities and university colleges:

Blekinge Institute of Technology
Chalmers
University of Gothenburg
Lund University
University of Skövde
Stockholm University
Uppsala University

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