Statistical methods used in measuring impact of copyright ownership author behaviour regarding open access

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Abstract: For the fulfilment of the mission of dissemination of information and knowledge and in order to offer products and quality services to the users, the universities structures should take to different actions by which to identify the needs and expectations of the users, to know as well as possible their behaviour in the process of information, to identify the factors which influence this behaviour. One very important problem which should be considered in every research is copyright ownership. The article present one statistical and computational research methodology to find expectation and academic staff behaviour regarding open access principle and copyright policy of universities, authors and editors.

Key Words: open access, copyright agreement, publishing process, information technology

1. Introduction

Within the RoMEO project [4], different researches and studies regarding the attitude, desires and knowledge of the academic community were done with reference to copyright, self-archiving and open access to information [1].

The researchers referred to the two situations: of the member of the academic community as researcher and author.

2. Research methodology

The researched population was formed of 542 authors from the academic environment and 80 publishers of academic journals. The research took place in 2003.

As research base the triangle A-P-U was taken into consideration, where: A – Authors of the scientific articles created in the academic environment, P - Publishers, U - Universities. In 2000 ‘the crisis of the journals’ was vast in scope. The price of journals increased considerably generating a crisis in the field of scientific research.

As a reaction to this crisis, ‘the open access movement’ appeared. Then, the issues of owing copyright were seriously taken into consideration. The debated issue was: WHO IS THE OWNER OF COPYRIGHT? A, P or U? The research took into consideration these elements and researched the attitude of the three parts involved in owing copyright. Three methodologies were developed:
1. Documentary research concerning the relationships A-U-P.
2. The academic personnel’s point of view concerning the relationships U-A and A-P.
3. The analysis of the A-P relationships by the study of a great number of contract which deal with the transfer of copyright to the publishers of journals (CTAs)-Copyright Transfer Agreements.

Aspects of the specific relationships of the three methodologies were intr oduced in the analyzed research.

An on-line electronic questionnaire was conceived in order to identify solutions for the four proposed goals. The questionnaire was divided into three sections:

A- Identification data
B- Information on personal scientific articles
C- How others’ articles will be used.

Section A collects the demographic data. Section B collects information about the desires of the academic communities on the protection of copyright in case of open access articles; Section C collects information about the way other authors’ open articles are used.

The questionnaire was launched in 2002 and disseminated on discussion lists such as: Emerald’s Literati Club (2003) - 16,000 authors in the whole world, September 98-Forum, Open Archives Forum, OAI Implementers, University Science and Technology Librarians Group. Equally, there was a connection to ArXiv web pages (the electronic archive of the electronic articles from the field of physics). [2]

The rate of answers and the demographic data indicated 542 answers.
Because the questionnaire was on-line and launched by electronic mail, it was impossible to calculate the answering rate. The respondents represent 57 countries.

Most of them were from the United Kingdom -176 respondents, as it is indicated in Table 1. From the total of respondents, 17% were from the United States, 4% from Australia, 3% from Canada, 3% from Germany and one respondent from Romania.

The structure of the respondents per scientific fields shows that 50% from respondents are from the exact sciences field, 38% from social sciences and humanities – SSH, and the rest of 12% from engineering sciences.

By considering the work duration of the respondents in the academic activity, it is noticed that: 39% of respondents work for more than 15 years, while 24% work for less than 5 years. The distribution of respondents according to work duration in activity is presented in Figure 1.

The respondents were asked to indicate how many scientific articles they have published throughout their career.

<table>
<thead>
<tr>
<th>Specializations</th>
<th>Number of respondents</th>
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<tbody>
<tr>
<td>Physics</td>
<td>59</td>
</tr>
<tr>
<td>Bibliometrics and Information Science</td>
<td>59</td>
</tr>
<tr>
<td>Business/Management</td>
<td>54</td>
</tr>
<tr>
<td>Mathematics</td>
<td>30</td>
</tr>
<tr>
<td>Computer science</td>
<td>29</td>
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<tr>
<td>Marketing</td>
<td>23</td>
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<tr>
<td>Electric and electronic engineering</td>
<td>16</td>
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<tr>
<td>Engineering</td>
<td>15</td>
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<tr>
<td>Economics</td>
<td>14</td>
</tr>
<tr>
<td>Biology</td>
<td>13</td>
</tr>
<tr>
<td>Mechanic engineering</td>
<td>13</td>
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</tbody>
</table>

**Table 2** – Distribution of respondents per specializations. Source: Gadd, Oppenheim, Probets, The impact of copyright ownership on academic author self-archiving, 2003
There were 513 answers and the total number of published articles was 21653, the average number per respondent being 42 articles. The greatest part of respondents published only a few articles, as it is shown in Figure 2.

The answer from the RoMEO research shows that 61% believe that the author owns the copyright, 7% that the institution owns the copyright, and 32% do not know. Referring to the articles with more authors, 50% from the authors indicate the fact that 71-100% from their papers have more authors, 25% from respondents (134) fall in the category 91-100%, from which 75% (100) showed that all their papers have more authors. Only 17 (20%) are those who share no paper with more authors. Figure 3 presents the distribution of respondents according to the percent of papers with more authors.

As far as yielding the copyright is concerned, the 1999 research by ASPSP called ‘What do the authors want?’ shows that 61% of respondents believe that copyright stays with the author. The RoMEO research shows that 39% of respondents yield their copyright to publishers free of charge. A proportion of 7% of the ones interviewed in the RoMEO project say that the publishers did not ask for it and 3% that they insisted for the copyright to stay with them; 54% did not sign any contract with the publishers, 24% gave publication authorization. [3]

As a conclusion, the academic community is concerned with the intellectuality aspect from the intellectual property. The authors are more interested in their moral rights on their papers than in the patrimony rights. The majority interpret their papers as an intellectual extension, not an extension of the portfolio in an economic sense. This is comprehensible because it is very rare for the authors to be paid for an article.

3. Copyright agreement analysis (CTAs)

For the analysis of copyright transfer agreements to the publishers of journals (CTAs - Copyright Transfer Agreements) the publishers of journals were selected.

Two approaches were taken into consideration in the research:
1. The research focused on the great impact journals, namely the academic ones. In the academic communities there is the pressure of publishing in quality journals for a good academic evaluation and prestige. It was decided that, for a start, the first 50 top
journals were identified from the point of view of the impact, both in the case of social sciences and in that of the exact sciences. The reference source was ISI, Journal Citation Report from 2001. A target list was opened and the publishers were identified. [5]

2. There were collected lists provided by:
   - ULRICHS PERIODICAL DIRECTORY that offered a list of 53 top publishers by the number of reference journals published and
   - UK OFFICE OF FAIR TRADING, with a list of 20 journal publishers by the number of ISI published journals.

These publishers were added to the target list, as it is presented in Figure 4. A list with 84 publishers of academic journals resulted. They were contacted by the e-mail. They were described the objectives of the project and they were asked to make available the editing and transferring copyright contracts or agreement licenses. The contracts were gathered between August and December 2002.

After the analysis of a small number of contracts, a list of criteria was developed by which all contracts were analyzed. 15 analysis criteria were considered:

a. What rights are taken into consideration,
b. If the publisher disposes of a certain license option,
c. If the publisher owns an option for the employers who own copyright or for the governmental papers,
d. If the publisher specifies why s/he retains the copyright,
e. What rights are retained (e.g.: moral rights),
f. When the rights are retained (before or after evaluation),
g. What are the guarantees offered to the authors,
h. Exceptions from these rules (what the author can do with his/ her own paper),
i. Excepted conditions,
j. Self-archiving conditions (conditions specific to self-archiving),
k. What the publisher offers in exchange for yielding copyrights.

A great impact factor was analyzed and it was researched if the publishers use a general contract and a specific contract for others and a general contract was analyzed. 48 contracts from the list of 84 publishers were collected.

The answer rate was 57%. In a ratio of 49.29% the publishers of the top 100 ISI great impact factor answered; 19 out of the 20 top publishers were represented; 21 publishers were from the list of 53 provided by ULRICHS.

The group of the respondent publishers published 6960 academic journals (ULRICHS Periodicals Directory 2002). A number of 32 contracts from other sources representing 342 titles were collected. 80 more contracts were included in this analysis. The publishers represented 7302 titles of academic journals.

According to ULRICHS Periodicals Directory 2002 there are 39318 active academic journals. The research covers 18.5% of these. From the analysis of the contracts it resulted that in 72 out of the 80 analyzed contracts, 90% of the publishers demand to the authors to yield their copyright.

Source: Gadd, Oppenheim, Proberts, How academics expect to use open-access research papers

Figure 4 – Distribution of publishers from the target list.
Referring to the attitude of publishers about self-archiving, in the ALPSP report (2002) ‘Authors and electronic publication’ it is shown that 59% consider that self-archiving represents a very important fact. It is only 42.5% of publishers, representing 49.1% of the totality of journals’ titles that allow self-archiving.

The options of the members of the academic community about self-archiving and copyright are complex and depend on many factors:

a. The desire of self-archive the material before or after publication,
b. The agreement about copyright is demanded before or after evaluation,

If in the contract self-archiving is allowed before or after publication, both situations and none. The process of academic communication in the case of open access permits the archiving of documents both before and after publication.

In both cases, archiving depends on the publisher’s policy about access to documents.

4. Conclusions

From the beginning of the digital era, the use of electronic journals has been a constant preoccupation of libraries and publishers (Gadd, Oppenheim, & Probetts, How academics expect to use open-access research papers, Accepted for publishing). What is the desire of the academic community: traditional or academic journals? Many studies were elaborated in this sense. As a general conclusion, the scientific information is used in 75% for research and 25% for education.
Statistics of electronic journals (‘Guidelines for statistical measures of usage of web-based indexed, abstracted and full-text resources’, 2001) proposes for the statistic research of electronic journals the following variables:

- Number of sessions,
- Number of searches,
- Number of selections from the menu,
- Number of full-text downloads,
- Number of returns to the article.

Other recommendations consist of four categories of information use:

- What is used? – the content,
- Who uses the content? - the user,
- How is the database used? – the activity,
- When was the content used?

Other criteria researched in studies on the use of electronic journals:

1. Who uses the electronic journals?
2. Types of highly used journals,
3. How are localized the reference sources and the full-text source?
4. When are the electronic journals used?
5. Where are the electronic journals used?
6. How frequently and to what degree are the electronic journals used?
7. What reasons and purposes determine the use of electronic journals?
8. User’s interaction to the electronic version (navigation techniques),
9. Article’s reading and approaching methods (is it that the summary is read first?).

The study (Gadd, Oppenheim, & Probets, Accepted for publication) done on 542 members of the academic community from 57 countries researched the expectations and desires concerning the protection of open access articles. The terms and conditions in which the authors offer their articles in open access were analyzed. The research was done via e-mail, in discussion groups, from the whole world.

ODRL- Open Digital Rights Language (2002) elaborated an approach model regarding the papers taking into consideration the access, the restrictions and the use conditions: P - Permissions, R - Restrictions, C – Conditions; R can be an obstacle to P’s extension (it can be typed 4 times only); C – it can be typed four times if a fee is paid.

Out of the 536 answers, 310 respondents published in open access regime, called in research A – ‘Archives’, and 226 did not publish in this regime, called NA – ‘Non-Archives’.

To the question: ‘Have you used other people’s articles available in open access?’ 67 (12%) respondents answered NO, and 463 (88%) said YES. There are more authors who used other authors’ articles than authors who allowed open access to their articles. The analysis bi-varied by ‘cross-tabulation’ indicated that out of the 310 A authors, who self-archived their articles, 293 (95%) used other authors’ articles. Out of the 226 NA, 167 (74%) used other authors’ articles.

In what concerns the location of the open access journals, 48 respondents self-archived their articles in the institutional digital repository, but 306 (66%) used articles from this source; 81% from respondents self-archived the articles on their own web pages. As far as the use of open access journals is concerned, 90% of respondents expect to be able to save and print the open access articles.

The academic respondents as authors want to offer their papers free of charge in a proportion of about 79%. Almost all the members of the academic community expect to print the open access papers.

References


