

Academic Authors and Open Archives: A Survey in the Social Science Field

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This paper reports on a survey of the academic staff of the Faculties of Economics and Law of the University of Brescia, Italy. The survey sought to determine knowledge and use of Open-Access archives and to verify the conditions stated by the staff for their participation in an institutional Open-Access initiative. The response rate to the questionnaire was 57.9% (62 authors). Results show that 44% of the respondents (25 of 57) knew about the existence of Open-Access initiatives and archives. Of those aware of the existence of Open-Access archives, only 4% (1 in 25) affirmed they had

already used them to deposit papers, while 33% (16 of 48), among those who declared they use materials freely available on the Web, affirmed they had used an Open-Access disciplinary archive. Sixty-one percent (41 of 62) of the respondents answered they were prepared to archive personally their own scientific or educational material in an institutional repository, once the conditions that they request have been fulfilled. The study illustrates the crucial role that authors play in the process of diffusion of Open-Access initiatives.

The “Anomalous Picture” in scholarly communication

The “anomalous picture” described in an important contribution by Steven Harnad (Harnad 1998) is a fine example of the critical point in which scholarly communication lies (Pelizzari 2002). The first phase, called the “Serials price crisis”, has lasted for decades, and new technologies, such as the Internet, have not, as librarians had hoped, contributed to abating it. On the contrary, libraries and their users experienced further price increases justified by access to both the electronic and printed versions of journals.

Peter Suber analyses the critical phase the academic community is in regarding the diffusion of scientific works, underlining that this crisis has entered a second phase (Suber 2003). Suber suggests calling the second phase the “permission crisis.” It has lasted a decade, and is the result of a growing number of legal and technological barriers used to limit the uses libraries can make of those journals for which they have paid dearly.

Whilst the price crisis hits purchasers of both printed and electronic journals, the access crisis actually hits only the latter. The unacceptable consequence of the present situation is a concrete obstacle to the development of scientific research.

Resolving the anomalous picture: the Open-Access strategy

Open-Access initiatives are perhaps the most interesting response that the scientific community has tried to give to this problem. At least two different interpretations of the word “open” are possible (Brown 2002), and they are represented by the Self-archiving Initiative and by the Open Archives initiative.

Speaking about Self-archiving essentially means speaking about Steven Harnad. From his point of view, “open” means “free accessibility through the Web to the contents of refereed articles.” In his criticism of the traditional scholarly communication system, Harnad has been repositioning his initial idea of an electronic-only model of schol-

arly publications (Duranceu 1999), that now applies only to the pre- and post-peer-review journal article literature (Harnad 2000). Harnad claims that in an electronic-only environment, the costs can be drastically reduced to peer-review alone and covered by charging authors' institutions (or research funders) for their outgoing papers rather than subscribers institutions for their incoming papers, so that users can access scientific literature free of charge on the Internet.

The term "Open" has a different meaning in the Open Archives Initiative, as is declared by their promoters: "Our intention is 'open' from the architectural perspective – defining and promoting machine interfaces that facilitate the availability of content from a variety of providers. Openness does not mean 'free' or 'unlimited' access to the information repositories that conform to the OAI-PMH [Open Archives Initiative Protocol for Metadata Harvesting]" (from the OAI FAQ, available online <http://www.openarchives.org/documents/FAQ.html> [viewed June 1, 2004]. The Open Archives Initiative has provided the metadata tagging standards that enable the content of distributed archives to be interoperable.

In this sense the Self-Archiving Initiative is devoted to opening access to the refereed research literature online, providing free software for institutions to create OAI-compliant archives, interoperable with all other open archives through the OAI-Protocol for Metadata Harvesting.

Purpose of study

In this study, we use the expression "Open Archives" to indicate *OAI-compliant e-prints repositories*.

Aims and objectives

The aim of this work is to contribute to the efforts now in progress to improve scholarly communication, investigating the factors that could facilitate and the barriers that could obstruct the acceptance of Open-Access archives philosophy and practice among academic Professors and researchers of the Faculty of Economics and Law at the University of Brescia, Italy.

The objectives of the work were identified as follows:

- To verify the authors' general attitudes towards electronic publications
- To investigate knowledge of Open-Access initiatives and use or non-use of Open-Access archives inside the academic community
- To explore authors' attitudes towards copyright
- To verify whether the differences in scientific fields influence perception, behaviour and use of Open-Access archives
- To explore under which conditions would the authors agree to participate in an Institutional Open-Access archive project
- To verify which organizational unit, in the authors' opinion, should manage an Institutional Open-Access archive project.

The fieldwork

The University of Brescia is a small university with approximately 12,500 students. It consists of four Faculties with three libraries. The Faculties are: Medicine, Engineering, Economics and Law, the last founded in 1996. Both the Faculties of Medicine and Engineering have their own central libraries, whilst there is a single library for the other two Faculties – the Economics and Law Central Inter-Faculty Library, BCI (where the researcher works). The BCI serves more than 5.800 users, including students and academic staff.

Verifying the concrete behaviour of the authors connected to the Faculties of Economics and Law with regard to putting their scientific works freely available on-line seemed useful to the purposes of this study. It has not been possible to investigate authors' behaviour regarding teaching material, as this is offered at a number of sources (from departmental pages to the teachers' personal Web pages) and, furthermore, in a non-systematic way.

Analysis of scientific works and their availability was possible due to the introduction, from the year 2000, of an evaluation unit relative to the University's scientific works, and it was carried out using the data provided by this service.

Scientific production by department

The data referred to cover years 2000–2001. It covers scientific works in the five departments in the two examined Faculties, as follows:

Table 1. Freely available scientific works in the Faculties of Economics and Law, Years 2000–2001

Paper (Library) (%)	Electronic (Library) (%)	Paper (Department) (%)	Electronic (Department) (%)	Total local Availability (%)	DD/ILL (%)
172 (35.2)	21 (4.3)	23 (4.7)	31 (6.3)	220* (45.0)	140 (28.6)

Excluding overlapping in more than one format

1) Faculty of Economics

- Department of Business Management
- Department of Quantitative Methods
- Department of Economic Sciences
- Department of Social Studies

2) Faculty of Law

- Department of Jurisprudence

The aim was to verify availability of scientific works for institutional users, distinguishing between internal and external accessibility. A total of 108 authors contributed to such production.

Scientific production in the two Faculties for the examined years consisted of 489 items (subdivided into twenty-six categories, according to the scheme offered by the evaluation unit). With exception of Business Management Department (which represent 34.5% of the total production) there are no great differences among the departments.

Scientific production availability and accessibility

Scientific works were grouped on the basis of their availability for institutional users.

It was considered useful to subdivide the accessibility of local scientific works into direct accessibility (that is, guaranteed on a local level – libraries or departments, using the respective Web sites – on paper or electronically) and intermediary accessibility (that is, guaranteed through the inter-library loan service).

Scientific works were grouped according to main subject typology following normal procedure for existing open archives, in order to verify the “weight” of every single typology of scientific works in the two Faculties and their availability for the academic community. Scientific articles represent the most prominent output (242, equal to 49.5%), followed by internal publications and research reports (67, equal to 13.7%) and con-

tributions in conference proceedings (64, equal to 13.1%). Less importance had other type of scientific production (chapters in books, translations, essays and so on).

Accessibility of scientific works in the two Faculties was investigated ensuring the elimination of overlapping between different forms of the same item (see the column: ‘Total local availability’, as illustrated in Table 1).

Of the 489 items produced in the years 2000–2001 by the two Faculties, only 220 (equal to 45%) are freely accessible and of these, only 193 are accessible in the library (17 on paper, equal to 35.2%). Only 4.1%, equal to 21 items, are, instead, available electronically. It is possible to consider another 140 items available through the local inter-library loaning service. A negative reading would indicate that 269 items (equal to 55%) are not available (or in any case, that no information is to be found either in the library catalogues or in the departmental sites) in any format and 129 (26.4%) are not available at all, not even resorting to the document delivery service.

The conclusion that can be drawn is that the present system of diffusion of scientific works in the two Faculties is heavily penalising, both the users (who find it impossible to access the majority of local scientific works), and the authors who are subject to extreme limits in diffusion (and therefore in impact on the scientific community) of what they produce.

Methodology

A trigonometric model of triangulation approach was adopted (Kelle 2001).

The adopted methods were therefore:

- A literature search (carried out throughout the study)
- Semi-structured interviews
- Questionnaire

Table 2. Questionnaire statistics

Population size	107
Total number of questionnaires (Appendix 3) sent out	107
Number returned by initial deadline	33
Response to reminder letter (Appendix 5)	29
Total number of questionnaires returned by final deadline	62
Response rate (as percentage of population)	57.9%
Number of invalid questionnaires returned after final deadline	1

Semi-structured interviews

Semi-standardized – or semi-structured – interviews best develop their potential when used with key informants, or *elites* (Mutchnick and Berg 1996; Marshall and Rossman 1995). The key-informants selected were: the five Departments directors, the Deans of the Faculties of Economics and Law and the Pro-Rector.

The results of interviews are not presented in this paper; they will be however integrated in the “Results analysis” section.

Questionnaire-based survey

The population involved in our study was the full number of scholars (107 including Professors and researcher) of the Faculties of Economic and Law.

The chosen survey instrument was a self-administered questionnaire, based on a previous online survey emanated from the UK RoMEO Project (Rights Metadata for Open archiving, at <http://www.lboro.ac.uk/departments/ls/disresearch/romeo/>, viewed 1 June 2004), re-designed in order to relate the questions to the study’s objectives.

A single cross-sectional survey was performed during March and April 2003. Associations were assessed using Chi-square or Fisher’s exact test, as appropriate. The chosen level of significance was 5% and the p-values described were two-tail.

Analysis of results

The aim of this study was to contribute to the efforts made in various sectors towards improving the diffusion of scholarly literature, investigating factors that could facilitate and barriers that

could hinder acceptance of open archives philosophy and practice among academic Professors and researchers. The field of study were the Faculties of Economics and Law at the University of Brescia.

The results of questionnaire responses are presented in Table 2.

The highest return rate was obtained from the Department of Quantitative methods (76.9%); the lowest from Jurisprudence (46.8%). Of the 62 questionnaires returned, the highest return rate was received from Associate Professors (72.4%) and full Professors (66.6%), who also had the highest index amongst the various classes. No questionnaires were received from supply Professors.

The return rate was progressively higher in relation to the number of years the interviewees have been working in the academic field, varying from 11.5% for those who have been working for 5 years or fewer, up to 41% for those who have been working in the academic field for more than 15 years.

Conclusions drawn from the findings are discussed in relation to the six objectives of the study.

Authors’ general attitudes towards electronic publishing

Examination of the scientific academic works produced in 2000–2001 revealed that of the 489 contributions produced by a total of 108 authors, only 21 of them (equal to 4.3%) were available electronically through the Central Inter-Faculty Library and 31 (6.3%) on the various departments’ web pages.

More than 56% of the 62 respondents to the questionnaire declared that they had already made some of their scientific or teaching material available on the web (the latter constitutes the majority), even if this procedure does not yet seem consolidated, given the high value of those who declared not to have ever done it (43.5%). The department site seems to be a popular place for publication. The number of respondents that claim to have already used other authors’ works freely available on the web is much higher, reaching almost 80%. Over 80% of those who had replied positively claimed to have used this material for writing articles. It is much more customary to use the Web to find information.

Table 3. Acceptable uses for authors' works

Activity	... freely (%)	... with limits or conditions (%)	... not at all (%)	Total (%)	Non-respondents (%)
Display	49 (87.5)	6 (10.7)	1 (1.8)	56 (100.0)	6 (9.7)
Print, save, copy	29 (52.7)	23 (41.8)	3 (5.5)	55 (100.0)	7 (11.3)
Modify	3 (6.1)	13 (26.6)	33 (67.3)	49 (100.0)	13 (21.0)
Excerpt	34 (65.4)	16 (30.8)	2 (3.8)	52 (100.0)	10 (16.1)
Annotate	12 (24.0)	21 (42.0)	17 (34.0)	50 (100.0)	12 (19.4)
Aggregate	12 (24.5)	28 (57.1)	9 (18.4)	49 (100.0)	13 (21.0)

Table 4. Expected uses for other authors' works

Activity	... freely (%)	... with limits or conditions (%)	... not at all (%)	Total (%)	Non-respondents (%)
Display	48 (90.6)	5 (9.4)	0	53 (100.0)	9 (14.5)
Print, save, copy	28 (52.8)	23 (43.4)	2 (3.8)	53 (100.0)	9 (14.5)
Modify	2 (4.6)	13 (29.5)	29 (65.9)	44 (100.0)	18 (29.0)
Excerpt	28 (57.2)	18 (36.7)	3 (6.1)	49 (100.0)	13 (21.0)
Annotate	9 (19.2)	19 (40.4)	19 (40.4)	47 (100.0)	15 (24.2)
Aggregate	12 (25.5)	24 (51.1)	11 (23.4)	47 (100.0)	15 (24.2)

Distrust in this means of communication (which also emerged during some of the interviews) can also be noted in some of the replies given regarding expected uses and conditions relative to use of materials on the Web produced by the authors themselves and by other authors.

As a percentage, the expected uses both of one's own material and others' material (Table 3 and 4) are roughly equal; the percentages vary greatly, however, for the different possible uses and for means of accessing such material. Whilst there is almost unanimous agreement over freedom to visualise material, the replies become more cautious regarding the possibility to intervene on it, and there are relatively higher numbers of non-respondents, that for some questions exceed 20%, and reach 29% of non-responses, relative to the possibility to modify documents obtained on the web.

Only 8% of the respondents declared that they would not require any restriction at all for the use

of their own material nor expect any restrictions on the use of other authors' material, whilst a high percentage (over 65% in both cases) asked for – or expected that – materials to be used only for certain purposes and that the copy made should be an exact replica of the originals.

Users and non-users' knowledge of and attitudes towards Open-Access initiatives and archives

Various questions aimed at verifying levels of knowledge, use and more general behaviour of academic authors regarding the Open-Access initiatives.

The most direct question was the following:

"If you already know of the Open-Access initiatives, can you say how you knew of them?"

Fifty-six percent of the 57 people who replied to this question declared they knew nothing of

the Open-Access initiatives; 44% declared that they had already heard of them.

Of the 25 authors who declared they knew of the Open-Access initiatives, 14 (equal to 56%) declared they were informed by colleagues, 8 by professional literature, 1 by non-professional literature and 2 by other sources. Two respondents who replied "other" received information from the library.

Only one author out of the 35 who affirmed making material freely available on the Web declared having put material in a freely accessible disciplinary archive. Sixteen authors out of 48 (33.3%) respondents declared instead to have obtained material from a disciplinary archive. The authors' fairly passive attitude is confirmed. They are more prepared to use material produced by others than to commit to making their own scientific works freely available. Also the interviews with key informants revealed that only 2 out of 8 interviewees had withdrawn material from the Open-Access Archives.

There are very few studies available to date with which to compare these results. Ibranke Lawal includes the results of a survey of a population of 240.000 doctoral scientist and engineers employed in academia across the United States and Canada. The sample size was 473 calculated from the total population. The survey sought to determine use and non-use of e-print archives in different disciplines. Results showed that 18% of the researchers use at least one archive while 82% do not use any (Lawal 2002).

The survey refers to the year 2002. As far as non-use is concerned, a large number of respondents answered that e-print archives were not relevant to them. Another reason for the non-use of e-prints archives was due to publishers' policies, while a relatively small number named technology constraints as a barrier to use. The data from the Arno Project also offer few possibilities for comparison, even if the purposes and aims of the project were, in part, similar to this study (Bentum et al. 2001).

On examining the poor use of the Open Archives more carefully, it does not seem to be connected to mistrust so much as to the quality of the material they hold (even if this is certainly an important aspect). By combining the Open-Access users with those who claimed they had used material from "Archives run by an institution" we

obtained a positive reply rate equal to 66%. This can perhaps be considered a sign that non-use of the Open Archives is, essentially, linked to lack of relative knowledge rather than a prejudiced attitude towards them.

Authors' attitudes towards copyright

The authors' willingness to ask to retain copyright is a key aspect for any strategy that aims to create free accessible institutional archives. The results of both the key informants and the questionnaire revealed a rather contradictory attitude towards these themes. Four out of 8 of the key informants declared that this issue is either not discussed with the publisher or admit that they have never really considered the question.

It emerged from the questionnaire that although over 63% of respondents habitually ceded their copyright willingly to the publisher, 30% declared "Publishers do not ask for copyright assignment". When asked what other procedures were adopted when the copyright is not transferred to the publisher, only one author declared to "Amend the publishers' copyright assignment" (but a good 66% did not answer the question).

Investigating the authors' willingness to ask to retain copyright in order to deposit their material in an institutional open archive confirms how critical both the problem and how the problem should be faced are. If only 4 authors (6.9%) actually declare the unwillingness to such an initiative, 21 (36.2%) claim to be ready to face it. Thirty-three respondents (56.9%) answer the question with an "I don't know".

Influence of the scientific field in perceptions, attitudes, use and non-use of Open-Access Archives

This is a subject that frequently emerges in literature (Kling and McKim 2000). Relevant differences in use of the Open Archives did not emerge. No significant difference between the various Departments is found relative to declared knowledge of the Open-Access archives or initiatives or lack of such knowledge. The Department which emerges as the best informed is Quantitative methods (66.7%).

The greatest willingness to become personally involved in Self-archiving activities is registered

in the Department of Economics (85.7%) whilst the main perplexities and negative replies are fairly evenly spread throughout the various departments. Adding data on the Faculties does not change the results. There are, for example, no statistically significant associations between the respondents' Faculty and knowledge of Open-Access initiatives. The positive and negative values for both Faculties are around 50%. The percentage of authors connected to the Faculty of Economics that declared knowledge of Open-Access initiatives is 47.5% compared to the 50% in the Faculty of Law.

The same lack of statistically significant association has been registered regarding Faculties and willingness to self-archive. For Economics the level of willingness is 67.5% and unwilling/don't know 32.5%; these percentages are not dissimilar to those in the Faculty of Law (63.6% willing against 36.4% unwilling/don't know). These results could be explained by the extreme homogeneity of the subject areas examined. In fact, other studies seem to confirm the existence of this problem of considerable dimensions (Lawal 2002).

Conditions placed by authors for participating in an institutional Open-Access Archive project

The two main questions were:

- Under which conditions would you be prepared to deposit your works in the University of Brescia archives?
- Once the conditions that you request have been fulfilled, would you be prepared to personally archive your own scientific or educational material?

All 62 respondents answered the first question (Table 5).

Table 5 Conditions for participating in an Open-Access initiative

Conditions	Frequency	Percentage out of respondents (N. 62)
No conditions	4	6.4
Works' integrity	49	79.0
Possibility to publish in journals as usual	51	82.3
Protection from plagiarism	44	71.0
Long time preservation	14	22.6
Indexing	37	59.7
Interoperability	23	37.1

The condition that obtained the greatest agreement (over 80%) was the possibility for authors to continue publishing their works in the journals of their choice, respecting the traditional model of publication. This information is of considerable importance as not only it establishes a need that cannot be ignored but also because it should be considered in relation to the philosophy adopted for the Self-archiving strategy proposed by Harnad, which now refers only to scientific products that have passed a quality control process. Almost 80% instead, requested protection of the integrity of their works and, this too is of importance as it has been made possible by the software at present used principally to create the Open Archives; 37% of respondents specify inter-operability with other archives as a condition for their participation in an eventual Institutional Open Archives project. This is the concrete possibility offered at present by the OAI-Protocol for Metadata Harvesting.

The request for protection against plagiarism from over 70% of the respondents seems less important. This risk is ever present, if not more so for printed publication. The respondents show little concern, instead, for the long-term preservation of the works they deposit, a matter strongly felt in literature. This aspect cannot be ignored by the archive management; new initiatives, such as OAI, now allow this to be faced within the Open-Access strategy (Hirtle 2001).

Indexing the contents of the archives, requested by 59% of the respondents, expresses widespread concern about the 'recoverability' of the material deposited. Only 13% asks for an inter-disciplinary archive, whilst sub-division of the contents according to subject or typology obtain respectively 79% and 30% approval. Replies regarding which material should be accepted for the archives are interesting as well (Table 6).

Table 6. Material to be archived in the Institutional archive

Typology	Frequency	Percentage (n. 60)
Not passed through a quality control process	19	31.7
Passed through a quality control process	38	63.3
Teaching material	43	71.7
Pre-prints	32	53.3
Accepted by a body	10	16.7
Other	4	6.6

Non-respondents: 2 (3.2%)

Partially in contrast – or, at least, complementary – to the Self-archiving strategy objectives, the majority of the respondents' preferences are for teaching material (indicated by almost 72%). This would suggest that academic authors tend to see the institutional open archive as a place where all the material produced within the institution can be deposited and on hand. The more operative rather than strategic role of the archive and the prestige factor offered to the institution rather than the more general outcome of “freeing” scientific works resulted also from the answers to some interviews. The two issues certainly do not clash, however, but answers seem to confirm the importance of the “prestige factor” underlined by Raymond Crow (Crow 2002).

The request that only material accepted by an evaluation group could be deposited (16.7%) would seem to be contrary to the principles of the Open-Access philosophy itself, and perhaps reveals the “conservative” side to the academic body, but it is also, perhaps, a misunderstanding whereby the initiative is interpreted more as an Academic Press than an Open-Access Archive.

The results and remarks are considerable close to those quoted in Bantum and colleagues' work. The methodology adopted in the survey they describe is, however, different from the one used in this study.

Twenty-six research managers were interviewed and 45 authors. Even if the results are presented in descriptive form (there is no quantitative analysis) some of them deserve to be referred. Authors comment as follows regarding the scientific field they have examined:

“For social sciences, economics, law and humanities managers the main obstacle for the use of an archive server is the possible impediments to traditional publishing ... Authors from the social sciences and humanities prefer traditional publishing mainly because of the guaranteed quality control... Some authors distinguish between types of document. They think that journal articles should be published in traditional ways, whereas congress papers are regarded as suitable for electronic publishing ...” (Bantum et al. 2001)

As can be noted, there are various points of convergence. What emerged regarding scholarly outputs different from journal articles is of particular importance. These themes, based on the practice of academic departments publishing their own locally controlled series of working papers,

Table 7. Willingness to undertake self-archiving

	Frequency	Percentage (N. 62)
Yes, willingly	12	19.4
Yes, if adequately supported	29	46.8
Need further information	11	17.7
No	10	16.1
Total	62	100.0

technical reports, research memoranda etc, are beginning to establish themselves within the debate on improvement of scientific communication. This is demonstrated, other than by the work by Nixon (2003), also in the proposal for a new model forwarded by Kling and colleagues: the Guild Model (Kling et al. 2002).

A high percentage of positive replies were obtained regarding the very author's personal willingness to self-archive once his requests have been satisfied (Table 7).

By adding together those who declare themselves unconditionally willing and those who would be willing if adequately supported, we find over 66% of authors willing to self-archive, and at least part of the 20% who require more information to be able to express a choice could be added to this total.

Correct information regarding the purposes and the characteristics of Open-Access initiatives emerges, once again, as the main problem as well as its direct implications on the author's daily activity. A substantial part of the 16% who declared their unwillingness to self-archive do so, not so much as a rejection of the initiative but rather as a request that others carry out the activity of archiving the material produced by the authors (generally, departmental or Faculty technical/administrative personnel are mentioned).

Approximately 43% of those who have worked in the university for more than 10 years declared no knowledge of Open-Access initiatives compared to 70% of those who have worked there for fewer than 10 years (Table 8). It is possible here to note a possible statistically significant association ($p=0.06$).

There is, in contrast, no statistically significant association between years of work and willingness to self-archive ($p=0.78$). Over 70% of those who have been at the University for fewer than 10 years are willing to self-archive compared to

Table 8. Association between years of work and knowledge of Open-Access initiatives.

Years	Knowledge (%)	No knowledge Don't know (%)	Total (%)	p value
<= 10 years	6 (30.0)	14 (70.0)	20 (100.0)	0,06
> 10 years	24 (57.1)	18 (42.9)	42 (100.0)	
Total (%)	30 (48.4)	32 (51.6)	62 (100.0)	

30% who are unwilling or do not comment. There is a notable inversion of attitudes between the greater willingness on the part of the younger (or at least the more recently appointed) members of staff to invest personal energy in an eventual project, whilst it is those employed at the University for longer, who demonstrate greater knowledge of and attention to the problem.

Organizational unit devoted to implementation and management of an institutional Open-Access Archive

The answer to this question, which is almost never faced in literature, can be vital to the faith that authors place in the successful outcome of an eventual initiative, thus motivating greater commitment to it. On the other hand, it contributes to understanding the Library's future role in this process. Interviews to the key informants had already singled out the Library as the organizational unit that should take charge of any eventual institutional Open-Access initiative.

Amongst the 58 of the 62 respondents who answered the question, almost 71% singled out the Central Inter-Faculty Library as the structure proposed to manage the archive, followed by 10% who think that an appropriate structure should be created, and by 7% who ask for a structure in some way connected to their departments or their Faculty. Of the 5 people who chose the "other" option, 2 did not feel the problem affected them, whilst 3 thought that management should be shared between the Library and departmental or Faculty structures.

It therefore seems that academic authors recognise a central role for the Library, a role which is further confirmed by the fact that 60% specify that a fundamental condition for their participation in an Open Archive initiative is that the works they deposit should undergo a scrupulous index-

ing in order to guarantee their 'retrievability', which is a typical library function.

In the same way, the key role to be played by libraries in starting up institutional archives can be identified both by the requests for further information on the initiative and willingness to participate if adequately supported. Certainly, the main problem does not seem to be technical, but rather the inertia of the traditional scholarly communication paradigm, an inertia that particularly affects the academic Faculties.

Conclusions

The needs and perceptions that emerge from the investigated community are different and partly contradictory: the necessity to give greater impact to their research and perplexities over the risk of plagiarism, the necessity to speed up the process of divulging information and concern about lowering of quality standards, free transfer of copyright to publishers and suspicion regarding the possibility to intervene and modify published material offered on the web, to mention only the most obvious of the contradictions that emerged from this study. Accommodating the Faculty needs and perceptions, and demonstrating the relevance of an interoperable institutional archive in achieving them, seems to be a central aspect not only to convincing academic staff to make their output available through institutional open archives but also to content policies and implementation plans.

References

- Bentum, M., R. Brandsma, T. Place, and H. Roes. 2001. Reclaiming Academic Output through University Archive Server. *The New Review of Information Networking* 7: 257-263. URL: http://drcwww.kub.nl/~roes/articles/arno_art.htm [viewed May 01, 2004].
- Brown, D. 2002. Open archives need controls. *Information World Review* 180.

- Byrne, A. 2003. Manifesto on Open Access to Scholarly Literature. *D-Lib Magazine* 9(4). URL: <http://www.dlib.org/dlib/april03/04inbrief.html> [viewed May 3, 2004].
- Crow, R. 2002. *The Case for Institutional Repositories: a SPARC Position Paper*. SPARC. URL: <http://www.arl.org/sparc> [viewed March 10, 2003].
- Duranceau, E.F. 1999. Resetting Our Intuition Pumps for the Online-Only Era: a Conversation with Steven Harnad. *Serials Review* 25(1): 109–15.
- Fielding, N., and M. Schreier. 2001. Introduction: On the compatibility between qualitative and quantitative research methods. *Forum qualitative Sozialforschung / Forum: Qualitative Social Research* 2(1).
- Harnad, S. 1998. *For Whom the Gate Tolls? How and Why to Free Refereed Research Literature Online Through Author/Institution Self-archiving, Now*. URL: <http://www.cogsci.soton.ac.uk/~harnad/Tp/resolution.htm> [viewed March 10, 2003].
- Harnad, S. 2000. E-Knowledge: Freeing the Refereed Journal Corpus Online. *Computer Law and Security Report* 16(12): 78–87. URL: <http://www.cogsci.soton.ac.uk/~harnad/Papers/Harnad/harnad00.scinejm.htm> [viewed March 10, 2003].
- Harnad, S. 2001. The Self-Archiving Initiative. *Nature* 410: 1024–25. URL: <http://www.nature.com/nature/debates/e-access/Articles/harnad.html> [viewed March 10, 2003].
- Hirtle, P. 2001. Editorial: OAI and OAIS: What's in a name? *D-lib Magazine* 7(4), April. URL: <http://www.dlib.org/dlib/april101/04editorial.html> [viewed April 30, 2003].
- Kelle, Udo. Quoted in: Fielding, N. and M. Schreier. 2001. Introduction: On the compatibility between qualitative and quantitative research methods. Cit.
- Kling, R. and G. McKim. 2000. Not Just a Matter of Time: Field Differences and the Shaping of Electronic Media in Supporting Scientific Communication. *Journal of the American Society for Information Science* 51(14): 1306–1320. URL: http://www.webuse.umd.edu/webshop/resources/Kling_Not%20Just%20a%20Matter%20of%20Time_O-L%20Communities.pdf [viewed March 10, 2003].
- Kling, R., L. Spector, and G. McKim. 2002. The Guild Model. *JEP. The Journal of Electronic Publishing* 8(1). URL: <http://www.press.umich.edu/jep/08-01/Kling.html> [viewed April 24, 2003].
- Lawal, I. 2002. Scholarly communication: The use and non-use of E-print Archives for the Dissemination of Scientific Information. *Issues in Science and Technology Librarianship* Fall. URL: <http://www.istl.org/02-fall/article3.html> [viewed April 30, 2003].
- Marshall, Catherine and Gretchen B. Rossman 1995. *Designing qualitative research*. 2nd ed. Thousand Oaks: Sage.
- Mutchnick, R.J. and B.L. Berg. 1996. *Research methods for the social sciences: practice and application*. Boston: Allyn and Bacon: 116.
- Nixon, W.J. 2003. DAEDALUS: freeing Scholarly Communication at the University of Glasgow." *Ariadne* 34. URL: <http://www.ariadne.ac.uk/issue34/nixon/intro.html> [viewed April 24, 2003].
- Pelizzari, E. 2002. Crisi dei periodici e modelli emergenti nella comunicazione scientifica {Serials crisis and emerging models in scholarly communication}. *Biblioteche Oggi* 20(9): 46–56.
- Suber, P. 2003. Removing the Barriers to Research: An Introduction to Open-Access for Librarians. *College & Research Libraries News* 64 (February): 92–94, 113. The print edition is abridged. An online, unabridged edition is available at URL: <http://www.earlham.edu/~peters/writing/acrl.htm> [viewed March 10, 2003].

Web sites

- ARNO Project. URL: <http://cf.uba.uva.nl/en/projects/arno/> [viewed March 10, 2003].
- BOAI. Budapest Open Access Initiative. URL: <http://www.soros.org/openaccess/> [viewed March 10, 2003].
- DAEDALUS. URL: <http://www.gla.ac.uk/daedalus> [viewed April 30, 2003].
- DSPACE. URL: <http://www.dspace.org/> [viewed March 10, 2003].
- Eprints.org. URL: <http://www.eprints.org/> [viewed March 10, 2003].
- OAI. Open Archives Initiative. FAQ. URL: <http://www.openarchives.org/documents/FAQ.html> [viewed March 10, 2003].
- The OAI-Protocol for Metadata Harvesting. URL: <http://www.openarchives.org/OAI/openarchivesprotocol.html> [viewed March 10, 2003].
- OAIS. Open Archival Information System Reference Model. URL: <http://www.rlg.org/longterms/oais.html> [viewed May 3, 2003].
- RoMEO Project. URL: <http://www.lboro.ac.uk/departments/ls/disresearch/romeo/index.html> [viewed April 24, 2003].

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