
Academic Publishing in Modern Society

LARS ENGWALL

Department of Business Studies, Uppsala University, Box 513, 75120 Uppsala, Sweden.
Email: Lars.Engwall@fek.uu.se

This article analyses academic publishing in modern society by means of a governance model focusing on three groups of governors: Regulators, Market Actors, and Professions. It demonstrates how these three groups have interacted and how this interaction has put pressure on faculty members to produce publications for top journals. It also points to the strong position of publishers, which leads to high profit margins. The article therefore also discusses different possible measures to change the publishing system.

The Context of Academic Publishing

Since the Second World War, academic publishing has undergone considerable changes. The academic community has grown in the past, and the number of researchers is still growing considerably. For instance, in the United States, the number of PhD degrees awarded in the early 1960s was around 10,000, a figure that had grown to about 40,000 by the early 1990s (Snyder 1993: 87). Thirty years later, in 2020, the number was around 55,000 (Flaherty 2021). Similar developments have occurred in other countries all over the globe with a rising number of researchers in an increasing number of academic institutions with more and more students (see, for example, Meyer *et al.* 1977).

Another aspect of the growth of the academic system is an increasing demand for channels for the diffusion of research results. The Observatory of International Research (OOIR) reports that the three top publishers each publish more than 2,000 scholarly journals: Springer 3,692, Taylor & Francis 2,909, and Elsevier 2,467, respectively, i.e., together more than 9,000 titles! After these three publishers at the top, three others follow with more than 1,000 titles: Wiley 1,646, SAGE 1,310 and

De Gruyter 1,100. In addition to these six, the organization lists as many 127 publishers that handle more than ten publications each (OOIR 2023).

Against this backdrop, this article will provide an analysis of the system for academic publishing by means of a governance framework. The reason for this approach is the central role that publishing has come to play in the modern academic world. It has become a major force in the governance of academic institutions and their members. Three actor groups are significant in this context: *Regulators*, *Market Actors* and *Professions*. The following section presents their general roles in governance, while a subsequent section discusses the interaction between them in relation to publishing. After that follows a concluding discussion regarding the future.

A Framework for Analysing Academic Publishing

In relation to the governance of academia, Clark (1983) pointed out 40 years ago that, in principle, three basic actors govern university systems: States, Markets, and Academic Oligarchies. As can be seen in Figure 1, he labelled the USSR system as state-dominated, the US system as market-dominated, and the Italian as governed by the academic oligarchy. Other countries he classified as having systems with mixed governance. He considered Sweden and France to have a mix of state governance and the influence of the academic oligarchy, while Canada, Japan, and the United Kingdom, in his view, had more of a mix between market governance and the influence of the academic oligarchy.

Clark's framework focuses on the governance of national systems of higher-education institutions. However, a similar approach is useful for the analysis of the governance of individual academic institutions and their actors. Here, a framework regarding the general governance of institutions (Engwall 2018) is relevant (Figure 2). Using this model, instead of the State, it is appropriate to look at *Regulators*, since regulation in current society is

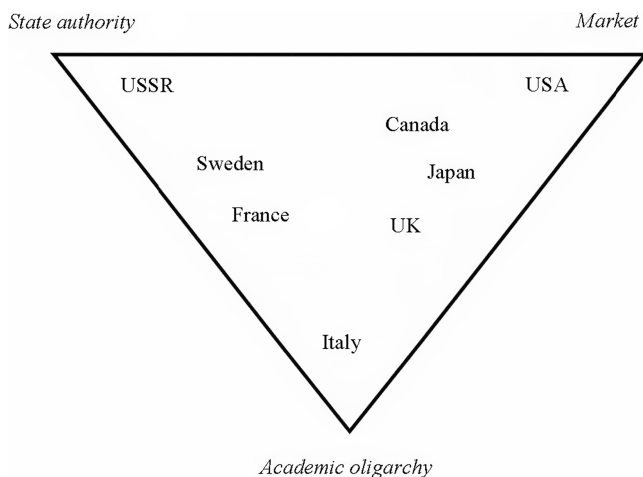


Figure 1. University governance (modified from Clark 1983: 143).

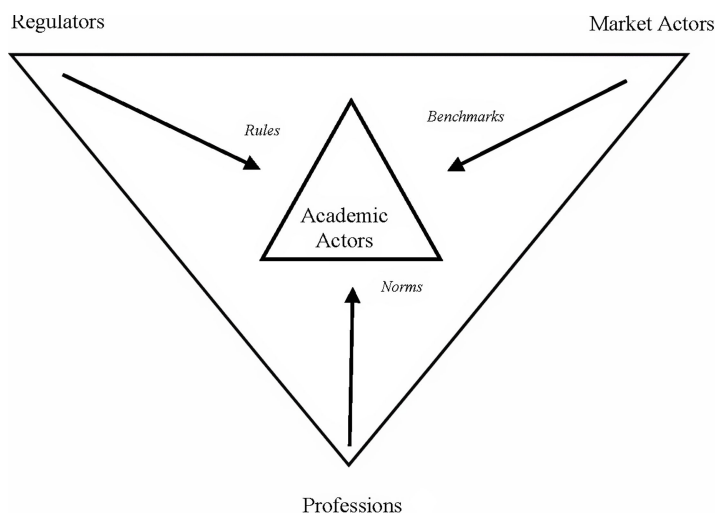


Figure 2. A model for analysing academic publishing.

coming from actors at different levels: international, national, and local. Similarly, it is relevant to focus on *Market Actors* rather than just the market since there are many market actors that influence institutions. Finally, *Professions* appears to be the proper label for the academic community at large with its wide range of disciplines from the hard sciences at one end, many other disciplines in between, and the humanities at the other end. As shown in Figure 2, Regulators, Market Actors, and Professions influence Academic Actors (Academic Leaders as well as Faculty Members) through various signals. Regulators provide *rules* for Academic Actors, while Market Actors signal by means of *benchmarks*. Professions, finally, play a significant role by providing Academic Actors *norms* of proper academic behaviour.

In the following, this last model will be used for an analysis of academic publishing, particularly in a European context (for accounts from other continents, see the contributions by Aldirdiri, He and Packer in this issue).

Governance by Professions

Looking at Professions, we can identify that they have a direct influence on Academic Actors, i.e., Academic Leaders and Faculty Members. It is also possible to recognize influences on Market Actors.

Professions and Academic Actors

Members of a large, and increasing, number of disciplines constitute the Professions. However, among them there are variations. As demonstrated by Whitley (1984), academic disciplines differ in terms of (1) task uncertainty and (2) dependence between researchers. In disciplines with low task uncertainty, scholars agree on

which problems to solve and how to handle them, and in disciplines where the dependence between researchers is high, they are closely connected. As a result, low task uncertainty and high dependence between researchers will result in a high integration of the field. Such disciplines are labelled by Whitley (1984) ‘conceptually integrated bureaucracies’. His example of such a discipline is physics.

Disciplines at the other end of the scale in terms of integration, with high task uncertainty and low dependence between researchers, he labels ‘fragmented adhocracies’ and exemplifies them with social science disciplines. It is obvious that the disciplines with high integration, i.e., the hard sciences, have become the norm for the rest. In terms of publishing, it means that researchers in the social sciences and the humanities have followed their counterparts in the natural sciences and turned from monographs towards journal articles as the important means of communication. An increasing organizing of disciplines has reinforced this development. As shown in Engwall and Hedmo (2016), the founding of many journals is the result of efforts to gather scholars with similar interests in professional associations. Many of these journals have been the result of the resistance that academic entrepreneurs have met in their various countries. However, as they have looked out internationally, they have found colleagues with the same ideas abroad. This in turn has led to informal networks, which over time have become more and more formalized. Often, this process has led to the launching of journals. Since these journals are international, their language has become English, the present-day *lingua franca*.

Again, the hard sciences, where the universality of the study object and the formalization of the presentation are high, provide the general role model (see Figure 3, upper right). This creates problems for disciplines at the other end of the scales (see Figure 3, lower left), i.e., the humanities and the social sciences. As a result, there are efforts in these fields to play down the context and increase the formalization in order to be published. In this way, the pressure to publish has effects on research. An example is economics, where researchers tend to leave aside national policy problems and increasingly work with general problems in a formalized way (Forslund and Henrekson 2022).

The gist of the above arguments is that the academic Professions in a wide sense have developed a culture that favours journal publications in English over monographs in domestic languages. The creation of a large number of specialized journals has reinforced this trend. Obviously, this development has implications for Academic Actors, be they Academic Leaders or Faculty Members. As will be discussed below, it also has effects on the prestige of the different journals.

Professions and Market Actors

Publishing requires resources and competences. Early on in academic publishing were a number of university presses, with Cambridge University Press and Oxford University Press as the frontrunners in the sixteenth century (Sutcliffe 1978), followed by other university presses from the late nineteenth century and onwards (Jagodzinski 2008). Before and during the nineteenth century a number of other

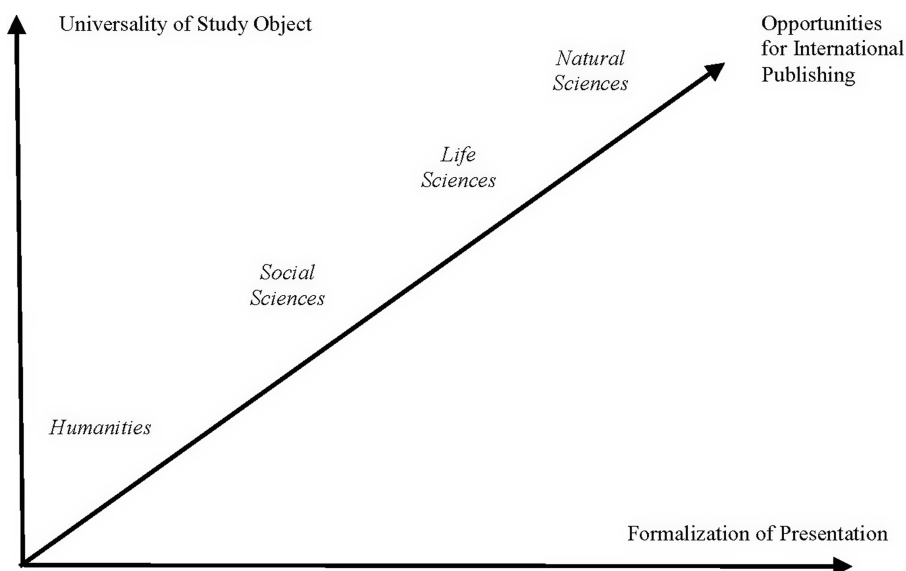


Figure 3. Opportunities for international publishing in different disciplines (modified from Engwall 2022).

publishers also ventured into the market: Longman (1724), Wiley (1807), Harper (1817), Collins (1819), Hachette (1826), Springer (1842), Macmillan (1843), Routledge (1851), Blackwell (1879), Elsevier (1880), and McGraw-Hill (1889) (see further Engwall *et al.* 2016, Chapter 6).

Originally, these publishers were focusing on the publication of books. However, over time some of them became significant publishers of academic journals. Among their titles today, there are, as already mentioned, a number of journals started by professional associations. As technology developed, with digital platforms, and due to the growth of submitted manuscripts, quite a few of these associations chose to hand over their journals to commercial publishers.

In parallel to this transfer of journals to commercial publishers, the publishing industry has undergone a considerable restructuring through a number of mergers and acquisitions. In terms of the publication of scholarly journals, this has become concentrated in the hands of a few actors. At the same time, the demand for academic publishing has grown considerably (cf. above). In this way, publishers as Market Actors have enjoyed considerable revenues. The *Economist* (2013) thus reported that Elsevier in 2012 had a profit margin of 38%. However, as early as a decade earlier the dominant publishers such as Elsevier had met a new challenge. In 2001, representatives of Professions, at a meeting in Budapest, took an initiative towards Open Access (BOAI 2023). It led to a declaration, which in November 2023 had 1,633 signatures from organizations and 7,042 signatures from individuals. This document defines Open Access as the

free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.

It concludes with the following statement:

We invite governments, universities, libraries, journal editors, publishers, foundations, learned societies, professional associations, and individual scholars who share our vision to join us in the task of removing the barriers to open access and building a future in which research and education in every part of the world are that much more free to flourish.

As will become evident below, governments and the academic community were more positive towards the invitation than were publishers, who wanted to protect their income streams.

In 2003, BOAI was followed up by two initiatives: the Bethesda Statement on Open Access Publishing in the United States (Bethesda Statement 2023) and the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (Berlin Declaration 2023) in Europe. Both were initiated by representatives of Professions. Recently, they have even argued that open networks under the governance of the scholarly community should replace academic journals (Brems *et al.* 2023). However, a full decade earlier Regulators adopted the principle of Open Access (see further below).

Therefore, briefly, as shown in Figure 4, Professions provide the norms for Academic Actors. In addition, they have developed a relationship with Market Actors through (1) the transfer of professional journals to commercial publishers and (2) more recently challenged the commercial publishers by demanding Open Access.

Governance by Market Actors

Among Market Actors, there are two particularly significant groups: Publishers and Assessment Organizations. The first group provides the opportunities to publish scientific research, while the second takes advantage of data generated from the publishing industry and stimulates the publishing race. In this way, the two groups of market actors live in symbiosis.

Publishers

The most significant interaction between Market Actors and Academic Actors in terms of publishing is that between individual researchers and Publishers. In fact, the

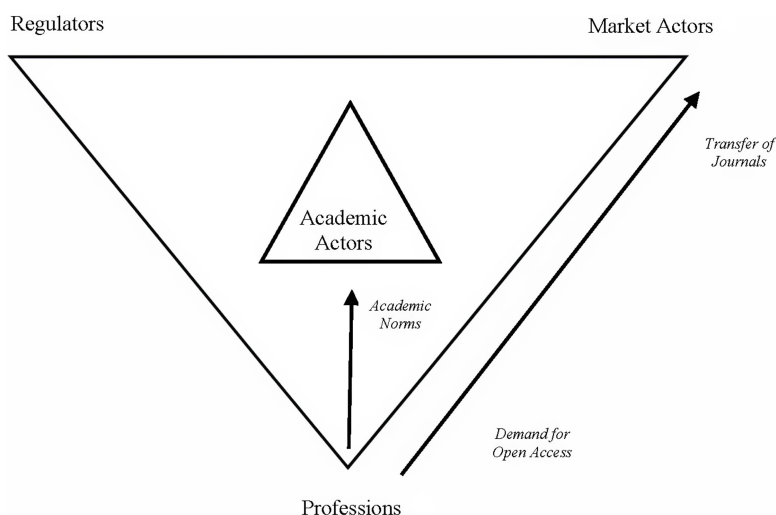


Figure 4. Professions versus Academic Actors and Market Actors.

entire publishing industry depends on the Academic Actors supplying manuscripts. As the academic community has grown considerably since the mid-1950s and researchers are increasingly eager to publish their findings – largely for career reasons – the inflow of manuscripts is massive. A basic issue in that context concerns the principles of payment. Even earlier, some journals charged submission fees. However, with the advent of electronic publications, Article Processing Charges (APCs) have become widely used for Gold Open Access, i.e., for papers accessible without restrictions. A less costly alternative, Green Open Access, permits authors, normally after an embargo period, to post an earlier version of their manuscript in a repository online without paying an APC (Taylor & Francis 2023).

The introduction of APCs has put pressures on academic institutions and research funding organizations to pay these fees. However, this has not eliminated the inclination of Publishers to charge for reading. Earlier subscription models, although modified, are still there. In addition, there are instances where individual researchers have to pay for the downloading of articles. This phenomenon of publishers being able to earn money twice, labelled ‘double dipping’, has aroused criticism. Therefore, some publishers have responded to their critics by setting up policies. Cambridge University Press (2023), for example, states:

We aim to price our journals fairly and transparently. In particular, our subscription prices should reflect the amount of subscription content in a journal. It is unfair to ‘double dip’ by charging subscribers for open access content that has received funding through an institutional open access agreement, an article processing charge (APC), the Cambridge Open Equity Initiative, sponsorship from a third party, or some other mechanism.

Likewise, Elsevier has adopted the following policy (Elsevier 2023):

We do not ‘double dip’. We can be reimbursed for an article in two ways – through an Article Publishing Charge (APC) to publish the article and make it available to read by everyone, or a subscription fee to pay for reading the article. We either charge for publishing an article or reading an article but we never charge for the same article twice. We have a strict no double-dipping policy.

Yet another alternative, without charges, is Diamond Open Access. This refers to publications to which neither authors nor readers pay. These are ‘community-driven, academic-led, and academic-owned publishing initiatives’ (Plan S 2023b). Furthermore, some publishers apply Bronze Open Access, which means that they publish papers on their website free to read but with restricted access (Piwowar *et al.* 2018).

Whereas the dominant publishers have a strong position in the market, a large number of entrants into the market are challenging existing market members, as new scientific fields develop and specialization increases. The development of information technology has reinforced this expansion, which has included numerous journals that have limited or no editorial screening but charge for publishing. In order to counteract these predatory journals, organizations have been created to set standards for publishing. Two such organizations are the Committee on Publication Ethics (COPE) and the Directory of Open Access Journals (DOAJ).

Founded in 1997, COPE is an association of editors of academic journals. In 2021, it had more than 12,000 members in 103 countries from all academic fields. As the name of the organization indicates, its purpose is to set standards within academic publishing. It has established ten core practices regarding issues such as allegations of misconduct, authorship and contributorship, complaints and appeals as well as conflicts of interest (COPE 2023).

DOAJ, like COPE, has formulated a best-practice code providing ‘selection criteria, resources and tools for the identification of reputable open access journals’. This organization – founded in Lund, Sweden in 2003 – has indexed close to 20,000 open access journals covering all academic fields in 135 countries as of 2023 (DOAJ 2023). In this way, DOAJ, like COPE, aims at weeding out non-serious actors among journals.

Assessment Organizations

In addition to the publishers, Assessment Organizations – some of them closely related to the publishers – are significant Market Actors. They are part of the system as providers of data on individual researchers and academic institutions. Major players are the Web of Science, Scopus, and Google Scholar. Among them, the *Web of Science* is the frontrunner. It stands on the developments of the work of Eugene Garfield in the 1950s and his foundation of the company, Institute for Scientific Information (see further, Garfield 2006). In 1992, the media conglomerate Thomson

acquired the business and kept it until 2016 when it became a part of the British-American company, Clarivate Thomson ISI. For the academic community it is not only important for its provision of citations for individual scholars but also as the provider of data on the Journal Impact Factor (JIF), i.e. the yearly mean number of citations of articles published during the preceding two years. Thus, the higher the impact factor, the more prestigious the journal. Obviously, this affects the submission behaviour of researchers (see further below).

The second Assessment Organization mentioned above, *Scopus*, is run by the publisher Elsevier, which is an abstract and citation database that has been in operation since 2004. Twenty years later it now covers ‘more than 25,000 active titles and 7,000 publishers [...] with millions of author profiles and 1.7 billion cited references’ (Scopus 2023a). Scopus uses an alternative to the Journal Impact Factor called CiteScore. The basis for this indicator is the number of citations by a journal in a preceding four-year period to articles, reviews, conference papers, data papers as well as book chapters divided by all Scopus documents in the same period, and published in those same four years (Scopus 2023b). Scopus thus takes more publications into consideration, a circumstance that has prompted the criticism that it will favour Elsevier publications (cf. for example, Straumsheim 2016).

Another competitor to the Web of Science is *Google Scholar*, also launched in 2004, an academic database provided by the Californian multinational technology company, Google. It uses a web crawler for the selection of titles to be included and thus covers a very broad population of publications. It has been criticized for also containing predatory journals (Beall 2014). Because of its simplicity, Google Scholar has enjoyed wide use. Its attraction has been reinforced by its automatic calculation of the *h*-index, i.e. the *h* number of papers of an author that have been cited at least *h* times.

The data provided by the bibliometric platforms are widely used by ranking organizations (Espeland and Saunder 2007). Some of these organizations rank whole universities, while others rank programmes of professional education. Among the former, Times Higher Education (THE), World University Rankings (QS), and Shanghai Ranking (ARWU) are dominant. The first two have collaborated since 2004. However, since 2009, THE has been part of the multinational media company, Thomson Reuters (Baty 2009). Since 2014, it has been collaborating with Elsevier using its Scopus data (Hanafi and Boucherie 2018). In this way, THE, like other rankers, is closely connected to the publishing industry by using bibliometric data as well as pushing academic leaders to stress top publications among faculty members. In addition, the Assessment Organizations have an impact on Regulators, who are inclined to ask if they are getting value for money. It also happens that Regulators use bibliometric data as a parameter in resource allocation (cf., for example, Gornitzka and Stensaker in this issue).

Summing Up

Figure 5 summarizes the reasoning above. In relation to academic publishing, the basic relationship is that between Market Actors (Publishers) and Academic Actors

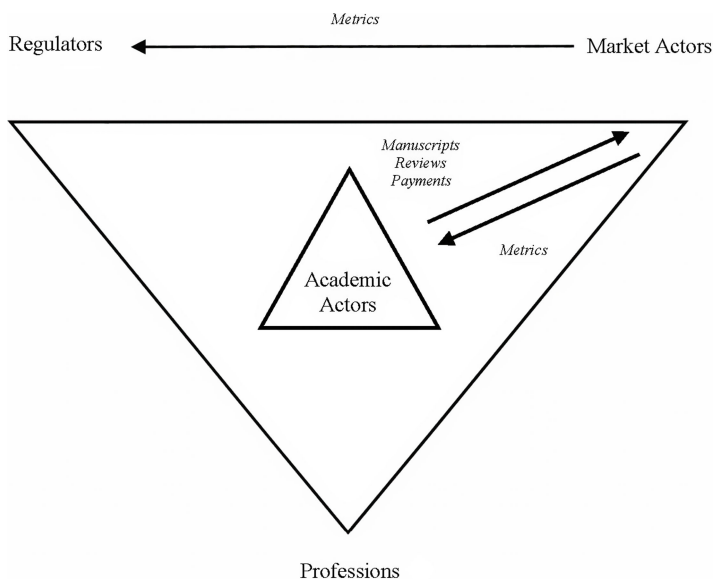


Figure 5. Market Actors versus Academic Actors and Regulators.

(Faculty Members). Researchers submit manuscripts, while publishers process these manuscripts through screening, editing – with the assistance of Academic Actors (see further below) – and, for the papers selected, publication. In relation to the latter, a significant issue concerns the payment for publishing and reading. For this, academic leaders play a significant role by facilitating the necessary resources. At the same time, Market Actors provide metrics, which academic leaders tend to take on board as a basis for strategic decisions. They have also been used by Regulators as a basis for resource allocation.

Governance by Regulators

As demonstrated in Figure 1, the role of Regulators varies across countries. However, since the early 1980s, when Clark published his book, there has been a general trend towards more market governance (Engwall and Weaire 2008). Regulators in previously strongly regulated countries have thus had an increasing tendency to delegate resource allocation to the market. Even in countries without tuition fees, academic institutions are nowadays more dependent for their income on the number and the performance of their students. Likewise, the share of project grants to individual researchers or research groups has increased at the expense of block grants. In addition, as mentioned above, bibliometric data are used in some countries by Regulators for the allocation of block grants. In this way, publishing has come to play a significant role in resource allocation. In addition, Regulators tend to launch various evaluations in order to assess the performance of the Academic Actors. In so doing, they rely on representatives of Professions, often from abroad.

The prime example here is the research evaluations in the United Kingdom, the Research Evaluation Framework (REF), and its successor, the Research Evaluation Exercise (RAE) (see, for example, Martin and Whitley 2010; Otley 2010). Similar projects followed in other countries, for example, in Italy (Rebora and Turri, 2013), and in Australia (Williams and Grant 2018).

A basic task for Regulators, in addition to providing resources, is obviously to provide the rules for Academic Actors. These rules are national through Higher Education Acts such as the British *Higher Education Act 2004* (2023), the French *Code de l'éducation* (2023), the German *Hochschulrahmengesetz* (2023) and the US *Higher Education Act of 1965* (2023). However, with time, Regulators have become increasingly international. This is particularly the case for Member States of the European Union. In terms of the regulation of publishing, the rules for Open Access have been very important. Already in 2012, the European Commission published a recommendation on access to and preservation of scientific information (European Commission 2012). Later on, in relation to the funding schemes, Horizon 2020 and Horizon Europe, the Commission required that all recipients of grants should 'make sure that any peer-reviewed journal article they publish is openly accessible, free of charge'. In order to facilitate this aspiration, the Commission has launched the platform Open Research Europe, which is 'an open access publishing venue for European Commission-funded researchers across all disciplines, with no author fees' (European Commission 2023). The ambition is also to move towards Open Science, thereby not only open access publishing but also open access to all scientific research data. (For the corresponding conditions in China, see the contribution of He in this issue.)

In the same spirit, a number of mostly European national research funding organizations got together in 2018 to form the organization cOAlition S with ten principles and the following general rule (Plan S 2003a):

With effect from 2021, all scholarly publications on the results from research funded by public or private grants provided by national, regional and international research councils and funding bodies, must be published in Open Access Journals, on Open Access Platforms, or made immediately available through Open Access Repositories without embargo.

This means that cOAlition S members require in the first place Gold Open Access (cf. above). However, they also appear to accept Green Open Access, thereby advising authors to use what they label a Rights Retention Strategy (RRS). It means to put the phrase 'CC BY or equivalent licence is applied to the AAM arising from this submission' and to deposit the Author Accepted Manuscript (AAM) in a public repository. Obviously, they also accept Diamond Open Access (Eglen 2021).

Figure 6 summarizes the above arguments. Regulators govern Academic Actors by means of statutes and principles for resource allocation. In addition, through their funding agencies they have adopted the principle of Open Access to a considerable extent. Regulators also tend to launch evaluations of Academic Actors, thereby engaging distinguished, often foreign, representatives of Professions for this task.

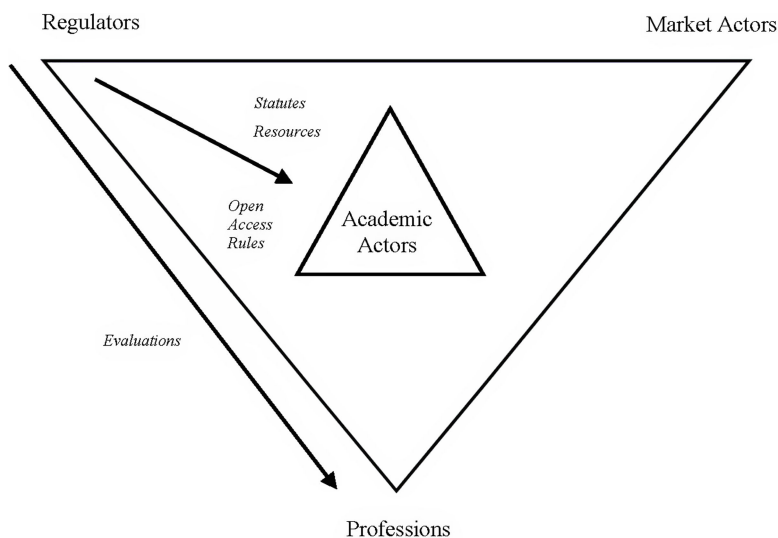


Figure 6. Regulators versus Academic Actors and Professions.

Effects for Academic Actors

As already mentioned above, Academic Actors are significant for the publishing industry. Among them, Academic Leaders tend increasingly to feel the pressure to raise the rankings of their institutions and therefore try to encourage faculty members to publish in journals with high prestige. In this way, they transfer the pressures from Professions, Market Actors, and Regulators inside their institutions. The publishing race indeed plays a role in the governance of modern academic institutions.

However, publications also have an increasing impact on the financial conditions of academic institutions. Even before the digitalization of the publishing industry, university leaders had to deal with growing costs for journal subscriptions. This was a result of the growth of the academic community with an increasing number of titles, and the considerable bargaining power of publishers. The issue then was the pricing of reading. With the advent of digitalization, the dispute between Academic Leaders and Publishers is the pricing of not only reading but also publishing. However, Academic Leaders challenge the occurrence of double dipping, i.e., that some publishers charge for both publishing and reading (cf. above). Therefore, negotiations with publishers have become a significant task for Academic Leaders. In so doing, they have increasingly come together in consortia in order to increase their bargaining power (cf. Carbone 2007 and the contribution by Söderbergh Widding in this issue).

While Academic Leaders are influenced by the publishing performance of their faculty members and must negotiate with publishers regarding pricing issues, their Faculty Members are those most dependent on publishers. They submit manuscripts, they review manuscripts, and some even provide editorial services (on the

experiences of the latter, see Musselin in this issue). In this way, they offer input to the journals as well as quality control.

In terms of manuscript submissions, rankings and bibliometric data – not least the Journal Impact Factor (JIF, see above) – play an important role. Since researchers want to go for prestige, they tend to adopt publication strategies (see further, Musselin in this issue). They seek the top journals in their field and adapt their manuscripts to what was previously published. However, since only a small fraction of the papers submitted to high-prestige journals are accepted, there will be a flow of rejected manuscripts to less prestigious journals. As they are eventually accepted by one of these, the result will be a homogenization of the journal contents in the field. For the individual researcher, the effect may be that they do not get credit for their publication, since a practice of counting only papers published in top journals has spread into many disciplines. Those doing so have thus outsourced the quality assessments to outsiders without making their own assessments. However, there are counter reactions to this development. As early as 2012, at the Annual Meeting of the American Society for Cell Biology (ASCB) in San Francisco, a group of editors and publishers developed a number of recommendations regarding the assessment of scientific work under the label DORA. Their general recommendation was the following (DORA 2023):

Do not use journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles, to assess an individual scientist's contributions, or in hiring, promotion, or funding decisions.

Obviously, this recommendation is particularly important for early career researchers (ECR, see Saugman in this issue).

A similar, more recent, initiative is the Coalition for Advancing Research Assessment (CoARA) launched in 2022 by Science Europe, the European University Association, and the European Commission. Among its core commitments are (CoARA 2023): 'Abandon inappropriate uses in research assessment of journal- and publication-based metrics, in particular inappropriate uses of Journal Impact Factor (JIF) and h-index'. This, like the DORA initiative, is welcomed in the scientific community as important for the freedom of research. However, at the same time, there are tendencies that metrics nevertheless are informally used in assessments and in the competition for resources (Engwall *et al.* 2023).

As far as quality control through reviewing and editorial work – key activities for publishing – is concerned, the role is becoming less attractive. The reason is the strong focus on the publishing performance of scholars, while their rewards for reviewing are limited. This has led to increasing difficulties for editors in recruiting reviewers. In the words of a European editor (Engwall 2014: 101):

Our problem was reviewers never responding [...] Often I had to contact 6–7 people to get 3, and too often I had to contend with 2 reviewers.

In order to handle this problem and to acknowledge undertaken reviews, the platform Publons was created in 2012. Clarivate took over as owner in 2017, and since 2022 Publons has been part of the Web of Science platform (Teixeira da Silva and

Nazarovets 2022). Obviously, this is not a silver bullet. It has therefore to be acknowledged that the review system is far from perfect. There are thus a number of examples of accepted papers that have turned out to be scientific frauds, but also rejected manuscripts that eventually have turned out to be ground-breaking (Engwall 2014). Nevertheless, the peer review system is the best we have (see, further, Wien in this issue).

Figure 7 summarizes the above arguments. At the bottom, it points to the governance of Academic Leaders and Faculty Members (the Academic Actors above) by Academic Norms from Professions. In terms of Market Actors, Metrics constitute a strong governance mechanism. At the same time, Faculty Members serve the Publishers by submitting manuscripts and providing reviews. Academic Leaders have to negotiate the Payments for publishing and reading. Regulators, in turn, govern by Statutes and Resources and more recently by Open Access Rules. All this puts pressures on Academic Actors, among whom Academic Leaders tend to transfer the pressures on their institutions to individual Faculty Members (see the arrow between Academic Leaders and Faculty Members).

Quo Vadis?

The gist of the above arguments is that Academic Actors are under strong pressure from Professions, Market Actors, and Regulators in relation to publishing. Scientific output – not just *that* papers are published but primarily *where* they are published – has thereby become a key indicator of academic performance of individuals as well as institutions. This has had two consequences: (1) a strong tendency to assess research by means of quantitative indicators, and (2) a strong position for a few strong publishers who enjoy large profits from university payments. For both, it is

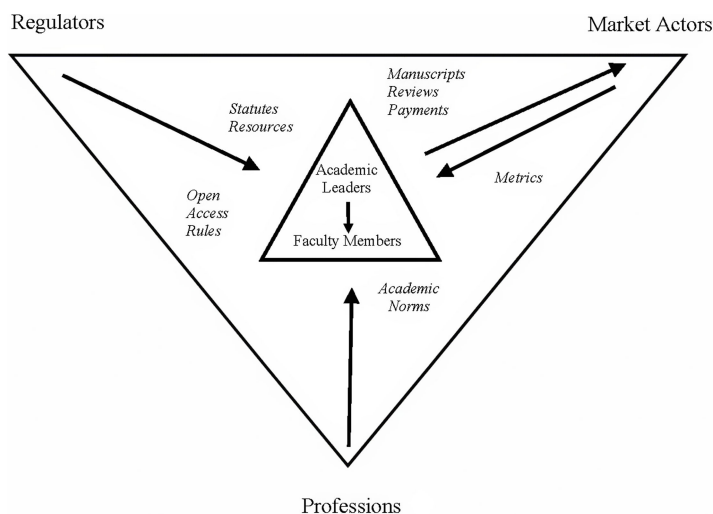


Figure 7. Effects for Academic Actors.

appropriate to ask about possible future developments. In answering this question, let us return to the governance model used above for the analysis.

Professions and the Future

Obviously, Professions have a considerable responsibility for future developments. One important step would be to change the academic norms that they communicate to Academic Actors (see Figure 4 above). In so doing, it would be important to continue along the lines of the DORA and CoARA agreements (see above) and further limit the use of journal- and publication-based metrics in assessing institutions and individual scholars. This would mean a focus on contents rather than publication channels, which in turn would be particularly important for disciplines where books are better means of communication than journal articles. It would also be beneficial for scholars who are not native English speakers, permitting them to publish in their native language. Worldwide, it is also likely to contribute to the valorization of teaching as a significant task for faculty members (see further below). In fact, although research is important for academic institutions, universities without able educators will suffer in the end.

Another step for the Professions would be to increase their control of journals. Professional associations may consider reversing the transfer of journals to the commercial publishers or at least making conditions for Publishers less advantageous in cases when contracts are up for renegotiation. Obviously, those professional associations that are considering the launch of new journals should be restrictive in handing them over to the commercial publishers. Instead, they should develop their systems of quality control and dissemination of research results by exploiting modern information technology. In so doing, Professions could be significant collaborators to Academic Leaders as they negotiate with Publishers regarding their remuneration (see further below).

Professions indeed have a special role to play in relation to quality control. This has always been so, but the task will be more and more urgent in the future with the development of artificial intelligence. As information technology develops, papers may increasingly be computer products, which means further demands on peer review systems. However, the other side of this coin is that artificial intelligence may also be helpful in revealing the origin of such papers and other kinds of fraudulent behaviour.

Market Actors and the Future

The discussion above regarding Market Actors concentrated on Publishers and Assessment Organizations. There is little hope that these two groups will step back. Instead, we could expect that they will take advantage of their positions and even make efforts to take an even firmer grip on the publishing market. Mergers and acquisitions among publishers and an increased integration between Publishers and Assessment Organizations can be expected. In this way, the resulting companies will become even stronger counterparts to Academic Actors.

However, there are also Market Actors other than Publishers and Assessment Organizations. Among them, it is important to mention those actors that want to benefit from the output of academia. One such group, already mentioned in the previous subsection, is the student body. There would be strong signals in the system if they protested against what they get from teachers who put publishing in top journals before excellent teaching. Interestingly, it appears that such voices – not least from parents – are more likely to appear in countries with tuition fees.

Yet another group that can hamper the publishing race are business organizations, which are particularly interested in research that is relevant for their economic results. They could therefore favour researchers that produce results that provide the basis for innovations and patents rather than publications in top journals.

It is also appropriate to consider the recruitment of future generations of researchers. Universities have to recruit these in the market in competition with other employers, who may be able to offer better economic conditions without any pressures to publish in top journals. For universities, in contrast, the publishing race may have negative effects on their abilities to recruit young people who could be the future top scholars.

Regulators and the Future

Obviously, Regulators are very important for the future of publishing. First, there are reasons for them to reconsider the idea that the publication records of faculty members should determine the resources to universities. This is particularly important in relation to the above-mentioned need to put more focus on the task of educating students.

Second, Regulators already today have a tendency to channel research resources towards specific problems that they find urgent to solve. There are reasons to believe that this behaviour will continue and even increase. This in turn may lead to the appreciation of other types of output than the publication in journals with high impact factors.

Third, Regulators could have views on the concentration of the publishing industry in the same way as both US and EU antitrust legislation has put restrictions on the market power of big companies. However, this may be sensitive due to the strong foundation of publishing in the idea of freedom of speech. It is clear that such measures against the publishing giants would require multinational collaboration.

Academic Actors and the Future

Among Academic Actors, Academic Leaders can play a significant role in the negotiations with publishers regarding their remuneration for their services. This was the case even earlier regarding subscription fees. However, in a world of digital publishing, this issue has become more urgent. As demonstrated in the article by Astrid Söderbergh Widding, present-day Academic Leaders need to come together in negotiating deals. In her case, it is a Swedish consortium. For the future, it would be to the advantage of the academic world if leaders from many different countries could join together and in this way put pressure on publishers. This could be a task for multinational university organizations such as the European University

Association and the International Association of Universities as well as national and multinational academies. The result could be lower fees, better finances for universities, and less spectacular profits for Publishers.

Academic Leaders could also be instrumental in a change in publishing climate by paying less attention to citations and rankings in their leadership of Faculty Members. The use of these metrics is based on the assumption that there is a global competition among universities. However, for the majority of universities worldwide – even for well-endowed US universities at the top – home markets for students are fundamental. Therefore, playing down citations in top journals and rankings may create better academic conditions for faculty members and thereby more creative research and better education. It is worth noting in this context that US law and medical schools boycotted the rankings of *U.S. News & World Report* in 2022 (Hartocollis 2023).

An additional reason to play down the use of metrics is that an increasing reliance on these figures may eventually constitute a severe threat to the influence of faculty members in hiring and promotion decisions. An extreme scenario is that such decisions in the future would no longer be collegial but instead taken by human resource departments based on the data they get from computers.

Academic Leaders can thus play an essential role in moderating the publication race. However, Faculty Members are likewise important as providers of editorial services and manuscripts. Thus, it would be reasonable to consider to what extent they should offer their services to journals that are charging outrageous payments. A boycott is likely to lead to difficulties in the production process and eventually a decline in reputation, even scandals due to the publication of fraudulent papers. Of course, this would require much more collaboration between Faculty Members at different institutions in different countries. This would be even more the case regarding the submission of manuscripts. However, a strike of Faculty Members against academic journals would of course be much more challenging than the one undertaken by the unionized movie and television writers in the United States in 2023 (Koblin and Barnes 2023).

All Together

Figure 8 summarizes the above reasoning. Expressed in words, the figure says the following.

Market Actors may be influenced by

- Professions increasing their control over journals;
- Regulators taking antitrust measures;
- Academic Leaders bargaining over charges;
- Faculty Member boycotting journals.

Academic Actors may be influenced by

- Market Actors other than Publishers and Assessment Organizations with other demands;
- Regulators putting more focus on education and practice;
- Professions getting together to limit the use of metrics.

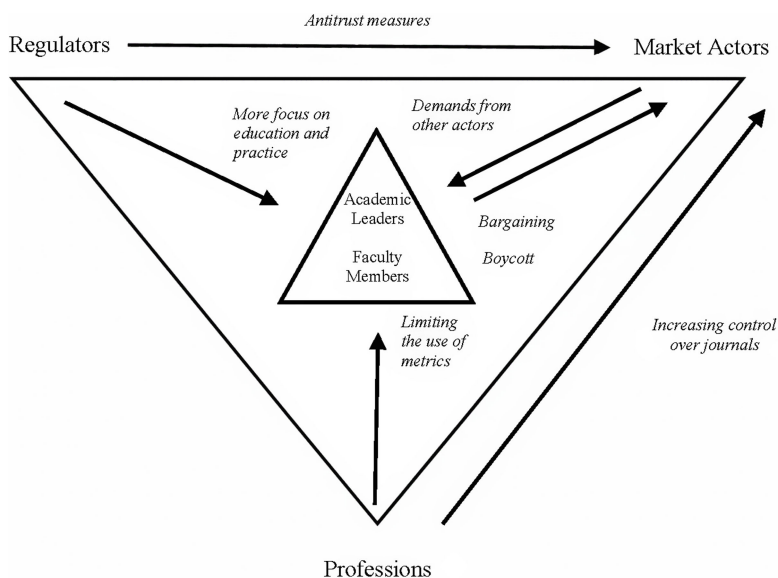


Figure 8. Possible future actions in the publishing system.

To what extent the discussed measures will be taken is of course difficult to say. Nevertheless, the above reasoning may demonstrate that there are possibilities for future Academic Actors to escape the present iron cage of academia.

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About the Author

Lars Engwall is professor emeritus of Management at Uppsala University, Sweden. His research has been particularly directed towards organization studies. Among his publications in the last decade are *Bibliometrics* (2014, ed. with Wim Blockmans and Denis Weaire, Portland Press), *From Books to MOOCs?* (2016, ed. with Erik De Corte and Ulrich Teichler, Portland Press), *Defining Management* (2016, with Matthias Kipping and Behlül Üsdiken, Routledge), *Corporate Governance in Action* (ed. 2018, Routledge), *Missions of Universities* (ed. 2020, Springer), *Internationalization in Higher Education and Research* (ed. 2024, Springer). He has received honorary degrees from Åbo Akademi University and Stockholm School of Economics, and he is an elected member of a number of learned societies.