

Something in the water: scholarly communications in a rapidly changing information economy

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The Internet is causing scholarly communication to lose its long-standing stability, and the players in this process – libraries, publishers, and others – are increasingly challenged to demonstrate their relevance in the digital world. This paper draws examples from another information industry that has also lost its stability: newspaper publishing. The objective is not to suggest that scholarly communications face exactly the same challenges that newspapers do. Rather, the purpose is to use the comparisons to provoke creative reflection for those who serve the academic enterprise. Both scholarly communications and the newspaper industry have historically been protected from significant external disruptive competition but are now seeing insulators stripped away in the networked environment. Going forward, both the scholarly communication community and newspapers must identify sustaining sources of competitive advantage and capitalize on them in order to survive and remain relevant in the modern digital world.



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Question: *If you are a pilot fish, how fast do you have to swim to survive?*

Answer: *As fast as the shark.*

Question: *If you are a pilot fish, how fast do you have to swim for your next meal?*

Answer: *Faster than the other pilot fish.*

Think of scholarly communication as an ecosystem not unlike the ecosystem that is characterized by the symbiotic relationship of sharks and pilot fish. One might imagine academic enterprise as a shark, and those who serve it as that shark's accompanying pilot fish. For decades, scholarly communication has been a closed – or at least very well insulated – ecosystem where there is internal but little external competition. The sea was filled with similarly isolated ecosystems of sharks and pilot fish, each focusing on its own particular purpose and only occasionally interacting. The Internet, and computer networking capacities more generally, have brought previously isolated ecosystems into close proximity and competition. To put it in the terms of the developing metaphor, there is

something new in the water – something big, different, and pervasive which threatens pilot fish and sharks alike, without regard to their traditional isolation.

We are all aware of the changes which have occurred in our own ecosystem with the rise of the Internet. Much has been written about this topic, and that ground will not be covered again here. For one thing, it can be difficult to perceive the true depth and character of change while living in the midst of it. As a way to gain perspective, this paper draws examples from recent events in the newspaper industry, an ecosystem which is also suffering an impact associated with the transition from print to digital delivery and dissemination. The parallel is not a perfect one, nor will what is happening in that sector necessarily occur in scholarly communications. But the comparison is offered as a cautionary tale and as a mechanism to provoke reflection. It would be valuable for everyone to consider his or her own context in scholarly communications and ask: "In what ways is my situation similar to theirs? In what ways is it different?"

Let's consider some of the similarities between scholarly communications and newspapers. Both are established industries, ones built around the communication of information, which were quite stable until recently. Newspapers and academic publishers have competed to build brands based on strong editorial values and high quality authorship. Both have generally competed in relatively niche-style environments – geographic regions for newspapers, academic disciplines for scholarly publishers. Finally, after decades of stability and success, both face major challenges adjusting to the digital era.

Historically, most newspapers were protected from significant competition. The physical medium of the newspaper typically restricted distribution to a relatively constrained geographic region. This meant that most readers had a limited set of newspaper options and that advertisers who wished to reach readers had similarly limited conduits through which to communicate with them. With some exceptions, the majority of newspapers had at most a handful of competitors within their regional sphere and often neatly partitioned the overall market by appealing to different demographic groups, thus leaving little real competition for market share. Although newspapers competed with television and radio news, especially for advertising and mind share, the electronic media tended to serve different functions and audiences, and so true competition between newspapers on the one hand and radio/television on the other was limited. Readers and advertisers seemed to recognize these differences.

In the early days of the Internet, newspapers continued to thrive. Despite declining paper circulation, efficiencies in production work flows, new advertising and revenue streams as newspaper websites came online, and rising ad revenues associated with a booming economy drove newspapers to great financial success. As recently as 2004, an industry study described the newspaper business as both 'economically robust' and 'enormously profitable'.¹ Since then, however, online competition for readers' attention and advertisers' dollars has driven the newspaper industry into a downward spiral. Profit margins have dropped and stock prices have fallen substantially. Print ad revenues have shrunk dramatically, with 2007 marking the worst decline since revenues began to be tracked 50 years ago. Even online ad revenues, which have never amounted to a substantial figure, are showing a

slowdown in their growth. Throughout this turmoil, the number of newspapers produced in the US has shrunk and cuts in staff have hit even the most prominent.²

The decline in newspaper profits has many causes, but most boil down to a growing exposure to competition. Newspapers' geographic monopolies have been destroyed because online, a reader can choose to read any newspaper in the world, not just the local paper. To make matters even worse, newspapers now have to compete for readership with alternative news media. For example, while in the past the BBC was in many major ways differentiated from a newspaper, the differences between its website and that of a newspaper such as *The New York Times* can be subtle at best. So in the digital environment, the websites of these varying enterprises are drawn into direct competition for readers and advertisers. Finally, new forms of media challenge the role of the newspaper, with blogs drawing attention away from traditional news media and collaborative websites such as Wikipedia sometimes 'scooping' newspapers with rapid updates and syntheses from diverse information streams.

Newspapers currently face new competition for the advertising dollars which long formed the base of their financial success. Revenues from classified ads – once the bread and butter of the newspaper business – have been decimated by new online competitors, most significantly companies like eBay and Craigslist, as well as a seemingly infinite number of specialized sites. Online advertising, although growing, has not yet proven to be able to provide a significant amount of income to newspapers which, in turn, are unable to command the high advertising rates that they have been accustomed to charging for print ads. Driven by competition from freely available blogs and other online information resources, newspapers have also faced substantial pressure to provide free and open access to their content, thus forgoing potential subscription revenues in order to draw readers.

One can imagine that, although uncertainty remains about the ultimate fate of newspapers, there are certain types of newspapers that will face greater definitional challenges than others. Let's engage in some speculation about what may transpire in this industry. The largest newspapers – those which have the capacity to do large-scale reporting on national and international issues – are likely to continue to play an important role in

global discourse because their ability to devote substantial resources and provide in-depth primary coverage will sustain them. At the other end of the spectrum, the smallest niche newspapers – those generally focusing on the ultra-local – also have an ongoing advantage because they cover topics of exclusively community-oriented interest, from the police blotter to community events and neighborhood news. Niche newspapers also serve as an advertising venue for businesses and individuals with a tight geographic focus, such as restaurants and local shops. It is the mid-tier newspapers – those which serve as smaller scale versions of the top-tier papers but are not fundamentally differently focused like the niche papers – whose future role seems to be substantially at risk. The historic role of mid-tier newspapers was to provide a regional audience with parallel, if perhaps less exhaustive, coverage of news addressed in greater depth by the better resourced top-tier papers. Much of their reason for being was to print this news and distribute it locally. But when distribution happens on the Internet, success factors are fundamentally changed. Although mid-tier papers have played an important role in regional reporting, their industry position is threatened by both the better resourced top-tier papers which can do significant reporting and by niche papers which focus on smaller regions and draw away local advertisers. Mid-tier newspapers are also subject to the challenges associated with alternative modes of news creation and dissemination such as blogs, Wikipedia and other user-generated sites.

Although there are many differences between scholarly communication's shark and that of the newspapers, a number of similarities exist. Parallels can be seen in the obvious common role of information dissemination, the traditional insulation of these industries, and in the recent stripping of this insulation by the rise of the Internet. The players in the scholarly communication chain – libraries, publishers and others – have historically been protected from external competition. Libraries have had a local monopoly on most types of information-oriented tasks, since end-users were generally unable to discover or access scholarly resources without using them. Taken together, libraries and scholarly publishers controlled the distribution of scholarly information, as faculty were not able to communicate with each other on a large scale except by publishing in scholarly journals which were distributed through libraries.

Scholarly publishers played a historically unique role in selecting, editing and presenting scholarly works and in doing so played an essential role in the credentialing process. Publishers competed amongst themselves for reputation and contributions, but they faced no real external competition.

As is the case with newspapers, the protections offered by the traditional exclusivity of the roles of libraries, scholarly publishers and others within this community are diminishing as books and journals migrate into the digital environment. Faculty can increasingly communicate with each other directly, posting research findings on personal home pages, in institutional repositories, in disciplinary services like SSRN and RePEc, or even blogs. These new capabilities compete with historically necessary publisher roles and may offer superior service in many areas, as research can be communicated extremely rapidly and inexpensively. The credentialing role of publishers remains relatively stable, as assumptions about this role are deeply embedded into tenure and promotion processes at institutions worldwide. The other roles of the publisher – as a selector, editor, and distributor – face substantial competition from new forms of online publishing. Likewise, libraries face challenges in transitioning to the digital realm, as their historic monopoly on the discovery and distribution of scholarly resources has been shattered by online scholarly resources and general purpose information discovery tools like Google. End-users can increasingly perform research tasks without ever setting foot in a library, and through the use of tools like Google Scholar, often without interacting with libraries at all beyond perhaps taking advantage of library-supported access to resources. Throughout the world of scholarly communication, historic monopolies are being destroyed, and many of the traditional players have not yet figured out how to compete effectively in this new environment.

We pose it as a thought exercise to the reader to consider how the example of the newspaper industry is relevant to their own role in the scholarly communications process. In what ways do they resemble *The New York Times*, the local newspaper, or the mid-tier provider? In which roles can they effectively compete in a networked environment?

One conclusion that might be drawn from this line of thinking is that libraries may want to focus on their local user communities. Like local niche

newspapers, libraries might consider very carefully what services they can offer that depend on close proximity, since this is the one area of strategic advantage that a network-based digital provider cannot replicate. Might libraries be able to offer personalized and in-depth services that large general-purpose competitors cannot? Is it likely that an individual library will be able to develop technology infrastructure and network-based services that are going to be more robust and reliable than large-scale providers can offer? Libraries should consider carefully how to exploit the advantages of geographic proximity. They should also consider in what situations geographic proximity does not offer a competitive advantage.

Thinking more broadly, almost all individual companies and organizations in the scholarly communications space are operating on a very different level than entities like Google or Yahoo and can bring far fewer resources to bear in a given situation. In order to gain the scale needed to even begin to work on this level, deep industry-wide collaboration is needed. Large-scale commercial enterprises will not have the mission or values of scholarship as a leading factor in their strategic decision-making or company direction. If the scholarly community – broadly conceived – is to maintain control over these important values, organizations such as colleges, universities, presses and scholarly societies are going to have to somewhat relax their traditional self-reliance, overcome competitive instincts and work together in unprecedented ways. Collaboration will involve compromises, shared investments and resources, and outsourcing of traditionally important roles. Entities in the scholarly communication space must be willing to experiment and invest seriously

in change and collaboration in order to enable the sorts of system-wide decisions and activities which are needed to effectively compete.

The example and recent experience of the newspaper industry do not perfectly match the world of scholarly communications, and discussion of the changes which have occurred in that industry is not meant to be predictive or deterministic. Even so, it is hoped that it serves as a useful thought experiment. There is something new in the water, and we are unlikely to be able to rely comfortably on our own experience and what has been successful in the past to carry us to the future. As pilot fish, we are going to have to find new sources of food and learn new ways to eat.

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