

## **Examining the Core Values of Libraries**

### **Using the New Economic Model of Open Access**

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*ABSTRACT: Based on Francis Heylighen's theory of new economic model of open access, this paper discusses the significance of open access to the core values of library in providing "universal and equitable access to information, ideas and works of imagination." It articulates from three perspectives: the open access recognizes collective efforts in creating and using information; it encourages collaborations and coordination; and it seeks a harmonized system to implement both the rights of intellectual property and the rights of accessing information. The paper took a unique approach to open access. It discussed why open access is a significant part of library service, and how the new economic model of open access reflects the core values of library to "promotes an inclusive society in which everyone will be able to find, create, access, use and share information and knowledge."*

#### **I. Introduction**

Libraries today are situated in a dynamic information environment. The most challenging and revolutionary of the changes in library services brought about by this dynamic environment is surely the internet. The internet, based on modern information communication technology, has opened up new paths for the creation and communication of knowledge resources and has also changed the way in which people produce, exchange and use information. It has had an impact upon virtually every aspect of society. The library, as the recourse gateway through which people disseminate and share information, needs to redefine and reemphasize what is essential to its professional practice in the digital age. The key to a new understanding of the core values of the library is the ability to continually innovate and adapt information services within the internet environment. In its 2006-2009 strategic plan, the International Federation of Library Associations and Institutions (IFLA) identified enabling everyone to "find, create, access, use and share information and knowledge" as the objective of library services, and cited "universal and equitable access to information" as one of the core library values.[\[1\]](#)

In this environment of information technology and knowledge economy, a key constituent of universal and equitable access is open access to information. Open access, including the development and use of open software and open standards, guarantees people's information rights without requiring considerations of "rights and obligations, disabilities, racism, gender, region, language, political views, ethnicity or religious views." [2] As Mr. Chen Li of the National Library of China has said, "open access' is first and foremost a way of thinking, thinking based on the principles of free communication and access to information. It is also a way of thinking based on the principle of fairness, as what it advocates is not depriving one group of people of their interests in order to satisfy the interests of another, but rather the sharing of interests based on fair principles." [3] This new information access mechanism gives more opportunities and equal rights to access information to an increasing number of people, who previously had limited or no access to information, due to economic, political or social factors; it also allows the core values of the library to be realized to a greater extent.

The phenomena embodied by open access and cyberinfrastructure have been called the two great movements of the information technology age. As a key part of the development of modern science and information technology, open access is rapidly becoming a new economic model for Western scholarly communication and information exchange. Unlike traditional economic concepts, open access depends not on the mechanisms of the market economy and economic competition, but on the mechanisms of sharing and cooperation. Francis Heylighen recently gave a highly original explanation of this new economic model. [4] This article will take Heylighen's discussion as a point of departure and will combine his theory with a discussion of the actual state of affairs in academic libraries in the United States.

Before examining the significance of this model for core library values, a brief introduction to the open access economic model is due. How does this new open access economic model really differ from the traditional market economy? In Heylighen's view, this model has at least two features which differentiate it from traditional market economics. First, the generation, recycling and growth of information resources rely upon cooperation rather than market competition. Consequently, what stimulates and drives its development is not the "invisible hand" of market regulation in the form of supply and demand for resources. The protection of proprietary rights, which has always been the foundation of the market economy, is no longer a key factor in stimulating the economy and the market in the open access economic model. What has replaced that is "collective selection," in which the generation of open resources depends upon the organizational forms of an open social structure and the freedom to participate. Any member is permitted to use and share results produced through cooperation. This seems diametrically opposed to the fundamental principles of the proprietary system.

Open access promotes non-profit co-production and free sharing of information, determined by the specific properties of the information source. Knowledge is treated

as a unique type of nonmaterial resource that is non-rivalry in terms of usage. In other words, once a knowledge resource has been produced, anybody can use it; its use by Party A by no means precludes Party B or any other party from using it. Moreover, in the internet environment, copying and recycling knowledge information involves virtually no economic wastage, and so there is no reason not to provide open access. Before the "dot-com" boom, the World Wide Web consisted almost entirely of open resources. Information on the net was available gratis before 1996, and people could provide or access information online at will. The vast majority of internet users were researchers who had followed a simple philosophy: "publish your data and ideas as widely as possible, so that others can use them, criticize them and improve them." [5] The incredible communicating power of the internet made it even easier to turn this conviction into a reality. For the same reason, the internet also became a commercial opportunity which many information providers and publishers pursue. The result has been the emergence of a strange situation, in which publishers and information providers process the research results of science researchers and then sell them back at high prices to the educational and research institutions to which the researchers belong, making enormous financial gains in the process. The institutional repositories which are currently flourishing outside China are an example of a measure intended to address this situation, as they aim to protect and preserve the rights and interests of institutions with regard to knowledge resources and information access.

Of course, recognition of the rights of the creators and owners of information resources remains a precondition of open access. It is entirely proper that the creators and owners of information resources be properly compensated for the time and efforts they have invested in their work. The question is whether such compensation should take the form of a direct exchange of financial benefits. The solution offered by the open access movement proves that financial compensation is by no means the best or only method of protecting intellectual property rights. This is another feature of the open access economic model which differs from conventional economic wisdom. Traditional market economics uses the mechanisms of market competition to stimulate production. Private ownership of technology and products becomes a means of guaranteeing the operation and regulation of the market. Where there is competition, secrecy and monopolization of technology become essential weapons in the fight to gain the upper hand. Whoever best understands and controls the market is able to gain the greatest financial benefits, and this is the most significant driving force stimulating production. However, when competitors join forces to control the market, monopolies and abnormal phenomena can occur, resulting in increases in price which are disproportional to improvements in quality. By contrast, open access does not rely on economic incentives. Although it is often accompanied by some form of financial compensation, the chief driving force behind open access is not financial compensation, but the psychological and emotional reward of recognition by one's peers or of becoming an authority in a certain field. A good example of this is that the recognition of qualifications in Western academia is determined by the assessment of published articles, essays and the academic standard thereof, while the salaries of

professors and scientists are linked to their academic qualifications. For a scientist, open access not only means that his or her research results can be quickly publicized and continually improved through comments and suggestions from peers; it also means that the scientist's work can be disseminated more widely, thereby significantly raising the profile of the scientist. According to Heylighen's interpretation, this is the key motivating factor for open access to information resources.

But what significance does the new economic model of open access have in practical terms for understanding and realizing library core values? The author believes that open access can at the very least be understood as co-creation, shared use and co-ownership of information resources, and this is an ideal practical embodiment of library services working to enable everyone to "find, create, access, use and share information and knowledge."

## **II. Open access constructs a social production model for knowledge resources**

Open access allows every single person to participate in the creation and recreation of information resources, and reflects an understanding of information resources as co-owned by the whole population. Open resources, open software and open standards are called "open" not primarily because they are provided for use free of charge, but because no form of artificial rules or restrictions are put in place in the process of developing such resources. It is no doubt that any such rules and restrictions would cause certain individual or group to gain privileges not enjoyed by others, such as control over technology, and the Openness movement in turn encourages mass participation. This is what Yochai Benkler calls "social production."<sup>[6]</sup> As cyberinfrastructure and the open access movement have developed, a new concept of the "social production group", the so-called "community", has become increasingly widespread. The community has no fixed organizational structure, and anybody who is interested in a topic under discussion by a particular community can join or leave at any time. The most common example of this is Listserv, a service network through which members can interact and communicate. Many open access plans and programs are jointly completed by members of communities. Linux is the classic example of this. Over a thousand software developers and programmers participated in the creation and design of the operating system, which was painstakingly built up over a nine year period. As the participants are either usually enthusiasts and/or experts, they participate on an entirely voluntary basis, and with such zeal that it is difficult to imagine that they would not succeed (see Figure 1).

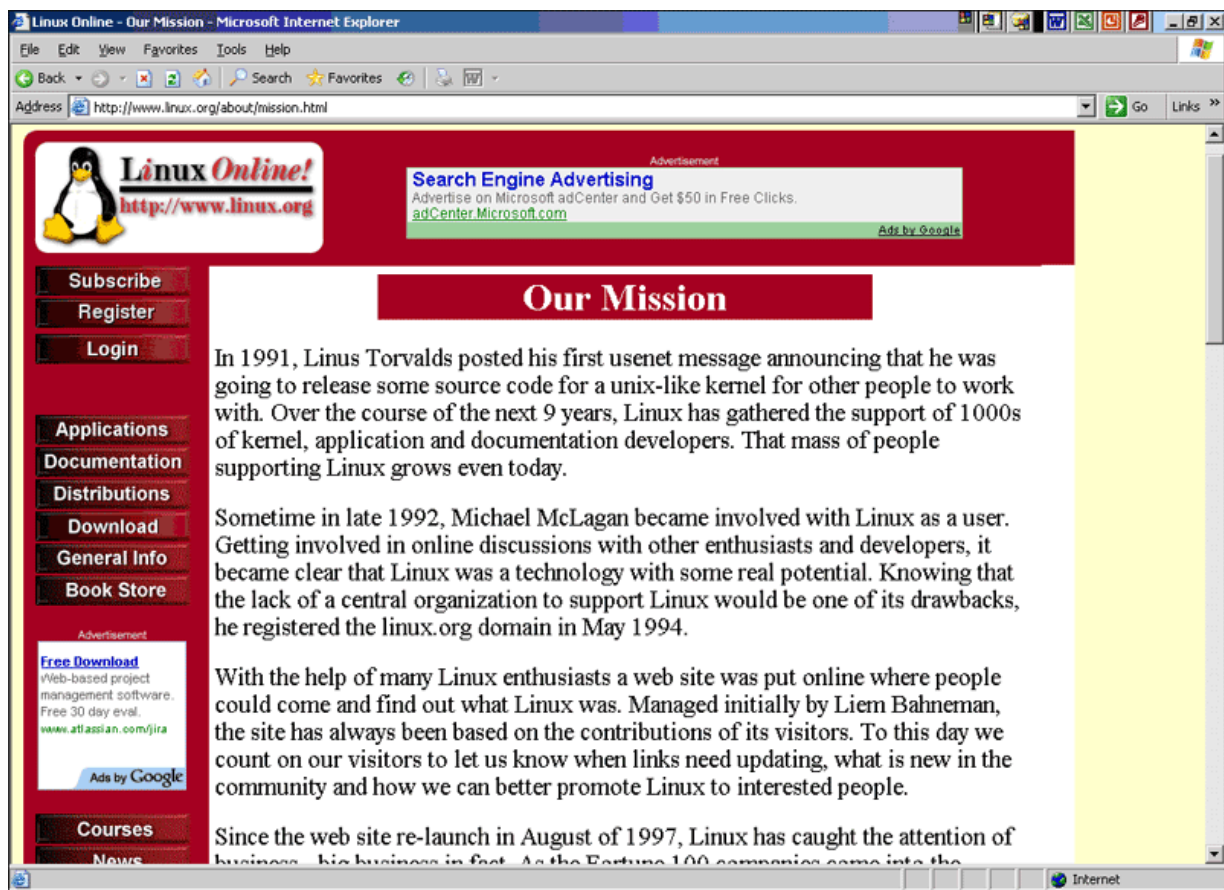


Figure 1: Description of the community cooperation process in the summary of the development of Linux

The function of the library has also changed in this internet environment. With the popularization of internet technology, the boundary between the role of information resource creators and that of users is no longer clear cut. Users can also be creators or re-creators of information resources. Libraries are also no longer simply places where books are stored, and are actively participating in the production and development of information resources. The responsibilities of the library have expanded massively, from collecting and acquiring publications and information resources with restricted proprietary rights, to gathering and storing open resources. The institutional repositories mentioned earlier are striving in this direction. It seems that the entire process generated by the storing of knowledge itself is becoming an increasingly crucial issue, as significant quantities of precious knowledge and information are not shown in final results. Using traditional written records, information can be stored in paper files; this is what is the precious archival collections of manuscripts and handwritten documents. This raw information undoubtedly has a great deal of historical and research value. Today, the use of digital technology, online laboratories, online academic debates and other digital research methods means that the process of academic and scientific research has been virtualized, and if prompt efforts are not made, a great deal of valuable information may simply be lost. This outlines the

challenge facing libraries in the internet age with regard to how to store and provide knowledge and information co-created by the public.

### **III. Open access encourages a spirit of cooperation and collective knowledge**

Online communities of many types are flourishing, and this wave of change is particularly significant in the field of science, where it encourages cooperation and team spirit. Market economics encourages protectionism, secrecy and competition in the interactions between different fields, causing mutual exclusion and the use of underhand tactics between opponents. The open access movement, however, rarely leads to the occurrence of such phenomena, which are replaced instead by healthy academic criticism and monitoring among community members, and positive feedback to research work by colleagues in the same field. Taking Benkler's book "The Wealth of Networks" for example. Benkler actually made the work available in open access "Wiki" form. Not only this, but he added a sections for reviews and discussion, even a "Wiki Community," in which he invited other scholars in the field to comment and discuss his work. Benkler's work has become a virtual centre, from which various communities have radiated outward (Figure 2). Some of these communities are interested in copyright for open access, while others have original opinions regarding the economic phenomena of open access. They actually enrich and enhance the perspective of the original work of the author; and the author has received the recognition of his peers as a result of his insightful views and penetrating analyses, thereby improving his standing in academia. This process is a benign cycle of non-competition, community monitoring, collective contribution, auto-catalysis and positive feedback. Although the formation of a community is self-catalyzed and involves many chance factors, there are always core people behind a successful open access project, who act as leaders or guides, such as Linus Torvalds, who initiated Linux.

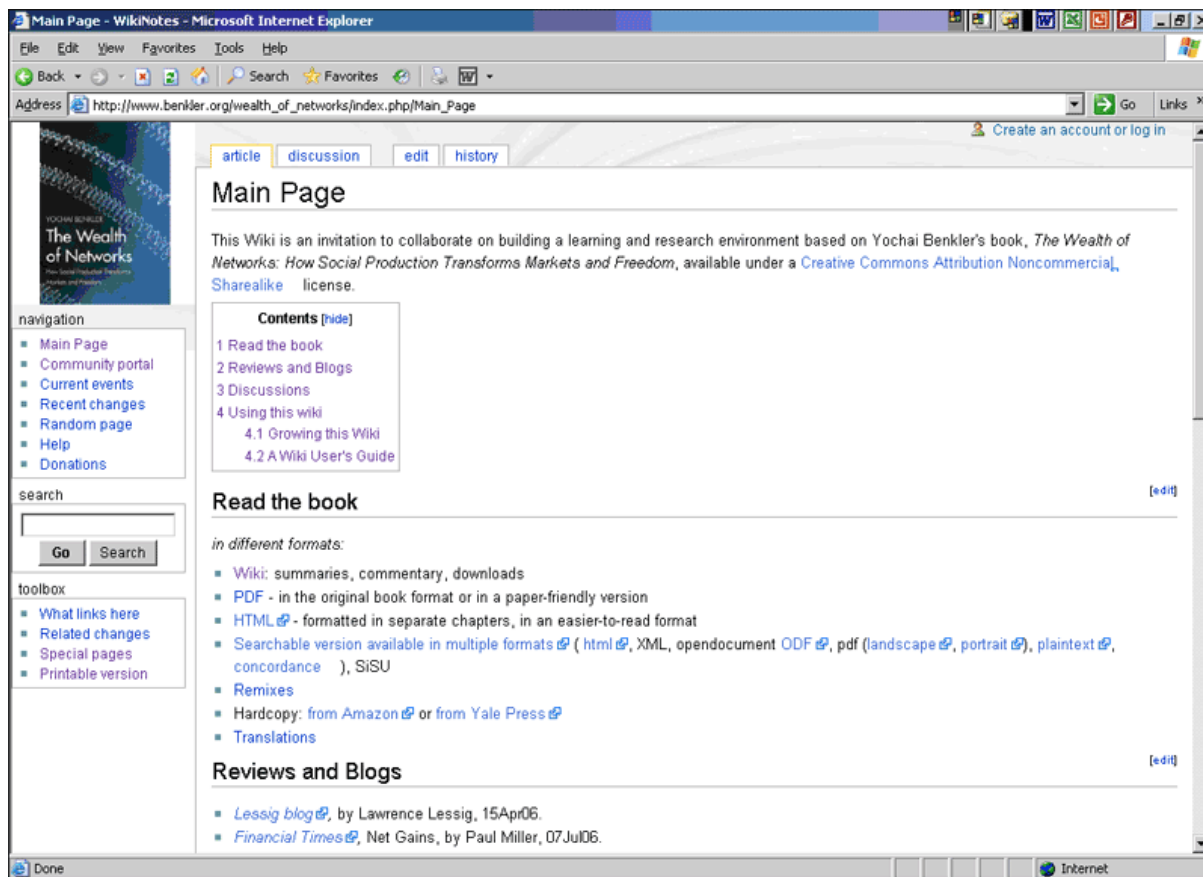


Figure 2: Webpage listing discussions and blogs on the "The Wealth of Networks" Wiki

While publishing one's research results using open access methods undoubtedly raises one's profile, it also means that these results are open to inspection and judgment by anyone who has the opportunity to access them. The courage to face up to such criticism stems from an awareness of the scientific nature of academia. Those who actively solicit the criticisms and comments of colleagues as Benkler did evidently fully realize the importance of community member cooperation and team spirit. The function of a community is to provide a serious, yet healthy academic environment for its members. The institutional repositories which have recently begun to thrive in the libraries of US higher education institutions are aimed precisely at providing such a space for the educators and students of these schools.

#### **IV. Open access seeks to safeguard the information rights of the public and to promote resource sharing**

Open access is the provision of information at no charge, including resources, software and standards. As the open movement is based upon public participation and social co-creation, it has resulted in a parallel attenuation of the desire for asset ownership and the monopolization of interests; excessive disputes regarding who gets a "free ride" when people use information resources created by others without charge are therefore unlikely to occur. The opening of internet information is built upon liberal and democratic ideas of knowledge and scholarship. This brings us back to the

issue of core library values. From the perspective of the core values of library services, open access is an affirmation of the status of knowledge as human wealth. China has a tradition of sharing knowledge stretching back to ancient times. Confucius' concept of "education without discrimination" actually shares some similarities with IFLA's principles of information access and information use without consideration of political, social, status or religious differences.

Library's point of view on core values, open access and information sharing brings up the issue of how intellectual property rights should be treated. Although the open access economic model does not rely on economic interests as its driving force, the intellectual property rights of information resource creators must still be acknowledged and respected. The open access movement has already developed and formulated a range of measures aimed at providing reasonable use of intellectual property under open access. The [Creative Commons](#) (CC) copyright licenses are just such an attempt to create a workable solution that takes into account both the rights and interests of the copyright holder and the information rights of the public. Benkler's book is in fact provided for open access under CC's "Attribution-Noncommercial-Share Alike" license. IFLA's strategic plan reaffirms the Federation's commitment to enable everyone to know, learn and communicate without restriction. It also reiterates IFLA's position of supporting regulations to enable fair and just use of intellectual property rights, while opposing the use of intellectual property rights to restrict access to information. It is essential to recognize that this is an aspect which cannot be overlooked in any discussion of library core values today.

The internet has not only changed methods of knowledge resource production but has also altered the forms in which information is exchanged, allowing anyone to be an information creator or an information product user. Benkler maintains that the internet will lead to the "social sharing" mechanism of open access, which will drive this form of exchange from the margins of the economy towards the mainstream. Traditional economics is unable to explain many successful examples of open access that can be fully explained using the new open access economic model. This economic model sets out the new meaning of library service core values in the internet environment in terms of factors such as social structure, utilitarian goals and economic effectiveness. The ideas laid out in this model are consistent with the long-term public interest of Chinese society, and the community concepts that it advocates also share a number of common features with the structure of society as a whole. The co-creation, sharing and co-ownership of information resources are the most basic driving force behind open access. Many scholars and colleagues in Chinese library community have already made and continue to make great efforts to advocate and develop open access. These efforts will allow the potential of the public service philosophy of the library to be maximized, and the core values of the library will meet with even greater success in the internet environment through the open access movement.



### Reference Notes

- [1] IFLA 2006-2009 Strategic plan (English). URL: <http://www.ifla.org/V/cdoc/IFLA-StrategicPlan.htm>. (Accessed on 10 April 2007).
- [2] *Ibid.*
- [3] Chen Li's email to the author, dated July 27, 2006.
- [4] Heylighen, Francis. (2007). Why is open access development so successful? Stigmergic organization and the economics of information. To appear in B. Lutterbeck, M. Bärwolff & R. A. Gehring (Eds.), *Open Source Jahrbuch 2007*. Berlin: Lehmanns Media. URL: <http://pespmc1.vub.ac.be/Papers/OpenSourceStigmergy.pdf>. (Accessed on 28 November 2007).
- [5] *Ibid.*
- [6] Benkler, Yochai. (2006). *The Wealth of networks: How social production transforms markets and freedom*. New Haven, CT: Yale Press.

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