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Librarians and the Attention Economy

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Introduction

With the advent of Web 2.0 technologies, libraries began not only developing an innovative technology, but have also started developing new economic paradigms for library services. In an economy where success and influence are based on the ability to attract attention rather than on scarcity of resources librarians have a unique opportunity to develop new models for library services that can greatly raise the public perception of librarians as professionals.

The Basic of Classical Economics

To understand this we need first review some basics of economic theory. A fundamental tenet of classical economic theory is the idea of scarcity. In a given area a limited amount of a good is produced - say, grain. In any given year there is a fixed amount of grain available in the market for sale - due to a variety of factors including weather, the decisions of farmers to plant, yields, and the flow of the finished product to other areas e.g. if the farmer can get a higher price in the next county he will withhold his crop from the local market thus raising prices. In classical terms, economics is based on the idea that there is a limited amount of any given produced good.(1)

In the information economy this becomes a different situation where scarcity is less a product of limits on production e.g. the amount of grain that can be grown in a given area than artificial limits such as copyright protection. There is a form of scarcity in that there are limited inputs available for the initial production of a product, but after it is produced the marginal cost of reproduction approaches zero.

A readily understandable example relevant to librarians is that of recorded music. There are limits on the amount of recorded music that can produced - related largely to the initial costs involved in producing the music - building a recording studio, hiring studio engineers, finding musicians talented enough to create music that people will want to buy - However, once the music is produced and available in a digital form the cost to the consumer becomes extremely low - exactly zero in the case of illegal music sharing systems such as Napster - ignoring, for purposes of argument, that the user has costs of buying a computer, an Internet connection, electricity, their time, etc.

Where does this lead? In classical economics items have some kind of intrinsic value based their perceived worth in the market place. In the case of land, for example, there is a limited amount, that damned scarcity again, upon which is imposed a commonly accepted system of valuation. Everyone can agree that a certain piece of property has value always. There may be disagreement over this value, but, again, we have a system of appraisers who can be used to determine an agreed upon value for people involved in a transaction. In the electronic environment we do not.

This, I would submit, is the fundamental difference between producers and consumers in a digital environment. Producers of digital content assert that their product has a marginal utility greater than zero while consumers assert that the value of the product is zero. Consumers of digital content, unlike, say, consumers of physical products such as pears, don't see any monetary worth to a digital product beyond the initial sale. We will ignore, for sake of argument, the minority viewpoint that all information should be free and assume that users, as a group, generally accept the idea of some form of capitalist marketplace.

Users of P2P systems are not thieves, in the sense of thinking they shouldn't pay for product, but have developed an economic argument that value ceases upon first sale and for producers to attempt to gain compensation beyond that is wrong. In some sense the modern teenager crouching in his bedroom with Napster or Kazaa has reestablished and extended the medieval concept of a "just price". As Thomas Aquinas stated:

If someone would be greatly helped by something belonging to someone else, and the seller not similarly harmed by losing it, the seller must not sell for a higher price: because the usefulness that goes to the buyer comes not from the seller, but from the buyer's needy condition: no one ought to sell something that doesn't belong to him.(2)

The fundamental argument that is routinely made is that consumers who download digital files without paying for them are guilty of theft. In a legal sense this is true. However, it assumes that both the producers and the consumers share the same ethical system that they agree on what constitutes an "unethical" act. The truth is that there are differing ethical systems. A cannibal, for example, sees no problem with eating another human being while someone who subscribes to Christianity or another system of religious values would find it revolting and "immoral."

The Development of a Post-Modern Ethic

One could point to many reasons why these different ethical viewpoints have developed the decline of religion, lack of moral education, etc but it seems one possible explanation lies in the idea of attention. As has been suggested elsewhere, see, we can be seen as entering what one could call an "attention economy." In the past, due to the paucity of mass media, individuals were forced to take a wide view. One was educated to the idea there was one set of values and, in practice, one had to take into account the views of the wider society in one's actions. Living in a small town, for example, one wouldn't routinely take up shoplifting both because of the limited amount of things to steal and the overwhelming chance one would be caught. As a society we paid attention to the actions of others and adjusted our actions in accordance with the expectation (or perception) that lack of conformation with accepted norms would result in a penalty. In economic terms, there would be an opportunity cost for not going along with the norm.(3)

In the modern digital economy, by contrast, everyone lives in the same large city where no one especially cares what people do. There are, of course, the screeds from publishers, the same as one hears small shopkeepers yelling "Stop Thief!" when a passer-by has helped themselves to an apple from an outside stand, but the cry is lost in the overall hustle and bustle. In a world of constantly bifurcated attention, calls about the unethical behavior in relation to one single node is lost the same as if one was looking at a tree one knows it's a tree, but rarely pays attention to individual leaves.

Ethical behavior matters more in an economy of scarcity. Ten individuals stranded on an ice-flow will care more about the distribution of a limited amount of a non-renewable food supply in an equitable matter (and the theft of that food) than the same group of individuals at a banquet at the Ritz Hotel. Abundance and autonomy begets sin. In this case what we're really talking about, as suggested above, is the indifference of a group of users of digital resources to a commonly accepted norm.

In the case of the Internet the sheer numbers of users (combined with the ready availability of nexuses of access both for downloading and uploading information into the system) has created a sheer

where the group, fundamentally, creates its own law. A crowd of ten people demonstrating on a street can be readily controlled by the police and a requirement for a permit. A crowd of 300,000 makes its own rules and enforces them on the larger society including those engaged by society in the creation of order. One only has to observe the situation surrounding most G-8 economic summits to see this is true to the point where these meetings of world leaders are now held in secure locations e.g. Davos, Switzerland rather than in the heart of major cities like Seattle.

The Attention Economy

Michael Goldhaber, noted commentator and writer on the new developing information economy, has written extensively about the idea of an attention economy, suggesting that we convey meaning to an object or situation by paying attention to it. In the digital world, one can suggest, the idea of moral conduct regarding the use of digital materials can be seen to be influenced by this principle. The fact that usage of a digital resource is "illegal" is simply another meaning that users can choose to observe or, more often, ignore rather than a societal taboo. If one considers, for example, the downloading of a digital music file there are numerous aspects, what we could call 'leaves of attention' that users notice whether they like this artist, do they have a copy of this song, is the song something they want, is it of a size and file type readily downloadable, is it something that has been recommended to them to others. The fact that the very act of downloading may be illegal is simply one more nexus, one node, one leaf, on what one could refer to as an 'attention tree'. Value is created by meaning. So, in a situation where the meaning attached by one's attention is small (or non-existent) the corresponding value associated with that "leaf" monetary, moral, whatever is small to non-existent. Just as when the first red leaf of autumn is swamped by the 99.9 percent of leaves that are still green the red leaf is invisible.(4)

This leaves the question of why. What motivates the user of digital resources to take the risk, however small it may be in reality, to steal digital files and risk lawsuits, monetary damages and, in short, incur opportunity costs for their actions? The Austrian scientist Georg Franck makes a comment regarding scientific information that seems applicable:

> "Science is a collective endeavor: an industry in which the work of one set of specialists serves as input for other lines of specialized production. From a collective point of view, science can only function rationally by an efficient division of labor. If the available talents and efforts are allocated suboptimally, scientific production will not achieve collective excellence even if it is optimized from the viewpoint of the individual. But how are we to assess efficiency in science? Efficiency concerns the output into which resources that are used are transformed. But the output of scientific work consists of information, which is semantic and pragmatic in nature and thus defies immediate measurement. Scientific information even seems to escape economic valuation. Economic value is determined by the willingness of those interested in a particular item to pay for it. But the output of scientific production is not sold on markets: it is published. Publication puts intellectual property at the disposal of the general public under the sole condition that its processing into the intellectual property of the user is credited by citation. The performance of knowledge production can therefore not be assessed by comparing inputs and outputs in monetary terms."(5)

One possible explanation: The downloaders are actually expressing an attempt to create a more rationally allocated set of nodes of attention. In a "legal" manner the distribution of these nodes, these leaves, are restricted by various legal mechanisms most obviously by having them only available in security coded shrink wrap in brick and mortar stores. The illegal downloading of music, then, can be seen as an attempt to redress this irrational, in the view of the users, allocation of resources. Illegal downloaders, in effect, are similar to individuals breaking into the grain silos of the farmers mentioned at the beginning of this piece and redistributing the grain where they feel it is needed.

Illegal downloads of music (or any other digital materials) are reflecting the principles expressed by Franck regarding scientific information. He states "Efficiency concerns the output into which resources

that are used are transformed." Illegal downloaders are exercising this idea since, in their view, the system is inefficient in how it distributes information which they see as creating conditions of artificial scarcity. Their actions, while perceived, quite correctly by majority moral and legal positions, as being wrong, represents a kind of digital Benthamism where their actions, in their view, are creating efficiencies in the marketplace creating the greatest good for the greatest number which, in the end, is what the idea of just price really comes down to.

Goldhaber makes the observation that huge numbers of postings on the Web or the net, along with many kinds of information distributed by more primitive means, never receive the slightest attention, that is, in the old terms they are not consumed; there is no demand for them. No matter how curious or inquisitive we may be, or much desirous of being entertained, there is already far too much information coming at us for us to make good use of it, or indeed to take it in at all. If the growth of material production was limited by the ability to consume, then the growth of information should have been limited even more, if the economic motives for that growth had been the same. In other words, the tremendous growth of the information sector is entirely irrational from the viewpoint of standard economics, carefully analyzed. A different explanation is required.(6)

Libraries and the Attention Economy

This leads to a fundamental issue facing libraries. Individual users of digital resources have been attempting, legally or not, to create efficiencies in the marketplace. Libraries, on the other hand, have been attempting, with lesser or greater success, to accommodate all information being produced. Over the past twenty years we've seen an increase of great proportion to include all the new digital materials being produced as well as post-process existing materials into some form of useable digital content e.g. the Google book initiative.

All well and good, as long as one accepts the traditional definition of a library as an archive a place where all the leaves of attention will be gathered and organized. But this leads to the question, assuming Goldhaber is correct, is whether this strategy is wrong. Are libraries collecting materials that are used or simply materials that may never be used?

The truth is that the present economic situation for libraries is unsustainable. Unlike the illegal user, who is picking and choosing what items meet his need for attention, libraries assume that every node is of interest, at least potentially, so it needs to be collected or, at least, an access point defined. The former, from an economic perspective, is actually being more efficient. He knows he wants copies of all the Brittany Spears songs in existence and can choose to ignore all the other nodes of attention competing against that. Libraries, by their nature are being required to pay attention, to a lesser or greater degree, to all the leaves of attention. Libraries, from an economic perspective, are irrational since they are not seeking to maximize their economic efficiency except, perhaps, in some narrow sense of making broad collection decisions (we will not collect books in ancient Ge'ez) and economically (We won't buy the $100,000 database and try to get discounts on the rest).

Libraries, as a practical matter, cannot pay attention to everything, to every node, to every leaf on the tree of knowledge. In the past we could, as a group, make at least the pretence of doing so - if even, in practice, only the largest libraries attempted to put it into being Now, even that polite fiction is denied us in the overall flood of information. For no other reason then we operate in conditions of scarcity money, staff, and , most important, attention. There must be a new paradigm that deals with this reality.

Web 2.0 and Libraries

Web 2.0 is one approach to the problem. This can be seen as an attempt by librarians to involve themselves more fully into this economy of attention. Through creation of multiple points of interaction with users, the result is an increase in the level of attention paid by the user, compared to the static nature of Web 1.0 technologies, which were mostly passive in regards to the users. The result is what

could be referred to as 'multiple leaves of attention.' Like the autumn tree of our earlier example, instead of one red leaf, there are a multitude with varying colors and shades.

More importantly, Web 2.0 also represents an attempt to deal with the issue of scarcity of library resources by making the users partners with the librarians in the creation and development of content. From an economic perspective this is sensible since the library, aside from infrastructure costs of building and maintaining the system, is offloading the actual labor costs to the users themselves.

There is, of course, major anxiety, among library professionals, somewhat if not entirely justified, in doing this, especially in terms of quality control the library is giving up, for example, its monopoly over such things as the content of library catalog records by allowing user inputs. Presumably, although this is yet to demonstrate by a substantial body of research, this will by offset by higher user participation and satisfaction. To some extent there is criticism of some Web 2.0 social networking activities - such as user tagging of catalog records - as being duplicative and unneeded since librarians, long ago, solved such issues with the use of MARC records and controlled vocabulary. However, understood from the standpoint of an attention economy such activities serve to increase the public participation in and engagement with the library. The real question becomes not whether libraries will participate but how they will shape this participation to meet their own needs and the needs of their users.

It would also seem, based on the experience of other professions, such as journalism or computing, that the widespread participation, the "democratization" if one will, of information provision in economic terms the elimination of a barrier to entry should create a larger market for librarians through the creation of new forms of professional activity. For example, by allowing readers to annotate the catalog with their impressions of read books, it eliminates the need for the librarian to provide reader's advisory services e.g. annotated new book lists. Whether this is indeed the case that this leads to new and higher forms of professional activity (and recognition) or whether it results in the marginalization of librarians remains to be seen.

It does seem clear, however, that, at present, the advent of Web 2.0 services, Instant messaging, chat, etc, has resulted in a higher public profile for librarians and a greater amount of attention through the perception, especially by younger users, that librarians are "cool" or "hip".(7) More to the point, however, the advent of these services tends to raise the public awareness of librarians at exactly the same point in time, as illustrated by the discussion about ethics above, where librarians can exercise their existing moral and professional influence to help direct the development of new paradigms of thought. Rather than being simply marginalized, as the archivers of existing content, librarians can participate front and center in the development of new technological models for access and distribution of content and, in the process, influence the moral and ethical development of society associated with such developments.

How Can This Be Accomplished?

There seem to a number of immediate steps that librarians can take to start making the changes suggested above happen:

- Full integration of new technologies e.g. blogs as a format and, more importantly, with librarians as participants.
- Librarians need fuller engagement with the wider intellectual life of academe. Perhaps becoming more of a public forum for academic events, especially those related to issues of ethics and technology. The library as a community center of culture will have to become the norm for libraries to remain viable in a culture saturated with multiple media striving for attention. Public libraries have more readily embraced this concept than academic libraries
- The librarian as public intellectual. Librarians need to be more fully engaged in public discourse - even in those kinds of venues which, traditionally, they may have shunned. There is a place for librarians on talk shows or in print articles in newspapers and other places that people outside of libraries use.

- More and better dialogue with users to develop collections that meet their needs rather than the expectations of librarians as to what libraries should be.

Most importantly, and this may be the most difficult thing to do, libraries will have to be focused. No longer can we attempt to be all things to all people, but need to concentrate on what our users need. It is this mindset, moving from the librarian as expert in information to the librarian as co-participant in a process of discovery, which may be the most difficult for many libraries (and librarians) to accomplish, but not impossible.

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