Copy me: Technological change and the consumption of music

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> For those who worry about the cultural, economic and political power of the global media companies, the dreamed-of revolution is at hand. The industry may right now be making a joyful noise unto the Lord, but it is we, not they, who are about to enter the promised land. (Moglen 2001)

Introduction

Technological changes have political implications. Changing the way we interact with things encourages a reconsideration of the rules and institutions that have governed previous interactions with them.

The current debate about copies of recorded music using the Internet is an excellent example of this, and by examining it one may better understand the relations between people and recorded music, and between listeners and the traditional publishers of music.

While undoubtedly a great deal may be usefully said and examined in other technological changes in music recordings, I will here focus primarily on file-sharing, as it is something I have been somewhat involved in myself, and hence I have significantly more knowledge 'from the inside.'

I will begin by discussing traditional definitions of 'commodity,' and then move on to a very brief overview of historical trends in copying and music recording. I will also touch upon the printing press in order to discuss the creation and rationale behind copyright laws, which form a major part the present filesharing debate. I will then go into greater depth into the current practises of people who share music on filesharing networks, and the response by the recording industry, before embarking on an analysis of the meaning and significance of some of these new practises and dialogues.

It should be noted that I'm speaking primarily of England and the United States of America, and the situation will be somewhat different in other parts of the world.

The Meaning of 'Commodity'

The word 'commodity' has been used variously to talk about items of exchange. In the capitalist market a 'commodity' is defined as having several key features, from which are derived appropriate rules of trade.

Commodities are also generally assumed to be rival and exclusive; that is in trading an item one loses access to it.

The most important feature of a commodity is that it be comparable to another commodity, in order that their relative values may be judged so that one may establish an exchange value for the item. Indeed Kopytoff (1986) goes so far as to claim that wherever exchange technology is introduced which allows a greater range of things to be compared (such as for example money in newly colonised regions), more objects are commodified.

Two commonly identified means of deciding on the relative value of a commodity are use value and exchange value. Use value is based upon the utility of the commodity, whereas exchange value is based upon the amount of labour that went in to creating it. (Sterne 2006: 830) Different systems of exchange weigh the relative merits of utility versus production labour to value commodities differently.

Assigning value to works of art is of course a very difficult and personal task, revealing a great deal about the valuer as well as what is being valued. Several commentators have argued–Adorno and Horkheimer (1972) perhaps most strongly–that to assign an artwork an agreed-upon value in order to facilitate its exchange undermines both the personal and the transcendent nature of art, and inevitably devalues and debases it.

The History of Recorded Music

While such concepts of commodity appear to map quite easily onto most physical objects, using such terms to talk about recordings of one sort or another is generally less straightforward.

Indeed the technology of the printing press, by dramatically reducing the production cost of creating copies of written works, was an early example of the difficulty of reconciling ideas of commodity with the new properties of exchange enabled. To be more specific, by enabling near-perfect copies of a work to be made, the qualities of rivalness and exclusivity which were assumed of a commodity were altered. While the initial creation costs of a work remained high, the cost of subsequent copies dropped dramatically, making it economically feasible to make and sell copies of works in a far less centralised manner.

In the free market the cost to produce something is the means of determining its exchange value, which becomes more problematic when means of mechanical reproduction become available. This is as the production cost differs very significantly between the item produced and its copy. Whereas the first work costs perhaps one year's salary for an author, plus the amount for the set up of the book in the press, plus the materials needed, plus the working of the press, a great many subsequent copies may be made for only the cost of additional materials and working the press again. The exchange-value of all subsequent copies is extremely low, but does not take into account the author's salary.

Publishers chose to create a business model in which the initial production costs of a work could be compensated by subsequent printings, which would be priced a little over the exchange value which the free market would assign. However such a model was undermined if a competitor took a work which had already been paid-for and produced their own copies at a price closer to its exchange value. In order for publishers to ensure the feasibility of their business-

model concepts of copyright were enshrined into law, removing the right of anybody but the author (or more typically a publisher designated by them) to print a given work.

In so doing publishers legally repressed the new economic qualities printing presses bestowed on the written word–less exclusivity–and instead artificially mirrored the model of scarcity under which which the majority of the market operated.

This way of business worked reasonably well, and when it became feasible to produce of mechanical reproductions of music, publishers adopted essentially the same model, using copyright laws to ensure a monopoly sufficient to pay back the initial creation costs.

However this model was threatened somewhat by the introduction of new technologies which dramatically decreased the expense, size and difficulty of copying music to the point that many private individuals could do so themselves. Whereas previously making unauthorised copies had been limited to large operations, new technology now enabled a much larger group of people to copy and share recorded music, independent of any external organisation. While such home-copied music was generally of noticeably poorer quality than an officially sanctioned copy, widespread use made clear that for many the virtue of sharing music was worth some degradation in quality.

Publishers were unsurprisingly hostile towards home copying of the work which they had released, invoking the fact that such activity was technically breaking copyright laws (though these laws had been drafted with rival businesses in mind), and arguing that home copying was causing a reduction in their sales of music which would result in a smaller number of musicians able to be supported by them.[1] Over time however the publishers found that there was no realistic way to stop home-copying, and resigned themselves to a position of quiet grumbling. People evidently still bought copies of music produced by publishers, due to factors such as increased sound quality and included cover artwork, and the belief that by doing so one was ensuring the continuance and success of the musician.

With the new technologies of music compression, filesharing software and cheap internet access came a far more significant threat to the business model of music publishers.

Computers on an electronically are primarily copying machines of anything digitisable–almost any task performed on a computer requires the copying of digital information across various parts of the computer. The measure of how quickly information can be copied between different parts is a significant measure of how fast a computer is said to be. And so it is when networking computers together, and as such a primary focus of network engineering is ensuring copying between computers is as fast and efficient as possible. Computer networks at their core are no more than geographically insensitive copying systems.

By allowing anybody with an internet connection to share music with anyone else with an internet connection with no more effort than setting up a filesharing program, a global network of available music was created. Now anybody with internet access had free access to almost any piece of recorded music at near-

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[1]Commentators such as Adorno and Horkheimer (1972) argue that a smaller pool of musicians would make no real difference to the quality of output from the publishers, as by their nature they homogenise and will only support acts which propound their world-view. See below.

or identical quality to the products of the publishers' copies. Moreover the process of acquiring music copies using internet filesharing was faster and more convenient than the traditional vehicles offered by publishers.

The structure of the computer networks which make up the internet are by design decentralised and fault-tolerant, and as such top-down control or restriction of internet activities is very difficult. This is further compounded by its transnational nature, which renders national legislation on acceptable uses largely ineffective, as one may simply access the desired material on a computer in a country which has no such legal restrictions. Thus we get the well-known quote by John Gilmore: "The net interprets censorship as damage and routes around it." While early filesharing networks such as Napster were centralised and hence could be easily shut down by stopping a few computers, most are now designed to take advantage of the decentralised nature of the internet, and thus remain active regardless of the status of any particular computer in the network.

Filesharing: Individuals

The first point to note regarding the practises of individuals is the enormous popularity of filesharing as a means of acquiring recordings of music. Despite appeals and threats from music publishers the usage of filesharing networks is commonplace among those comfortable with technology. Included among these are many artists signed to record labels, though many others reject filesharing citing reliance on a business model which would be undermined by their doing so.

The importance within filesharing networks of making newly downloaded music available for at least a few days is very frequently emphasised, though technically it's very rarely enforced (not least because it's very difficult technically to do - as the networks have been engineered from the ground-up to facilitate the free copying of data). The process of only keeping a downloaded file available until one's own download is complete and then immediately removing access to others is strongly frowned upon, and referred to as 'leeching'.

Some commentators have suggested that such emphases can lead one to fruitfully consider treating filesharing as a gift economy (Barbrook 1998), but as Zerva (2008: 16) points out, the typically very diffuse, vague and anonymous social connections between exchange partners renders such a frame of analysis inappropriate.

That copyright law is being broken is very widely known by participants, but evidently is not regarded as a valid reason to change their habits. Indeed many who are more deeply involved in the filesharing community have vocally opposed (with varying degrees of sophistication) current copyright regimes as inappropriate and inapplicable in the era of the internet.

Probably the largest and best organised of such opposition groups call themselves the 'free culture' movement. Inspired heavily by the 'free software' movement before them, at the centre of their beliefs are that it is an ethical imperative to allow the sharing of digital work, and in many cases also explicitly allow others to use one's work in their own creations. This is accomplished through a series of copyright licences[2], the most popular of which are produced by the

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[2]This again is an innovation first used in the free software movement, by which one allows

Creative Commons foundation, and allow several choices as to how one's work may be used. Some of these licenses, referred to as 'share-alike' licenses by creative commons, and more broadly as 'copyleft' licenses, actively encourage the sharing of a work, by allowing one to modify or incorporate the work into their own work however they choose, providing that the resultant work is also released under the same sharable license.[3]

Filesharing: The Publishing Industry

The response from the music publishers was unsurprisingly less enthusiastic. After cutting the head off Napster only to find a hundred new networks spring up, the publishers started an aggressive campaign to sell the idea that music recordings ought to be treated as any physical commodity, and moreover that copying a recording was no different to stealing from a shop. Indeed the rhetoric of 'stealing' and 'theft' was employed a great deal by the industry, in an attempt to ensure that any discussion of filesharing would be framed in terms implying that recordings were no different from physical items.

When it became clear that a significant number of people were not swayed by their advertisements, and filesharing networks were technically nigh-impossible to dismantle, the Recording Industry Association of America (RIAA), soon followed by the British Phonographic Industry (BPI), started the highly controversial practise of suing individuals who made their copies available on filesharing networks for copyright infringement. With estimates of numbers of people sharing copyrighted material reaching the millions it was clear that the lawsuits were not intended to directly target each individual offender, but rather scare enough people into stopping to make the filesharing networks less attractive and useful. Indeed it appears that industry hoped that by targeting prolific 'seeders' (that is people who share a large amount of content) they would change the economic situation to one in which the best path for the individual (according to classical game-theory) would be to only download what they needed and share as little as possible, hence initiating the conditions for a tragedy of the commons type scenario. Thus far however such tactics have primarily served to provoke resentment towards the industry, thus for many adding the motivation of fighting a system seen as destructive.

Industry groups have also lobbied for and won significantly more stringent copyright laws, such as the Digital Millennium Copyright Act (DMCA) in the USA and the European Union Copyright Directive (EUCD) in the European Union. One of the major features of such laws is to make the breaking of copy-protection measures on digital copies illegal. Copy-protection is as mentioned above a very difficult thing to institute on computers, whose basic design is to copy data. As such the recording industry found that any copy protection scheme they added to their copies was quickly dismantled, so they turned instead to the courts in an attempt to dissuade people from breaking the protection measures. These too appear to have done little to stop the breaking of copy-protection, but have further incensed and solidified many against the recording industry and their lobbyists.

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redistribution of a work providing certain conditions are met.

[3]This effectively turns copyright law on its head, and has hence been described as "a form of intellectual jujitsu." (Williams 2002)

In their public statements recording industry bodies have repeatedly appealed to the need to buy copies only from publishers, as otherwise musicians can not be paid. Leaving aside debates about the percentage of profits which major record publishers pass on to their musicians, in repeatedly justifying their position as enabling musicians to be paid they strongly implied that no other business model was possible. Therefore, the argument went, if one wanted a society with full-time musicians there was no choice but to treat recorded music as a commodity and reject filesharing.

Such lack of imagination from the record publishers is not very surprising, as conservatism towards new technologies is entirely natural, and of course they have a great vested interest in the system as it existed before (Mokyr 2002: 220). However a large variety of alternative business models have been suggested by others which attempt to work with the new features of recorded music on the computer network, rather than against them, and as such become more profitable the more music is shared (at zero cost). Suggestions include various donation / microdonation schemes, embedded advertising, and using recordings as a loss-leader for live performances and merchandise.

Analysis

Adorno and Horkheimer (1972) argued that the 'culture industry' represented a major homogenising and pacifying force to culture, thus for the first time in history neutralising the power of art to "protest against the petrified relations under which people lived" (Adorno 1991: 2) and thus ensuring the continuance of the existing system of inequality. Moreover, they claimed, the power of the industry was inescapable, as it tended to subsume and pacify elements of protest and define the frame of cultural discussion, as well as by more direct means such as wielding massive top-down power over the processes of production and distribution.

The argument follows that the primary role of the culture industry is to keep all members of society accepting of the political and economic systems of inequality–or at least too apathetic to do anything about them. Its role then was largely to facilitate the smooth running of other major areas of repression, with which its leaders are intimately connected (Adorno & Horkheimer 1972: 4).

However if this were the case one would have expected the 'culture industry' to respond very positively to the phenomenon of filesharing, as it allowed for the far wider and easier dissemination of the normative ideologies embedded within their recordings. After all, while such technology makes it easy for any copy of music to be widely distributed regardless of source, in practise a significant majority of copies available were originally produced by the 'culture industry.' (Sterne 2006: 831)

One must therefore conclude that while the wellbeing of the wider systems of power may well be an agenda of the culture industry, of higher priority is its own profitability.

A point that should be emphasised is the political power which the music industry still wields. In being the source for the majority of music in a culture, with its inevitable ideological payload, the influence the industry has on the minds of listeners is still enormously significant, regardless of whether they

continue to enjoy a monopoly over distribution.

Kopytoff (1986) defines commodity in opposition to the singular. Copies of music on a filesharing network could then be considered perfect commodities. However using the calculation of exchange value based upon the level of sacrifice necessary to acquire a copy one sees the exchange value drop to zero, (Zerva 2008: 14) in which case copies could be considered to fall well outside of the realm of commodities, which at their core are tradeable.

What such definitional confusion flags up is the inappropriateness of trying to fit music copying into categories of commodity, which were created for items with quite different economic properties. In particular, the meaning of exchange–of voluntarily losing access to one thing in order to gain access to another–is changed, as in the world of the computer network one need not lose access to anything in order to gain access to another.

So if exchange value drops to zero for recorded music in the age of filesharing, how may one determine relative value? An easy answer is to turn instead to use value, that is the value derived by each individual of actually listening to the music recording. Obviously then values will differ for each listener, which is no problem as value-judgements are no longer necessary for successful exchange.

One could then argue, as Sterne suggests (2006: 831), that music before recording technologies were available was valued according to the effect on an individual upon listening, that is to say on use value. As recorded music became easily available, tied up in physical items tied to the wider market, music was valued more in terms of exchange. And now as filesharing once more removes music from the realm of the market by virtue of changing the rules of its exchange, focus again is on use value. A somewhat analogous process is claimed by proponents of free software, where the process of decommoditisation is seen as "more about clearing away a temporary confusion, than it is about some strange and amazing departure that's suddenly occurred." (Moglen 2007)

One should take care not to overstate the ephemeral nature of digital copies of recorded music. Sterne points to the continuance of collecting and stockpiling more music than one is able to listen to as evidence of a sense of ownership and possession of one's music files, in the same was that one does in the case of physical objects. (2006: 831–832)

Determining the extent to which the new technology associated with filesharing is a factor behind new political ideas is of course impossible, but one may usefully discuss the political tendencies embedded in the technologies.

Earlier distribution technologies had quite different qualities. For example the limited bandwidth available to over-the-air transmissions (e.g. radio and television) made the establishment of a governing body to decide who could broadcast on which frequency (if at all) quite necessary and natural. Decisions about how to make such choices often involved money, and as such large entrenched interests had another advantage over smaller organisations in doing business and spreading their particular viewpoints over the airwaves. The decentralisation and allowance for modular growth offered by the internet has significantly reduced the need for such a governing body. Of course many argue that stronger governance of the internet is important, the difference being that it is not necessary to the successful functioning of the network as a whole.[4]

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[4]Recent discussion of laws regarding 'network neutrality' however illustrate the limits of such a view, as most people connect to the internet via an internet service provider, who *could*

Central to general computing, compression technology and computer networking has long been the striving for faster copying of anything digital, utterly regardless of concepts such as property rights over certain digital data. As Sterne puts it "The primary, illegal uses of the mp3 are not aberrant uses or an error in the technology; they are its highest moral calling ... These are the instructions encoded into the very form of the mp3." (2006: 839) However one needs to be careful with such statements, as they tend to carry an air of technological determinism which denies individuals agency and ignores instances of difference.

When disembodied from their physical forms and instead made to take digital forms, ideas of copyright and commodity have often been questioned. The first industry to be exposed to the power of computer networks as a distribution and indeed creation channel was computer programming, which was the sphere in which the radical take of copyright 'copyleft' (see above) was envisioned. The place of software was reconsidered and concluded not to lie in the commodity realm, but somewhere quite different: "The technological information about the terms on which we and the 'digital brains' exist: that's not a product. That's a culture." (Moglen 2007)

In many quarters the same is now being said about music, and the place of the record publishing industry is being recast by those engaged in file-sharing, from the purveyors of culture to an entity which seeks to profit by restricting access to a shared culture.

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artificially alter the operation of parts of the network to their customers.

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