

The Economics of Peer to Peer

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Objective

- Study P2P from the perspective of the commons
- Focus on the content sector and the growing role of intermediation
- Highlight:
 - the consumer response to P2P
 - P2P and owners of copyright
- P2P platforms and institutional factors

THE P2P Sector an overview

- April 2004 the number of simultaneous P2P users (people who are jointly connected at any given moment) approached close to 10 million (OECD)
- Displacement of the fast-track networks (such as KazaA) with all other networks
- P2P usage: fastest growth in Europe and Canada
- People are downloading more video, image, game and SW than music
- Research on impact of file-sharing on sales of music CD gives mixed results.
- Music vs Games: a different approach to P2P

P2P and Commons

- We define commons to include all economic exchange, whether market-based, based upon central planning allocations, or other arrangements that could be government and/or community based
- It is our observation that one of the main characteristics of commons is to provide sustainable and viable solutions to market failures.
- This prospective highlights the benefit of looking at commons as the broad context within which to study economic exchanges, i.e., the benefit of looking at markets as a subset of commons.

P2P and Commons

- P2P Networks share many of the properties with the public or club goods, but they are different from both of them.
- P2P networks will exhibit
 - Non-excludability (information is made available to all members of the network)
 - Non rivalry (consumption by one user doesn't decrease network download possibilities in the absence of free-riding)
 - But, if there is free-riding P2P networks will exhibit level of rivalry
 - Hence on P2P Networks a user can be a provider, or consumer or both
- The willingness of member of P2P communities to contribute with access and computer resources to the community is another commons P2P is creating

P2P and Commons

- In 2001, the Economist was observing that, "[t]he most important lesson of Napster is that people are willing to open their computers to, and share files with, complete strangers - as long as they see value in doing so. In the process, they have shown how really large computer networks can be created rapidly through the piecemeal contribution of million of individual PCs, each of which functions as a server as well as client."
- Willingness of individual to participate in voluntary program such as SETI

P2P and Commons

- Since Hardin (1998), it is convenient to distinguish between “managed” and “unmanaged”commons
- P2P networks are now all unmanaged at the level of file sharing, because the commercial links between individual members of existing P2P communities and the owners of the copyright material that is being shared have now completely disappeared
- Content owners for the first time, have effectively lost all channels that link them directly or indirectly to consumers (vs Internet radio & TV –single owner-community still organized in a centralized manner)

P2P and Commons

- Markets are based on the presumption that all players are opportunistic. This is not a generic requirement for commons that recognizes a diversity of attitudes among members of the society as a possibility.
- Free-riding is an inherent problem with commons as long as all agents act independently of one other and cannot credibly signal to each other that they can commit not to act opportunistically (Rational egoism)
- Experimental economics shows that the temptation to free-riding is universal but that it coexist with the ability and willingness of people to cooperate to their mutual benefits (Ostrom2000)

P2P and Commons

- Experimental economics suggests that this outcome not automatically creates a tragedy of the commons (Ostrom 2000)
- It is conceivable that many of the members of these new p2p commons may be willing to shift to commercial p2p networks that incorporate reasonable payments to artists, as the commercial success of services such as iTunes shows
- Sales of single (legally) downloads in the UK have erupted in the past year from 216,000 to 4.5m (Guardian-15-04)

P2P and Commons

- Viewing exchanges as commons can improve regulation and business strategy, and can guide entrepreneurs in promoting new markets. For coordination to succeed, the rules and norms of this commons must encourage cooperative behavior.

Focus on the content sector and the growing role of intermediation

- The content sector is now days a complex and generally highly concentrated sector, characterized by the growing role of intermediation
- Through time, today’s content aggregators have been able to build and then use intermediation into one of ownership and brokerage
- Our conclusion is that P2P may be creating a growing wedge between the objectives of artists, especially new artists, and today legacy intermediaries

P2P and Intermediation

- Artists are able to reach through reproduction of their work and, in recent years, through digitization, ever larger audiences, a process that has not stopped since Guttenberg and the printing press. The process is not just a matter of reproduction, but it involves also other functions such as billing, production and financing.
- That process is called in economics “Intermediation” and it involves intermediaries who facilitate the task of artists in terms of billing, reproduction, distribution, rights collection.
- Innovation and technological change are constantly transforming the intermediation process. This means that intermediaries need fewer and fewer resources and incur less and less costs to provide services to artists

P2P & intermediation

- Copyrighted commodities have unique characteristics relative to conventional economic analysis: widget commodity vs "hand-crafted".
- It is in this context that one must look at the contribution of the aggregators. The glamorous image they like to convey is the image of "l'enfant terrible", an image that conveys the idea that they have to work so hard to search, discover, and transform such a blockbuster artist the way the public will worship him or her. (Discover "the Beatles")

P2P & intermediation

- Their role is not all that glamorous. Through consolidation they have gained the ability to manage huge portfolio of artists. Given the size of the library already in existence and given the continuous flow of additions, they are able to benefit from a demand for intermediation that organize and process information to the extent that it makes the decisions by potential customers, i.e., to the extent it actually lowers transaction costs.
- That type of strategy has enabled them to use their size to effectively shield themselves from many of the risks of failure individual artists and small intermediaries would face. The outcome is their ability to gain control over a significant share of copyrighted material. In the same process, they begin to act as an insurance company.
- Their most visible role, at least from the perspective of the outside observer, is to intermediate between the artists and the public.

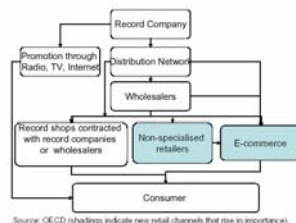
P2P and Intermediation

- P2P has demonstrated its capacity to build a bridge between individual artists and their public.
- Innovations such as P2P impact artists and intermediaries in totally different ways. There will probably always be a role for intermediaries but that role is shrinking and shifting at the same time. This means that the legacy intermediaries such as aggregators need to redefine themselves, a step almost impossible for established firms

Traditional physical value chain



New distribution arrangements before digital distribution



New online music distribution



P2P and Consumers

- P2P is transforming the content into a good that is, in and of itself, more attractive to consumers
 - Choice
 - Mega-catalogues
 - Gains by independent artists,...
 - Anytime, anywhere easy access
- Consumers who would have been more ready to support fostering pay services have not received the support from copyright owners that they needed

P2P and Consumers

- Consumers are involved in the process that will determine a mature P2P environment just as members of the industry
- Their involvement is the most important of all
- Car and speed limit (Deregulation of Small satellite antenna in Canada)
- An hardline strategy is most likely to backfire

P2P and owners of copyright

- The owners of copyright content may point to their property rights, but they neglect the business dimension of those rights, namely, that their narrow and rigid interpretation effectively destroys the value of those property rights. It is not good business to enforce copyrights too narrowly.
- Secondly, they overlook the most essential dimension of property rights. A property right, if it is not to be imposed by sheer power and ruthless fiat, but rather if it is to be a factor within a democratic society, cannot be arbitrarily imposed on that society. Rather, it must reflect society's acceptance of the granting of power that society's recognition of ownership *de facto* implies. This means that society must find them reasonable in the long run.

P2P and Technology: exogenous or endogenous ?

- P2P fight and transformation of P2P Technology : created strong incentives for entrepreneurs to favour the new generation of P2P networks
- It is equally likely that the technology path depends on the institutions - especially on the response of the copyright owners to the technology itself. In this respect, the conventional assumption of exogenous technology that economists continue to make in industrial organization is at best misleading

Conclusions

- In this paper we study P2P from the perspective of the commons. Viewing exchanges as a commons can improve regulation and business strategy, and can guide entrepreneurs in promoting new markets.
- For coordination to succeed, the rules and norms of this commons must encourage cooperative behavior.
- Important role of consumers: from pirates to sales !
- Strategic role of institutions.

The Charter for the development of digital content distribution in Italy

- On March 2, 2005 *The Charter for the development of digital content distribution in Italy* - launched by the Interministerial Committee - was signed by three Ministers (Innovation and Technology, Communications and Cultural Heritage) and a number of Internet service providers and their Associations, Telcos Operators, Representatives of the publishing, music and movie industry and their Associations, the Agency for the Collection and Distribution of Rights for Music and Dance Artists (SIAE), Broadcasters, etc.
- *The Charter* aims at protecting valuable creative works in the digital world and defining new ways of downloading and paying for digital content (music, movie, etc) rather than simply blocking peer-to-peer networks.
- *The Charter* contains guidelines and lists a series of actions among which:
 - offer consumers thousands of titles of music, movies, etc.
 - implement anti-piracy technology
 - draft sectoral and cross-sectoral co-regulation code of conducts
 - digitalize valuable cultural content in public domain