

# Inciting Infringement and Innovation: from Napster to Now - the dialectic of law and technology

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## Abstract

The original Napster had only a short life, but what it set in motion has lasted and been significant. From 1999 to 2001(2), the Napster platform offered the first widely known and widely adopted music file-sharing download service, combining internet distribution and MP3 file compression with its own central server acting to enable user uploading and downloading of music. Whilst Napster was shut down for 'contributory infringement' on the grounds that its central server directly facilitated copyright infringing downloading, its closure on these grounds saw the rise of fully peer-to-peer (P2P) services such as Kazaa. When P2P uploaders were targeted for infringement, Torrent-based services replaced them with peers-to-peer (Ps2P) sharing sites (most famously The Pirate Bay). Legal targeting of Torrent sites saw the geographical distribution of servers and the rise of temporal evasion by means of live-streaming services (a form of peers-to-peers software). Where Napster directly pressured record companies to do a deal that enabled the creation of iTunes, its longer-term impact was on laying the foundation for today's legal streaming services, the most famous of which is Spotify. Today's legal services provide what Napster offered 25 years ago: free access to recorded content and a consequent reduction in opportunity costs, which has seen the rise of live performance ticket prices and sales volumes. The cat-and-mouse battles between law and technological evasion have made recorded content freely available at the same time as increasing the earnings of live performers.

## Keywords

Copyright, Filesharing/File-Sharing, Infringement, Intellectual Property Rights (IPR/IPRs), Napster, Peer to Peer (P2P), Spotify, Streaming, Torrents

## Napster 1999-2001(2)

The advent of the compact disc (CD) in 1982 saw a perfect storm of profit for record companies (David 2019a), with increased prices combined with increased sales due to reformatting and reduced manufacturing costs (Sandell 2007). However, the same digital reduction in the costs of production that benefited record companies had the reverse impact once it became possible for end-users to also make digital copies for themselves at zero marginal cost (Rifkin 2014). Domestic CD burners became available in the 1990s, but it was Shaun Fanning's Napster that brought together commercially developed compression formats, digital network technologies, and his own addition, a web-based portal/server that enabled users to locate each other to upload and download music files between themselves (David 2010).

Court action by the Recording Industry Association of America (RIAA) saw Napster required to cease operations in 2001, which then saw the company declare bankruptcy in 2002. The US Courts' 1984 Sony Ruling (in the case heard, the particular technology in question was the Betamax video cassette recorder, but the principle was set in general) declared that a technology that enabled infringement of copyright was not intrinsically criminal if that technology had 'dual use' (i.e., potential legal uses) (David and Kirkhope 2004). Where Sony did not actively encourage infringement and also did not directly partake in individual users' acts of recording, Napster was found guilty of contributory infringement because users who made files available (uploaders), in fact, uploaded those files to Napster's own server from which downloaders would then be able to make copies. As such, Napster was directly 'handling' the infringing content and directly enabling the infringement. As such, Napster's central server saw it successfully targeted and shut down within a relatively brief period. However, whilst short-lived, Napster set in motion changes that have lasted.

The most immediate impact of Napster was the willingness of record companies to look for a copyright-compliant alternative form of digital sales. In the 1990s, individual record companies experimented with stand-alone encrypted platforms to sell downloads of their musical content directly to fans of those artists signed to their particular label. Labels were not keen to hand over control of their content to any single external platform. Napster offered a generic service combining access to the content of multiple labels, giving users far greater ease and range. That major labels became willing to sign over access to their content to Apple and, in so doing, afford a legal download service was in large measure due to the threat of an infringing alternative (Napster). Apple's iTunes was launched in 2001. Initially, record companies had required iTunes to encrypt downloads to limit further copying. The removal of the 'Fairplay' encryption software was itself something Apple undertook in 2007/8 under pressure from free, copyright-infringing services that had filled the gap left when Napster closed and because the practice of uploading content was made easy by the fact that record companies were selling CDs (from which copies could be taken) without any form of encryption (David 2010).

### **Kazaa, plus, plus: peer-to-peer distribution**

Where physical manufacture of records requires a substantial level of capital, and where digital storage, manipulation, and distribution reduced this need, first for record labels and then for end-users, the law was used to maintain the control formerly enabled by the need for such fixed cost (capital). Whilst Napster's innovation afforded a zero-marginal cost for the reproduction of copies by downloaders, its central server made it legally vulnerable. With the closure of Napster, however, a new generation of file-sharing platforms emerged that did not use Napster's central server-based model. Services such as Kazaa, Morpheus, and Grokster arose in or just after 2001, offering uploaders and downloaders the opportunity to share files directly between themselves rather than for files to pass through the software providing the platform's own servers. Users simply downloaded the search software from the service provider and transferred files directly between themselves. This was, therefore, a genuinely 'peer-to-peer' (P2P) based exchange. This exempted software providers from liability for infringement, at least as long as the platforms did not directly promote their products for the purpose of infringement (as some initially did).

Again, in the cat-and-mouse game of technical evasion and legal targeting, services like Kazaa++, Morpheus, and Grokster were able to deny direct contributory infringement so that record companies instead went after the uploaders of files. If a P2P platform user was to make an MP3 music file available for others to download copies from, that uploader could be accused of infringement on the grounds that the file being made available to others might lead to a reduction in lawful sales of the same content. Whilst the claim regarding like-for-like lost sales (the claim that every download made was a sale lost) is hard to prove, it was the case that record sales fell dramatically in the years after the emergence of Napster and its descendants, and a number of legal cases were brought against uploaders in an attempt to intimidate fans, even as the financial gains made in such cases did not cover the cost of the

lawyers (David and Kirkhope 2004). Claiming hundreds of thousands of dollars of losses against often relatively poor music fans was not a good look and never a profitable one. In an additional twist, user uploading data was gathered by Kazaa to sell to advertisers. Disquiet over such 'spyware' led to the production of pirate versions of Kazaa's software (Rojas 2002), but pirated versions like Kazaa Lite, which claimed not to be installing such spyware, were themselves accused by the owners of the 'official' Kazaa platform, of doing exactly that, and even that harvested data was then used by record labels in identifying downloaders for legal targeting (Billboard 2003). These legal and technical tactics then had the consequence of incentivizing the development of a new level of evasion.

### **The Pirate Bay: peers-to-peer distributed liability and networked evasion**

Whilst legal targeting against Napster focused on its central server, leading to the development of peer-to-peer services, the targeting of the uploaders using such P2P services led to the development of what can be called peers-to-peer (Ps2P) services. Where P2P software allows a file to be downloaded that has previously been uploaded, what Ps2P (otherwise known as Torrent or BitTorrent) services enable is for a downloader to assemble a copy of a file from a large number of elements taken from multiple uploads. Rather as if ten students making ten copies of ten percent of a book each; and then sharing these elements such that each student ends up with a full copy of the work even as no one student has copied more than they are legally allowed to copy; so it is that a Torrent-based file-sharing service distributes legal infringement in such a way that no one uploader can be identified as 'the' source. Whilst it would be possible to target the downloader using such a service (as one might target the downloader of any infringing service), this is not an attractive option as targeting the downloader would only address the infringement involved in making a copy of the individual file being downloaded (as opposed to the potentially large number of infringing copies that could be made from a single file that an uploader makes available). The likely fine that could be set against any downloader, relative to the cost of taking such a legal course of action, therefore, makes such a strategy unattractive.

With peers-to-peer (torrent) services making users relatively immune, legal attention returned to service providers. The most famous torrent service, The Pirate Bay, which was initially launched in Sweden in 2003, actively promoted itself as a means of infringement, so it was doubly targeted (for infringement and for incitement). Legal actions against the site, and its owners, have been 'successful' in some senses, seeing closures, imprisonments, fines, domain name seizures, and more, but the ability to relocate servers to different and multiple jurisdictions witnessed another set of technical evasions and innovations relative to legal developments taken against such service providers.

Whilst Napster did promote its service as enabling users to access content without paying for it, the various technical innovations that led to The Pirate Bay saw the denial of such intent turn to active and political incitement of infringement, such as with the creation of Pirate Party lists in a number of countries (Dobbin and Zeilinger 2015).

### **Live streaming: peers-to-peers temporal evasions**

Just as there had been seventeen years of feast for record companies after the introduction of the compact disc in 1982 and before the advent of Napster in 1999, so the rolling out of digital sports broadcasting in the 1990s saw a profit storm for early adopting companies in that field (most notably Rupert Murdoch's Sky in the UK and Fox in the US) (see David and Millward 2012). The development of live-streaming channels and developments within the cat-and-mouse logics of technology and law that have so far been documented in this article brought a new level of evasion to the dynamics of free access versus firewall-protected digital media content.

Streaming developed the parallel legal and infringing affordances of digital circulation that Napster set in motion. Where digital broadcasting enabled the encryption of what had previously been free-to-air terrestrial broadcasting, it was easier for a company like Sky/Fox, once it had bought up rights to

broadcast live sports, to charge access to de-encrypt such content. It was also much easier to sell those rights to wider (global) audiences via new digital satellites and ariels. Yet, with a delay comparable to that seen between the CD and Napster, it was in time that free live-streaming services emerged when broadband speeds allowed live visual content to be circulated through domestic Internet bandwidth. Initially, free streaming channels (Birmingham and David 2011; David, Kirton, and Millward 2017) offered a form of temporal evasion insofar as service providers were not responsible for user streams so long as the service provider acted to remove infringing streams when notified (by which time sports events had likely already ended). When rights holders pressed for faster (automated) shut-downs, users could simply switch to alternative streams; or else service providers who actively promoted free copyright-infringing access to live sports coverage (incitement as well as infringement) could simply relocate their servers to other jurisdictions – and users could access these live-streaming channels via VPNs (virtual proxy networks) when rights holders pressed ISPs (Internet service providers) to block channels (Brown 2015). Nevertheless, the most profound impact of live, copyright-infringing streaming services (like Justin.tv and FirstRowSports and their many alternatives) was the development of legal streaming services, the most famous of which being Spotify.

### **Spotify and its discontents**

Spotify is a commercial music streaming service. It originated as a technical system in Sweden in 2006 (in part as an attempt to create a legal alternative to Sweden's The Pirate Bay). Spotify was launched as a commercial service in London in 2008. Initially, Spotify adopted a business model not unlike file-sharing, torrent-based, and live-streaming-based sites to the extent that it gained payment from advertisers. Advertisers are attracted to the site as they believe the site will be viewed/listened to by music fans with disposable income. Spotify offers its ad-funded users the opportunity to stream (listen to but not record/download) music of the listener's choice, and this has attracted many millions of users to Spotify's service. However, subscription-based users can now download content. Spotify successfully raised significant amounts of venture capital, and with this and its advertising revenues, Spotify was able to pay musical copyright holders (rights holders, most often record companies) for the license to stream their musical (intellectual) property.

Users can choose between a free service or a premium subscription service. The free service enables users to stream the songs of their choice from Spotify's extensive catalog, but in the free-to-use version, users can only listen to the same tracks a certain number of times per month, and they are also exposed to advertiser messages after every three (or so) tracks they listen to. Different countries have slight variations in this arrangement in terms of how the limits work on non-subscription accounts. In exchange for the 'premium' (subscription payment) service, users gain unlimited 'plays' of their preferred tracks, can download content, and are not required to experience commercials between tracks.

In its early years, Spotify gained a limited subscriber base. Three-quarters of users signed up for the free service in these early years (David 2016). Whilst generating large revenues, income was eaten up by payments made to rights holders (record labels not artists), such that Spotify did not make operating profits for its first decade (first posting a profit in 2019). At the current time, with around six hundred million users worldwide, 239 million of these are subscribers (40%), generating almost ninety percent of the company's revenue (Stassen 2024). Still, whilst the company generates most of its revenue from subscribers, most users pay nothing.

Critics of Spotify point to the fact that whilst billions of dollars/Euros/Pounds, etc, are paid over to rights holders each year, payments to artists remain low (Marshall 2015). This is because rights holders (record companies, for the most part) receive the Spotify payments and only pass on to artists a small percentage of this revenue. This payment model is in line with the royalties-based record deals artists sign with labels (Albini 1993). Spotify does not create this issue, but neither does it remedy it. A multiplicity of alternative streaming services (Deezer, BandCamp, Tidal, and SoundCloud, to name but a few) claim to offer better deals for fans and artists by means of the same basic streaming technology. There is even a streaming service called Napster, though it is not the actual descendent of its original namesake. What

remains the case throughout is that, whether from physical or digital sales, artists receive only a tiny fraction of their earnings from royalties. Most artists get paid the most for live performances. Most fans access streaming content without payment, and streaming services promote fandom. If accessing them is free, such services do not compete with payment for live performance in terms of opportunity costs. This is the true legacy of the original Napster.

### **The legacy of Napster as the rise of live**

It can be disputed that Napster and its descendants directly 'cause' specific individuals to suspend decisions to buy a recording when they instead choose to access a free digital download or stream instead. Individuals who download/stream more free music also spend more money on recorded music than do persons who do not download or stream (David 2010). However, it is true that the advent of free digital file-sharing also saw a collapse in the sale of recorded music. Alan Krueger and Marie Connolly (Krueger and Connolly 2006) map out how this decline in the sale of recorded music also coincided with a parallel rise in concert ticket sales and volume of tickets sold (their regression analysis suggests the relationship is causal). The mechanism they claim explains why the decline in record sales produces an increase in live performance spending is simple, the declining opportunity cost for those with an interest in music: when free digital downloads (and today that would extend to streaming as well) retain and even promote interest in music, the fans who would previously have spent some of their money on a recording now have that money to spend on additional concert tickets (or else to be able to pay more, and sometimes much more, for what tickets there are to buy).

Because record contracts most often leave artists in debt to their record labels, as royalties are only ever a tiny fraction of net sales, and from these royalties, artists are required to repay much of the money record companies invest in them up-front, the decline in the sale of records makes little impact on artists' earnings (David 2019b). Because a greater part of most artists' earnings comes from live performances and associated sales of merchandise, etc., the 'rise of live' is good for performers precisely because it is bad for record sales (Love 2000). Even whilst COVID-19 crashed the live music economy for a year, it was digital forms of hybrid performance and distribution that enabled many performers to sustain themselves, and the subsequent and powerful recovery of live performance since 2021 has been the main engine of rebuilding artists' finances and careers (David 2025), not any reversion to yesterday's record based 'business as usual.' Nonetheless, the US Department of Justice's antitrust action against the concert promoter Live Nation highlights that the struggle between capital and living labor is also ongoing in the live performance arena (Tencer 2024).

### **Conclusions**

Record labels have sought to resist what Napster set in train and have, in many respects, adapted to and appropriated the innovations developed by those who created sharing technologies in the very face of such record labels' legal resistance (Arditi 2020). The cat-and-mouse interplay of law and technology has incited infringement and incited innovation. Laws designed to extend intellectual property protection (in duration, depth, and geographical reach) in the face of global networks of infringement have been strengthened even as these very laws have acted to incite the creation of new generations of technology designed to evade such forms of closure (David and Halbert 2015). This cat-and-mouse interplay is something akin to what Alvin Gouldner (1982) referred to as the dialectic of ideology and technology: culture is knowledge generalized, whilst capital is knowledge privatized.

Napster was crushed within a couple of short years after its creation, a testament to the power of major record labels in defending their interests against the threat of free sharing, a threat/promise to reduce marginal cost (and hence price/profit) to zero. Napster's demise, however, witnesses repeated re-inventions of free digital sharing, each new form adapting to the legal restrictions set in place to defeat the previous adaptation. From the central server of Napster to the next wave of peer-to-peer, then peers-

to-peer, and then peers-to-peers forms of free sharing, Napster's descendants have evaded the power of law set against them, even as record labels have likewise sought to adapt themselves. Nevertheless, such an adaptation as Spotify (in making music free to most of its users) is itself, in part, carrying forward the very logic of free digital distribution it was created to resist. A similar dialectical struggle takes place between recording as capital and performance as living labor; artists are being exploited by labels even as the free circulation of recorded works promotes live performance and as record labels seek to embed themselves ever more within the live music economy (such as with 'record' deals that include a slice of performance, publishing, and merchandising rights). Laws that seek to contain can incite, even as innovations designed to evade, can themselves incite new forms of appropriation and control.

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<sup>1</sup>I have often asked, and no student I have ever talked to has ever read the licensing agreement that is placed above every photocopier in my university – so I do not believe this legal loophole has any actual impact on what students actually do.