



The Business of Anti-Piracy: New Zones of Enterprise in the Copyright Wars

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From the perspective of copyright holders, piracy represents lost revenue. In this article we argue that piracy nevertheless has important generative features. We consider the range of commercial opportunities that piracy opens up outside of the media industries, identifying four overlapping fields of legal anti-piracy enterprise: technological prevention, revenue capture, knowledge generation, and policing/enforcement. Our analysis notes the commercialization of these activities and their close relationship with the informal media economy. A case study of recent “speculative invoicing” lawsuits demonstrates the extent of this commercialization and its detachment from the mainstream content industries.

A key strategy of content industry groups during their long war on piracy has been to associate copyright infringement with lost revenue for artists, producers, and media businesses. Consumers are now familiar with the claim that piracy directly threatens the livelihoods of cultural workers and generates large profits for criminal organizations, bootleggers, and online intermediaries. Hence, the model of a zero-sum economic redistribution between two camps—producers and pirates—with the latter cannibalizing the revenues of the former. This is an ever-present theme in anti-piracy discourse, exemplified by the Motion Picture Association of America’s claim that “copyright theft means declining incomes, lost jobs and reduced health and retirement benefits” (MPAA, 2010, p. 2) and by the Australian Federation Against Copyright Theft’s warning that “film and TV piracy rips more than \$230 million out of the Australian economy each year” (AFACT, 2008, p. 1). This rhetoric can, of course, be traced back much further to early literary and music publishers, who developed similar arguments about the inherently cannibalistic effect of unauthorized distribution on producer revenues (Johns, 2009).

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Our aim in this article is not to engage in debates about the validity of media industry estimates, which are already the subject of sustained critique from copyright reformers. Rather, we wish to place claims of piracy-related revenue leakage into a broader context. Reducing the political economy of intellectual property (IP) to a tug-of-war between producers and consumers obscures the presence of other stakeholders, many of whom benefit from piracy through licit means. As we will demonstrate in this article, a generative logic is at work in contemporary IP economies: piracy produces new anti-piracy enterprise, which in turn produces new informal workarounds for pirates, which generate new anti-circumvention responses, and so on. The pattern here is not leakage but dispersal, with commercial opportunities created in both the legal and extralegal spheres, leading to the consolidation of diverse and rapidly expanding lines of business around IP enforcement, policing, research, and technological prevention.

For example, a multiplex screening of a blockbuster—say, James Cameron’s *Avatar*—creates a market opportunity for bootleggers, who use camcorders to discreetly tape the film and then produce their own copies for sale or upload the footage onto a file-hosting site in return for a small commission from the advertising revenues thus generated. This kind of digital piracy represents a formal-to-informal trajectory, as exchange moves into the extra-legal sector. Industry-commissioned research has been very active in attempting to quantify the nature and effects of this leakage. However, this is not the end of the story, for camcorder piracy also creates new lines of business for other *legal* enterprises—including companies that specialize in the measurement, control, monetization, and regulation of infringing activity. In the case of multiplex screenings, such products and services include digital watermarking and audio fingerprinting technologies (which pinpoint the theater in which the *Avatar* bootlegs were shot); CCTV systems (which detect the use of camcorders by audience members); and night-vision goggles (used by ushers to spot suspicious activity in theaters). The adoption of these technologies throughout the supply chain then creates commercial opportunities for businesses that wish to use this anti-piracy infrastructure for other purposes. One entrepreneurial company is now developing systems that use CCTV anti-camcording equipment in theaters to monitor the facial expressions of audience members as they react to advertisements, with a view to selling this data back to advertisers.²

As these examples suggest, both piracy and anti-piracy generate a diverse range of secondary activities. If we track these generative effects, we find a range of other economic trajectories opening up for businesses outside the mainstream media sector, leading to innovative technical specializations, new lines of business, and bespoke services that have little to do with media production and distribution per se. For example, when the *Avatar* bootleg leaks onto BitTorrent, there will be opportunities for companies to track the number of illegal downloads, send out threatening letters to downloaders, provide credible estimates of financial losses, and so on. These webs of economic activity take institutional form in what we call the *anti-piracy industries*. By this we mean the large, complex field of anti-piracy enterprise—

² A British firm, Aralia Systems Ltd, is being supported by UK research funding agencies to adapt existing anti-camcording technology to include “instruments that will be capable of collecting data that can be used by cinemas to monitor audience reactions to films and adverts and also to gather data about attention and audience movement” (PhysOrg, 2010).

employing thousands of technicians, lawyers, analysts, researchers, lobbyists, programmers, content-protection specialists, freelance consultants, and field investigators in many different nations—which has grown rapidly in the post-Napster era. A great deal of anti-piracy work is now conducted not by the major media companies but by an array of third parties, including large IT firms as well as freelance consultants, technicians, investigators, researchers, and programmers. The emergence of these new media businesses is a direct consequence of piracy's generativity. Hence, the economic flows we investigate here, rather than taking the form of revenue "leakage" from producers to pirates, are from copyright industries to other parts of the media, IT and legal industries.

This raises the question of what analytical frameworks are appropriate for studying this dispersal. We have argued elsewhere that the concept of the informal economy—and the rich tradition of social science scholarship around it—is profoundly useful for understanding contemporary media industries (Lobato, 2010, 2012; Lobato, Thomas, & Hunter, 2011). Piracy occurs in the informal space: it is unregulated, untaxed, and, in the main, unmeasured. The anti-piracy industries conduct their business primarily in the formal sector (although not exclusively, as we note below). Like the pirates, these industries are innovative and dynamic: some but not all of what they do can be understood as a strategy of formalization—finding ways to transform what are putatively copyright infringements into licensed or regulated transactions. What we see in the example above is the generativity of both piracy and anti-piracy and the dynamism of the relationship between informal and formal industry sectors: pirate reproduction creates demand for anti-piracy solutions, which in turn lead to further opportunities in the formal and informal sectors, and so on.

A more complex attention to the generativity of both piracy and anti-piracy enables us to move beyond the over-rehearsed debates between producer and consumer advocates, and the relative virtues of the ethos and interests of the "artist" in opposition to those of the pirate or hacker. In this area, for both sides, the apparently solid ground of ethical principle often turns out to be rather thin ice. This article argues for greater realism in our analysis of the regulation and political economy of the copyright industries. In contrast to the idealist critique that informs much of the work on copyright and piracy in media studies (for instance, Wark, 2004), this article argues for a critical analysis of actually existing IP economies and how they work in practice. In the proliferation and expansion of anti-piracy enterprise, we see a paradoxical interdependence between the formal and informal spheres, which complicates the rhetorical justifications used in anti-piracy campaigns and free culture/cyber-libertarian discourse alike.

The Anti-Piracy Industries

Anti-piracy industries seek to prevent, measure, transform, and otherwise derive revenue from copyright infringement. In recent years, the sector has expanded rapidly in several directions. It is now diverse and fragmented, with cowboy operators and entrepreneurial start-ups operating alongside large IT firms and mainstream software companies. Some companies act as subcontractors for record labels, software publishers, and other rights holders, offering services like audio fingerprinting, anti-circumvention measures, data encryption, and so on. This is the field now referred to as "digital rights management." But other firms have devised their own business models for deriving revenue from copyright infringement, which may depart from the approaches of media rights holders.

A key dynamic we observe in the field of anti-piracy activity is the increasing divergence between commercial anti-piracy enforcement and mainstream entertainment industry IP policy. We suggest that the anti-piracy sector is now emerging as a distinctly separate domain from content production and distribution as such and that it has its own dynamics and objectives. In academic scholarship and popular debate, anti-piracy enforcement has been closely associated with rights holders groups, from the Stationers' Company and its "beadle" in the late 16th century, to the MPAA's legal teams. One of the characteristic features of the copyright system has been the role of rights holders in do-it-yourself policing. Johns (2002, 2009) points out the historical continuities underlying this aspect of intellectual property: in the pre-modern period, rights depended on membership of a guild; and despite all the changes to the law subsequently, a guild function persists in organizations such as the MPAA. This approach involves rights holders commissioning third parties to discourage, measure, or otherwise regulate infringing activity, an activity that has a long history.³ However, when we grasp the scope and scale of the contemporary anti-piracy industries as a whole, in our view they are now better understood as a distinct sector, with their own commercial imperatives and incentives, which may not always match those of content producers. In other words, heavy-handed enforcement by producers and the industry groups that lobby on their behalf (IFPI, IIPA, MPAA, etc.⁴) is by no means the only force of anti-piracy. It follows that it should not be the exclusive focus of critical IP scholarship, as the growing body of work in the recent history of technological protections for content demonstrates (Gillespie, 2007; Thomas, 2011). Anti-piracy now involves an array of autonomous, semi-autonomous, and freelance operators who play according to different rules, as we will see in the case study below.

In addition to policing and enforcement, we note at least three other sectors of anti-piracy enterprise: technological prevention, revenue capture, and knowledge generation. This schematic of the anti-piracy industries is captured in Table 1. We have defined these sectors in terms of their tactical and strategic orientation: each is organized around a distinct understanding of what the problem of piracy involves and how it should be addressed. Each sector comprises specific products or services, different lines of businesses, a large number of firms, and has discrete markets for its work.

³ Historians of copyright have documented how, in the late 1800s, London-based music publishers like Chappel and Co. hired "retired police sergeants to raid the premises of pirates," a strategy that often led to "pitched battles with buckle belts and even pokers" (Plonman & Hamilton, cited in Chesterman & Lipman, 1988, p. 116). Johns (2002) notes that English music publishers including Chappel and Co. and Francis, Day, and Hunter hired retired policemen and professional detectives to pursue sheet music pirates in the early 1900s. Note also that John Wolfe, a notorious pirate who became the enforcer (Beadle) for the Stationers' Company in 1587, is a key precursor of anti-piracy enterprise (see Loewenstein, 1988; Bowrey, 1994).

⁴ For more on The Motion Picture Association of America, the International Federation of the Phonographic Industries, the International Intellectual Property Association, and others, see Karaganis (2011) and Miller et al. (2005).

Table 1. Four Sectors of the Anti-Piracy Industries 1995–2010.

	Technological Prevention	Revenue Capture	Knowledge Generation	Policing and Enforcement
<i>Problem</i>	Reproducibility of digital media makes piracy too easy	Piracy provides no return on investment	The harm caused by piracy is not understood	Too much piracy goes unpunished
<i>Service/Product</i>	DRM tools, watermarking, fingerprinting, conditional access systems, P2P spamming, spoofing	Revenue-sharing technologies to make unlicensed use profitable for rights holders	Measures of the extent of piracy	Identification and apprehension of pirates
<i>Market</i>	Technology and content companies, ultimately consumers	Content hosts, rights holders	Content companies, industry bodies	Content companies, industry groups, law firms
<i>Strategic Aim</i>	To make piracy harder	To build new legal advertising markets on the back of piracy	To influence public opinion, achieving legal and policy change	To deter would-be pirates. In some cases, to create new revenue streams
<i>Businesses and Firms (examples)</i>	<u>Technology providers</u> Intel, News Corp (NDS Group), Macrovision/Rovi, ContentGuard <u>Spoilers, spoofers</u> Media Defender <u>Watermarking, fingerprinting</u> Google (Content ID), Cinea, Sarnoff	<u>Advertising revenue-sharing models</u> YouTube Content ID <u>P2P advertising firms</u> Skyrider, MediaDefender	<u>P2P traffic measurement</u> Sandvine, Big Champagne, Web Sherriff, BayTSP, French Technologies, DtecNet <u>Packet inspection</u> CView (Detica), Envisional	<u>Industry lobby groups</u> IFPI, RIAA, MPAA, IIPA <u>Takedown notices</u> Web Sheriff, Friend MTS, Take Down Piracy, PiracySniper, RemoveYourContent, Intercept Media <u>Cease-and-desist notices</u> BayTSP, MediaSentry <u>Speculative invoicers and ancillary services</u> ACS:Law, Digiprotect, U.S. Copyright Group

The purpose of this model is to help us understand the major strands in a complex and globally dispersed line of business. It is not an exhaustive account and does not preclude other models. Moreover, although it is helpful to distinguish between the different elements of the anti-piracy industries in this way, there are strong links between these sectors and overlaps in their markets. For example, the knowledge-generation sector produces a range of information—from aggregate measures of piracy activity to detailed traffic analysis—that is also useful for policing and enforcement. Rights holders and technology companies are also important markets for several of these sectors. Let us now consider these sectors in a little more detail.

Technological Prevention and Revenue Capture

Today, the largest sphere of anti-piracy commerce is concerned with digital rights management (DRM). The broad objective of businesses working in this area is to counteract the inherent reproducibility of digital media by developing technologies that prevent, limit, obstruct, and track unauthorized distribution. DRM is a central part of the anti-piracy strategies of major media corporations—witness Apple's Fair Play system for encrypting iTunes downloads, or Sony BMG's experiment with rootkit DRM on CDs. Many technologies are developed in close collaboration with a bevy of small subcontractors, some of which are listed in Table 1. It is common for these providers to be acquired by large media corporations and for their products to be built into existing anti-piracy repertoires. One recent example is Google's purchase of Widevine, provider of video DRM technologies for Web-connected TVs and other devices, in December 2010 (Saphir, 2010). Thus, corporate acquisition rapidly integrates emerging DRM technologies into mainstream media business.

In addition to the DRM technologies built into consumer digital products and platforms, more specialized products are designed for smaller markets. One example is the aforementioned anti-camcording systems, which detect the use of video cameras by audience members in movie theaters. This is a profitable line of business for United States-based companies like Sentek, Trakstar, Sarnoff, and Cinea. Companies like Cinea have strong links to the U.S. military, which finds many uses for motion-detecting technologies.⁵ A related line of business is fingerprinting and watermarking technologies (the specialization of companies like Vobile, Audible Magic, and DigiMarc).

DRM is undoubtedly a multi-billion-dollar business, though its integration into mainstream IT business makes it difficult to gauge the scale of the industry in more precise terms. One report from 2005 predicted that the global DRM industry would be worth US\$3.6 billion by 2008, and that it is growing at a rate of 106.1% per year (RNCOS E-Services, 2005). Another puts the size of DRM industries at around US\$2 billion (Digital Tech Consulting, 2005). Given the rate at which piracy and anti-piracy technologies have developed in the last five to 10 years, it is likely that both of these estimates are on the low side. But anti-piracy technology is not just about DRM. A large number of small to medium-sized businesses are

⁵ As *Wired* notes, "the PirateEye camcorder-detection system they built was derived from technology originally created for the Defense Department to detect sniper scopes and land mines in combat environments" (Jardin, 2004).

involved in developing technologies that target pirates—especially peer-to-peer downloaders—in a more direct and aggressive way. For example, many smaller operators specialize in digital “spoofing” and “spoiling.” The aim is to flood torrent servers with defective files in order to annoy would-be pirates and drive them toward legal services like iTunes. Companies that have been involved in this line of business include Anti-Piracy LLC, Overpeer, Nuke Pirates, C-Right, and Media Defender.⁶ Working on behalf of the Indian film industry, the Bangalore-based Aiplex has reportedly gone further, conducting targeted denial-of-service attacks against torrent sites (Grubb, 2010). These “cyber hitmen” attempt to sabotage the architecture of digital piracy.

So what are we to make of these vendors and their role in the larger anti-piracy economy? It may be worth stressing that anti-piracy technology and DRM are about using technology against technology, within a wider political economy of IP maximalism and global media governance. In this sense they differ from mainstream anti-piracy enforcement—which also works through legal, policy, and public relations processes—and from other anti-piracy strategies that seek to change the behavior of consumers and foster a respect for property rights. Although it seeks shelter in the anti-circumvention provisions of copyright law, anti-piracy technology is a market solution: the assumption is that if digital technology has created piracy, it can also eradicate it. Implicit within this idea is a kind of technological utopianism—a faith in technology’s ability to solve its own problems—but one that parts ways with the kind of utopian impulses found in the free software movement, for example. This sector of the anti-piracy industries firmly believes that the way we use the Internet should be shaped and governed by property rights. The aim in DRM and the like is to grow a new kind of industry on top of the media production and distribution sector and to make its services integral to every aspect of digital entertainment business—just as the anti-virus industry is now an essential part of digital commerce and everyday Internet use.

A recent development in this field is the emergence of technologies that seek to monetize, rather than merely obstruct, infringement. Google has been leading the charge with these new revenue-capture technologies, working with an array of small IT companies to develop content identification and filtering services for its various user-driven platforms. This new line of business involves maintaining databases against which uploaded content can be checked to determine copyright status. YouTube’s Content ID system, introduced in 2008, allows rights holders to control how their material is used on the site. Rights holders have the option of blocking offending content, tracking its use (thus generating valuable data on user behavior), or monetizing it through revenue-sharing of third-party advertising. These strategies of formalization reflect a significant reorientation in corporate IP policy, both by Google and various rights holders, toward a more pragmatic commercial engagement with copyright infringement.

⁶ Overpeer, an anti-piracy company, pioneered a memorable spoofing approach in 2003, when P2P networks were deliberately flooded with a file that appeared to be Madonna’s new single “American Life” but contained only a short recording of the singer saying “What the fuck do you think you’re doing?” thus berating her would-be file sharers (Jesdanun, 2003).

Knowledge Generation

Anti-piracy technology operates in close articulation with another sector of anti-piracy enterprise: research. The production of empirical knowledge about piracy is a large, and growing, business. Amassing data about illegal downloading and commercial bootlegging for the purposes of motivating policy and legislative change is essential to anti-piracy strategy. This data-gathering takes various forms. Internet traffic measurement companies like Sandvine and Big Champagne are involved in tracking of pirate peer-to-peer flows as part of their broader activities. Major research firms like IPSOS, based in Paris, and England's L.E.K. Consulting are recruited by rights holders to write credible-sounding reports demonstrating the magnitude of revenue leakage (L.E.K. Consulting, 2005; IPSOS and Oxford Economics, 2011). Companies such as Ipoque and Detica, a subsidiary of BAE Systems with links to the UK defense industry, offer deep-packet inspection of P2P flows (Williams, 2009).

The anti-piracy research industry also attracts smaller, more explicitly entrepreneurial operators selling made-to-order data. One example is French Solutions Ltd, which advertises the following services:

Build a portfolio of evidence sufficient enough to present as a handle to lobby for legal and governmental supplements to further protect your business; assessments of levels of potential criminal gain in £ or another currency over a set period can be made; assessments of likely loss to your turnover in a set period in £ or another currency can be offered. (French Solutions Ltd., 2011)

While few companies working in this area are as upfront about the instrumental uses of data as French Technologies, the implicit promise of all anti-piracy researchers is to craft the client's desired narrative through empirical research. As the criminologist Majid Yar argues, there is a circular logic here that works to the ultimate benefit of the anti-piracy industries:

High figures put pressure on legislators to criminalize, and on enforcement agencies to police more rigorously; the tightening of copyright laws *produces* more "copyright theft" as previously legal or tolerated uses are prohibited, and the more intensive policing of "piracy" results in more seizures; these in turn produce new estimates suggesting that the "epidemic" continues to grow unabated; which then legitimates industry calls for even more vigorous action. (Yar, 2005, p. 690)

Here, Yar draws our attention to the connections between research and enforcement. This is the fourth sector of the anti-piracy industries, constituting a multi-tiered governance structure working at national, regional and global scales.

Policing and Enforcement

At the top end of the policing and enforcement structure, we have the international industry lobbies that represent record, film, book, and other media producers and distributors in negotiations with government. Organizations such as the Recording Industry Association of America (RIAA), the Motion

Picture Association (MPA), and the International Federation of the Phonographic Industries (IFPI) have their own staff, offices, investigators, and lobbyists. A great deal of their work and budget is devoted to anti-piracy strategizing. An authoritative Social Science Research Council report estimates the combined annual budget of these various industry groups as being "in the low hundreds of millions of dollars per year" (Karaganis, 2011, p. 19).

The activities of these official enforcement bodies have been discussed at length elsewhere. Miller et al. (2005), among others, have critiqued the MPA's efforts to embed copyright term extensions and other forms of IP protection in global and bilateral trade agreements, and the extensive public relations campaigns they orchestrate worldwide. However, we should not overlook the bottom end of the enforcement and policing structure—a dispersed and highly opaque economy of data-gathering that involves private investigators, field operatives and other ground-level enforcers. In the United States, cable piracy "stings" have long been a popular line of business among freelance private investigators, who conduct surveillance on bars and restaurants to detect unauthorized screenings of boxing matches and pay-per-view sports events. They then report these establishments to lawyers who represent cable companies, lodging affidavits that are later used in anti-piracy prosecutions, for a fee of around US\$250 per venue (Thomas, 2003).⁷ With the global expansion of IP-related trade, this anti-piracy profession is reaching into many new spaces. In booming markets like China and India, where IP protection is a priority for Western multinationals, a flourishing sub-business in field investigations attracts former policemen, heavies, turncoat bootleggers, and the like. Ravi Sundaram (2009) has documented aspects of this enterprise in Delhi, where the work involved in field investigations is poorly paid and unpleasant, and physical abuse of investigators by vendors is common. Many investigators end up switching sides to work with the pirates against the rights holders. The boundaries between enforcement and commercial piracy are blurred, to the point of being indistinguishable, as comments from a local MPAA representative indicate:

In India there were some guys who from the beginning were doing the authorized reproduction of cassettes and CDs and were also pirates. So by the time we found them out a good amount of damage was done because they had inroads into us and that began some kind of a competition among the pirates, because one pirate would pay our investigators not to have his premises raided, he would allow a raid maybe once in six months but he would give information about his competitors, the other pirates so that firstly the competitor is harmed and this guy gains his business and guy also grows. We tried to put an end to it, by the time we realized it some of our investigators were also double agents getting money from them also as well as from us. (Sundaram, 2009, p. 133)

⁷ An industry guidebook for aspiring PIs reveals a number of other entrepreneurial strategies for monetizing piracy, such as "trash runs" at suspected pirate CD-duplication plants to obtain evidence (such as CD spindles) that can be used to establish probable cause for a search warrant (Thomas, 2003).

The growth of this sub-industry, combined with the expansion of industry lobbying capacity, reflects the “private direction of public enforcement” (Karaganis, 2011, p. 21). Increasingly, piracy enforcement is an outsourced and privatized activity, with operators working as bounty hunters and guns-for-hire. As the quote above attests, there is considerable mobility between the formal and informal spheres, illustrating the extent to which much anti-piracy activity is divorced from the moral regimes of IP and becomes a service industry tailored to the needs of clients operating on, and across, both sides of the law.

Another indicator of this trend is the emergence of private companies that specialize in sending out “takedown” requests and infringement notices to consumers, Web sites, and bloggers. MediaSentry, DtecNet, and Web Sheriff are among the better-known companies. Recent years have seen a proliferation in commercial takedown operations, to the extent that there are now specialist companies catering to different niches of the media—Net Result for sports sites, the LA-based company Take Down Piracy and the Texas group Remove Your Content for porn sites, Internet Copyright Management for Russian-language sites, and so on. There has been much criticism of these operators, who have been accused of indiscriminate takedown “spam,” which catches many legitimate uses and users in its net.⁸

The preceding discussion gives us a broad overview of some of the major forms of anti-piracy enterprise. While the companies discussed above vary in size, business models and corporate philosophies, there are several recurrent characteristics that are worth reiterating here. First, all these businesses make their money, in one way or another, from consumer copyright infringement. They appear to have conflicted interests in eradicating piracy or particular platforms for illegal distribution. Second, most of the anti-piracy markets are characterized by significant information asymmetries between providers and their clients. The production of knowledge about piracy is a specialist enterprise, driven by companies with an interest in making the forms of knowledge conform to certain narratives about the putative pirate “threat.” As with all forms of risk management, anti-piracy enterprises tend to exaggerate the risks in order to increase the value of the solutions. Finally, we note that the increasing fragmentation of the anti-piracy industries, fueled by the widespread outsourcing and subcontracting practices common in the IT sector, ensures that much policy development happens outside formal processes and public scrutiny.

Interdependencies Between the Formal and the Informal

What broader implications does the growth of the anti-piracy industries have for media research? What kind of conceptual frameworks can account for these businesses and their role within the larger media and IT economies? Our model of the different elements of the anti-piracy industries is a provisional one, but we believe it can help to bring some theoretical questions and problems into focus. First, it presents an opportunity to rethink some aspects of how IP economies function. In contrast to the content

⁸ Chilling Effects (2010), a clearinghouse for data on takedown requests, comments on the rise of these intermediary agents in their discussion of the repeat takedown notice senders of 2010. Note also that many “infringing” Web pages are taken offline by the automated processes of online providers, with no right of reply given to the users in question.

industry's revenue leakage arguments, we feel the best way to characterize the relations between the media industries, piracy, and anti-piracy is as a series of relays between the formal and informal economies. For the purposes of illustration, imagine a model with three elements (see Figure 1). The content industries are a mainly formal economy of production and distribution. Piracy is an informal layer of unauthorized distribution above this, and the anti-piracy industries then constitute a formal layer of enterprise on top of the informal economy of piracy. Piracy depends on the existence of commercially produced content while anti-piracy businesses depend on the existence of piracy. Each realm generates its own kind of innovations and ancillary industries, and there are interconnections and interdependencies between and within each layer.

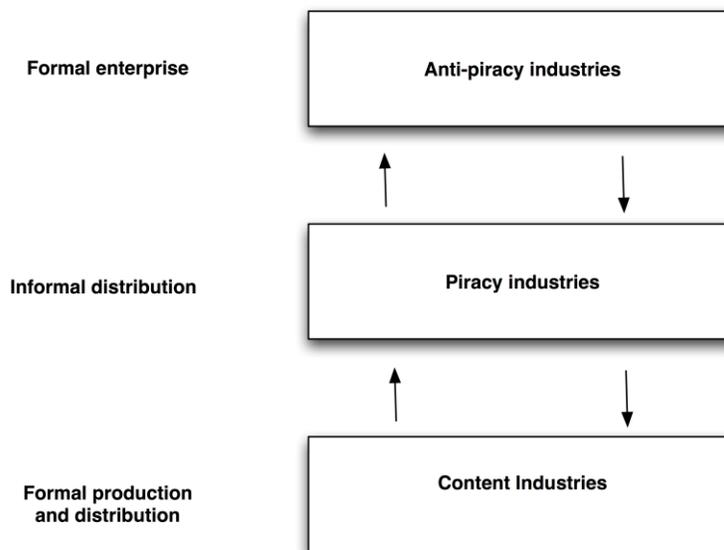


Figure 1. Piracy, Anti-piracy, and the Media Economy.

If we turn once more to our schematic of the anti-piracy industries—encompassing the distinct but overlapping sectors of technological prevention, revenue capture, knowledge generation, and policing and enforcement—we can see that each sector interacts with the informal in different ways. Each line of anti-piracy business has its own rationale, its own implicit philosophy. Policing and enforcement is a disciplinary and pedagogical practice, invested in the creation of new kinds of consumer subjectivities. Revenue capture, on the other hand, is a pragmatic response to the changing political economy of distribution. The point of technologies like Google's Content ID is to monetize, rather than eradicate, copyright infringement. What all these approaches have in common is that they are strategies of formalization, of bringing informal activity into a regulated commercial domain. We summarize these rationales in the table below.

Table 2. Rationales of Anti-piracy Industry Sectors.

	Technological Prevention	Revenue Capture	Knowledge Generation	Policing and Enforcement
<i>Rationale/ Formalizing Strategy</i>	To create new technological markets amenable to proprietary rights regimes	To create advertising markets from infringing traffic	To make informal circulation measurable and accountable	To create law-abiding citizen-consumers to sustain returns on investment for content producers

Hence, we see both piracy and the anti-piracy industries as involving reconfigurations of the formal and the informal. To imagine media economies in this way is to take seriously the economic productivity of certain kinds of copyright-related commercial practice, regardless of where these flows of money lead. In this sense, our approach differs from economic studies of pirate flows that analyze displacement effects and pricing structures to gauge the shifting relations between consumers and producers in a digital economy. We propose that another way of thinking about the economics of piracy is to begin with certain media products and practices and then track all the different kinds of income-generating activities that open up around them, as they cross back and forth between the formal and informal zones. While pirate distribution does not generate revenues for rights holders, it creates market opportunities for other formal businesses within the IT and media industries that pioneer their own ways to monetize illicit consumption. From the point of view of content producers and pirates, these anti-piracy enforcement activities are the costs of business. They are, however, worth closer scrutiny as an expanding sphere of commercial enterprise, with their own dynamics and a strong interest in the continuation of consumer copyright infringement.

Here, as elsewhere in the anti-piracy industries, we find a close integration between the formal and the informal. This relationship is structural. The long-term career trajectories and the day-to-day practices of anti-piracy personnel often crisscross between the two spheres, with enforcers honing their skills in the informal economies before reinventing themselves as legitimate businesspeople, or vice versa. Many anti-piracy software specialists, including the founder of the notorious outfit BayTSP, are former hackers (Shiels, 2003). Nexicon Inc, an anti-piracy outfit with ties to Google, was once prosecuted for illegally selling cigarettes online; the former CFO of another outfit, SafeNet, was convicted for securities fraud (*Toronto Star*, 2008). The annals of anti-piracy enterprise are full of these formal-informal cross-pollinations, which reflect the blurry lines between legal and illegal Internet commerce. While anti-piracy businesses can claim the moral high ground of rights protection, many of these outfits appear to have a close relationship with the grey and black economies that they purport to police.

Having surveyed the landscape of anti-piracy enterprise and considered some of the conceptual questions thus raised, let us now turn to a more detailed case study. The following discussion of

“speculative invoicing” lawsuits reveals anti-piracy enforcement at its most entrepreneurial. Of course, relatively few businesses employ the kinds of practices described below, which appear to be less about deterrence than freelance bounty-hunting. We have chosen an extreme example to illustrate how anti-piracy (like any privatized enforcement regime involving large sums of money) sometimes serves as a pretext for extremely questionable activities.

Speculative Invoicing: Monetizing Piracy through Entrepreneurial Enforcement

In the last five years, a number of law firms specializing in speculative invoicing and mass/volume litigation of peer-to-peer pirates have emerged. This entrepreneurial anti-piracy business model—which involves suing thousands of alleged pirates simultaneously with a view to extracting settlements—piggybacks on existing enforcement efforts, using the same rhetorical justifications while moving enforcement practice in an entirely different direction. Its aim is to open up a new terrain of anti-piracy litigation by monetizing consumers’ infringements directly via pre-litigation settlement agreements. While none of these cases have resulted in successful damages being awarded, and recent judgments suggest courts are increasingly hostile to these mass lawsuits, the process is such that only the veneer of legal legitimacy is required for it to work effectively.

The most controversial speculative invoicing lawsuits were initiated by firms such as ACS:Law in the UK, and Dunlap, Grubb & Weaver (aka the U.S. Copyright Group) in the United States. These firms typically work for rights holders on a commission basis, covering all costs themselves and paying a set percentage of revenues back to the rights holders (often 30% of the settlements received).⁹ The first stage in a speculative invoicing operation is to collect the IP (Internet Protocol) addresses of BitTorrent users downloading a specific song, album, film, book, or other work over open networks.¹⁰ By cross-checking with ISP server logs, these IP addresses can then be matched up to actual names and addresses of subscribers, creating “evidence” of thousands of infringements. Having signed a contract with the relevant rights holder, the law firm initiates court proceedings to force ISPs to hand over their customers’ details. Then a mass mail-out begins. Letters to defendants note the date, time, and place of alleged infringement and warn that the recipient may be liable for hundreds of thousands of dollars in penalties. They offer the chance to settle the matter through a one-off payment—typically between US\$500 and US\$2000. (According to an account of one U.S. Copyright Group suit, around 40% of users choose to settle [Gardner, 2010].) These settlement payments are then divided between the lawyer and the rights holder.

The evolution of the speculative invoicing model reveals its utility as a transnational template for monetizing copyright infringement. Mass P2P lawsuits were first trialed in Germany, where the approach had some success. It was then taken up in the UK in 2007 by the law firm Davenport Lyons, which sent thousands of letters to people accused of downloading video games, demanding up to £600 to settle the

⁹ This was the practice for UK firm ACS: Law (Wakefield, 2011).

¹⁰ Ordinary BitTorrent clients can readily log this information, but applications sold by firms such as Guardaley and Logistep have been specifically designed for mass harvesting of IP addresses for the purposes of litigation.

matter. In 2008, ACS:Law appeared on the scene, using the same template and legal documents as Davenport Lyons, with many of the same clients (Kendall, 2010). In 2010, Gallant MacMillan, acting on behalf of the UK dance label Ministry of Sound, launched a similar action against 5000 P2P users (with up to 145,000 more in its sights), seeking settlement payments of £350 (Paine, 2010). In the United States, the U.S. Copyright Group has been the driving force behind speculative invoicing, having initiated proceedings against an estimated 100,000 downloaders (Schwartz, 2011). Working on behalf of clients such as Voltage Pictures (*The Hurt Locker*), Nu-Image (*The Expendables*), B-grade filmmaker Uwe Boll (director of *Far Cry*), and numerous porn distributors, U.S. Copyright Group typically requests payments in the order of US\$1000 to US\$2000 per violation. The bulk of its business appears to come from the porn sector: the Electronic Frontier Foundation estimates that 75,000 people have been targeted in the porn lawsuits alone (Schwartz, 2011). Speculative invoicing has also been trialed in Asia, with the anti-piracy firm BayTSP seeking similar settlements on behalf of the anime distributor Odex in Singapore (Anderson, 2007), and, most recently, in Canada (Geist 2011).

A number of features of the speculative invoicing model make it different from other kinds of anti-piracy enforcement, such as the U.S. record industry's lawsuits against Napster and Kazaa users in the 1990s. Speculative invoicing has been criticized as a "shakedown" (Anderson, 2011) rather than a deterrence strategy. None of the cases launched thus far have resulted in successful damages claims against individual downloaders, let alone jail terms.¹¹ However, this is not necessarily a problem for firms like the U.S. Copyright Group, because winning a favorable judgment is not the aim. Rather, the objective is to process as many settlement payments as possible in the shortest time possible. Whether copyright infringement can or cannot be proven is immaterial: the strategy relies on scared customers with little knowledge of legal process paying up to make the problem go away.¹²

The actions of U.S. Copyright Group and ACS:Law represent a commercialization of piracy enforcement rather than a disciplinary practice. It is not in the best interests of these law firms to eradicate piracy, as this would mean the end of their business model. In this sense, the new breed of anti-piracy lawyers parts ways quite dramatically with mainstream entertainment industry policy. The Hollywood studios and major record labels have not signed on to the speculative invoicing model and appear to be nervous about the PR backlash this would generate. While the MPAA once experimented with a similar scheme called GetAmnesty, it no longer endorses this kind of enforcement and focuses its legal efforts on ISPs and commercial pirates instead.¹³ When compared with these new anti-piracy offensives, the strategies of the Hollywood studios and the record labels appear measured, even moderate.

¹¹ All cases have become mired in procedural technicalities before petering out: ISPs are now increasingly wary of handing over customer details; cases often need to be prosecuted separately in each state; and judges are tiring of what they see as time-wasting requests.

¹² In this sense the speculative invoicing model is eerily reminiscent of the anti-piracy strategy of the Musical Copyright Association in the early 20th century, described by Johns (2002, p. 70) as "an offensive that would skirt the fringes of illegality . . . that would depend for its success upon the reluctance of the pirates themselves to have recourse to the courts."

¹³ The reason *The Hurt Locker* is included in this scheme is because it was produced and distributed outside the studio system, by a small company (Voltage Pictures) that is not closely tied to the MPAA line.

The speculative invoicing model has clearly been developed at some distance from the mainstream content industries. It reflects the interests of a diverse group of minor players: entrepreneurial lawyers, independent distributors with nothing to fear from bad PR, adult movie producers, and copyright “trolls” like Digiprotect and MediaCat (who bundle the rights for a library of content, often porn and B-grade movies, and shop them around to litigators). To be clear, this is *not* mainstream anti-piracy practice; it is something happening at the fringes of the media industries, through operators whose interests are not in stamping out piracy but in strategically monetizing it. Anti-piracy litigation is clearly not completely congruent with anti-piracy deterrence. The relationship of speculative invoicing to piracy—or at least certain forms of piracy—is conflicted at best. While these firms could argue that they are deterring pirates, clearly their business model is built around the popularity of BitTorrent. It has even been claimed that some firms upload files to BitTorrent servers themselves, creating a honeypot for would-be downloaders, before launching legal action (Masnick, 2010).

The speculative invoicing trend represents freelance anti-piracy enforcement at its most autonomous. The dubious nature of this scheme is not necessarily representative of the broader anti-piracy industries, but it is a salutary reminder that the liberalized market for enforcement, measurement, and DRM technologies inevitably produces ambulance-chasers. As more anti-piracy activity is outsourced to third parties, opportunities arise for entrepreneurial businesses to invent their own ways to monetize infringing activity. Hence, we need to understand contemporary anti-piracy industries not as mere service-providers for rights holders, but as key players in the broader field of IP policy and enforcement practice.

Conclusion

The history of copyright teaches us that this form of intellectual property is a partial and incomplete organization of what have been, since the invention of the printing press, diverse, unruly and piratical markets for information and knowledge. We should not, then, be surprised that the current “hard lockdown” climate is producing its own grey markets, with mainstream media companies and bottom-feeding operators alike finding their own ways to monetize consumer infringement. More like a Mobius strip than a mutually exclusive relation, the distinction between piracy and legal distribution, between formality and informality, is changing as new kinds of commercial practices are invented, trialed, and incorporated (or not) into existing anti-piracy repertoires.

Whether it is ethical to sue file sharers and send takedown notices *en masse* is perhaps a less important question than what these entrepreneurial strategies for monetizing piracy mean for the future direction of copyright enforcement. Most of the anti-piracy businesses discussed above act in the name of, but not through, formal legal process. Speculative invoicing occupies a grey zone between law and commerce: the courts are enlisted to lend validity to a perceived threat of enforcement, with settlements being the main objective. The implication is that anti-piracy, in this area at least, may be moving out of the realm of law and into a private arena of enforcement and settlement, where norms of conduct are invented on the fly in the boardrooms of small IT contractors and law firms rather than through policy or legislative change.

This, finally, has implications for how we debate piracy and copyright. Rather than seeing the piracy wars as a David and Goliath battle between consumers and corporations, as per the liberal copyright reform script, or as the final crisis of informational capitalism, we also need to see them as driven by *ad hoc* commercial practice. Future critical analysis of intellectual property regimes may like to consider what spaces for intervention exist within the grey zones of anti-piracy enterprise, as well as in legal reform.

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