

## Chapter 24

# Possible Causes of Piracy

### 24.1 Piracy of Information Goods

The reproduction of information goods—legal or illegal—is relatively easy. The means of copying have existed for a long time. The “copy shops” of the Middle Ages were abbeys, where monks, using their specialist skills of reading and writing, copied and illustrated mainly the Bible. The invention of letterpress printing then made mass distribution possible for the first time. Today, contents that are available physically are technically easy to copy, e.g. by Xeroxing or recording on audio or video cassettes etc. This form of physical or analog reproduction has its limits, though, since every copy is of lower quality. Copying is much easier, and of higher quality, if the information good is available digitally. In that case, copying involves no loss of quality, which means that the original and the copy as well as any subsequent copies will be of equal quality. Data and quality loss, which are hardly perceptible by the individual, only occur if digital information goods are compressed for the purposes of copying. Information goods can be very easily reproduced in this way. There is no need for an elaborate “reverse engineering”, since the consumed good itself is the “master”, which can be copied any number of times, almost for free. Free usage of an information good can hardly be prevented by the author—we remember the public-goods problem—and this applies to both content and software offers.

We can distinguish between two different forms of illegal copying (Bundesverband Musikindustrie, 2007a). In traditional bootlegging, an existing information good is adopted, partly or wholly, and brought on the market in different external packaging than the original—e.g. under a fantasy label. In this form of illegal copying, the buyer has to be aware that he is purchasing an illegal product, due to

purchase location, pricing or obvious differences in design, quality or features (McDonald & Roberts, 1994, 58).

This is mainly referred to as piracy, meaning the unlawful appropriation of intellectual property, manifested by the unauthorized making of copies (Castro et al., 2008, 77 with further sources). Bootlegging and piracy will be used synonymously from now on.

Counterfeits, or ident-fakes, aim to reproduce the original good in every aspect, thus deceiving the customer as to its provenance and legal status (Staake & Fleisch, 2008, 17-18 with further sources).

Piracy is when information goods are commercially distributed and when they are illegally copied and used for private consumption.

	<b>Physical Distribution</b>	<b>Digital Distribution</b>
<b>Commercial Bootlegs</b>	Distribution of reproduced data carriers, e.g. • Cassettes • CDs • DVDs	• Illegal websites, e.g. AllOfMP3
		• Pay (FTP) Servers
<b>Self Supply</b>	Unauthorized, uncommercial production and distribution of data carriers, e.g. • „burning CDs”	• Usenet • Filehosting e.g. RapidShare
		• P2P/Filesharing platforms, e.g. eMule • Streams, e.g. YouTube

Figure 24.1: Distribution Forms of Piracy.

The forms of bootlegging bound to a medium are to be differentiated from the purely digital. The Federal Association of the Music Industry (Bundesverband Musikindustrie, 2007b) speaks of internet piracy, which appears in different forms:

Apart from filesharing services (e.g. eDonkey, eMule, BearShare, BitTorrent), there is now a multitude of different forms of internet piracy. Thus, for instance, music files are “posted” in message boards and on blogs, and more or less professionally structured “release groups” acquire—often unreleased—songs and albums. A rapidly increasing form of internet piracy runs via so-called sharehosters, such as rapidshare.com. Here, music files are initially uploaded to a virtual hard drive on the in-

ternet, after which the relevant download link is distributed via blogs and message boards.

For our further deliberations, a pirate copy will refer to any and all illegally produced copy, no matter whether physical or digital.

According to figures released by the Bundesverband Musikindustrie (2007b) illegal downloads account for a multitude of legally downloaded titles: in 2006, there were 27m legal, but 374m illegal music downloads.

For the German software industry, similar figures can be obtained from the Association of Software Providers, the Business Software Alliance (BSA), from the Association of Entertainment Software (VUD) for computer and video games, or, across the different industries, from the Society for Tracing Copyright Infringements (GVU). International statistics, also for books and films, are listed by the International Intellectual Property Alliance (IIPA). Particularly interesting here is the report (“Special 301”) that must be compiled, according to U.S. Trade Law, concerning worldwide pirate activities in the software, music, film, gaming and book industries (IIPA, 2007).

Why is there piracy? What moves people to create bootleg copies?

A different distinction for answering this question is that between commercial copies and self-supply copies. For commercial copies, the motivation is clear, since there is a definite profiteering component. The copies are mainly produced as data carriers and sold to end customers. The International Federation of the Phonographic Industry describes this as physical piracy (IFPI, 2006, 4). Generally, this involves organized crime (OECD, 2008, 157 et seq.).

The case is different for self-supply. This term refers to the fact the end customer himself acquires the desired information goods illegally. Apart from physical private copying, self-supply increasingly moves to the digital realm, taking place on illegal websites (e.g. AllOfMP3.com), filesharing services (e.g. P2P networks) or BitTorrent and FTP. The foundation of Napster, in 1999, marks a decisive turning point in the availability of digital goods, specifically of music, via P2P technology. In all generality, it can be noted that digital forms of distribution are gaining in importance. This goes for both legal (Bundesverband Musikindustrie, 2008, 14) and illegal offers (Dejean, 2008, 2), e.g. for music.

Since the motivation for commercial bootlegging is clear, we will now turn to the area of self-supply. There are manifold approaches to explaining the causes, most of them with empirical data backing them up. We will now address some central aspects.

## 24.2 Consumer Characteristics

The typical bootlegger of digital music can be relatively easily differentiated from the circle of people who buy or download music legally (Bhattacharjee et al., 2003). He is young and male, and his tendency toward piracy increases alongside

the price of the music title and his available bandwidth. In this respect, it is not surprising that (male) students represent a large percentage of bootleggers. They have access to high-speed networks and significantly more time than money (Wade, 2004). Appropriate for this analysis is the observation that after the foundation of Napster, CD sales receded much more heavily in stores near universities than in other places (Fine, 2000).

This profile matches that of persons whose goal is to get ever more stimuli. Scientifically, the term “Optimum Stimulation Level” (OSL) (Raju, 1980) describes the tendency of every individual to seek his or her own ideal level of stimulation. If there are too few external stimuli, the person will want to intensify them, if there are too many, they will need to be reduced. The OSL correlates strongly with demographic variables like age, gender, education and training and employment status. As for pirates, the results here are:

High-OSL consumers are relatively younger, more educated, better employed, and more likely to be male than low-OSL consumers (Sinha & Mandel, 2008, 2 with reference to Raju, 1980 and Zuckerman, 1994, 114).

High-OSL consumers, as empirically proven by Sinha and Mandel (2008), tend to turn to piracy. They are more likely to try out new artists and songs, and display a greater readiness to take risks, such as illegal downloads bring along with them.

### **24.3 Sense of Justice and Prices**

We know about the unbalanced cost structure for information goods: high first-copy-costs are followed by very low reproduction costs. Appropriately, it has been shown that search costs, lowered by the internet, have made consumers more price-sensitive. However, as has been shown in a study by Lynch and Ariely (2000), this only holds for broadly available, easily comparable (mass) products, and not for very specific or individually manufactured products. Specifically for the mass product music, it can be empirically observed that the music industry’s prices are regarded as too high (Deiss, 2006, 87-88, Buxmann et al., 2007). Similar statements are found with regard to digital games (Anderson, 2009, 72). It can be concluded that pirates regard the prices for all manner of digital goods as too high, and thus unfair, particularly in view of some of the rights holders’ economic success. This imbalance gives bootleggers a justification for their illegal behavior (e.g. Gupta et al., 2004). This attitude is reinforced by offers of information goods that are free, e.g. Linux or Open Office from the Open Source community, or the manifold offers of free content on the internet, such as news, financial information, pictures and sometimes music.

Rising prices cannot be the reason for digital offers being deemed too expensive. Liebowitz (2003, 14) was able to use data from the U.S. music industry to

prove that prices have stayed on almost the same level for more than 20 years. Similar results are drawn by Peitz and Waelbroeck (2006) in their study, according to which no clear pricing trends could be found for the world's five largest markets over the last few years.

Neither do per-capita income changes over time seem to be the cause of changes in music spending. A correlation is rather found in the level of an individual's income (Liebowitz, 2003, 15). The higher willingness to turn to piracy in younger people is partly motivated by their lower income. Younger users have less money than professionals, but much more free time. As a person's income increases, his willingness to buy legally increases in turn (Deiss, 2006, 95).

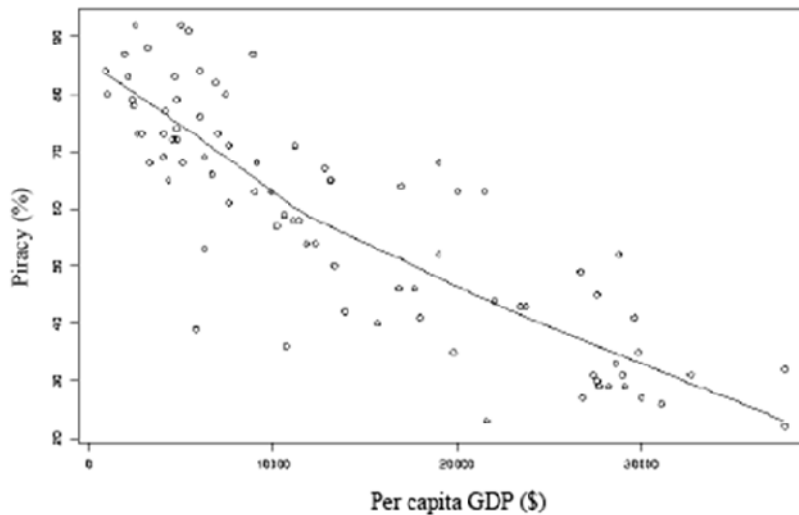


Figure 24.2: Per Capita Gross Domestic Product of Different Countries vs. Level of Software Piracy. Source: Varian, 2005, 125.

This pattern can be found not only on the individual but also on the national level. In general: who earns more downloads less. Varian (2005) establishes this correlation empirically and compares the Gross Domestic Product of different countries with their piracy quotas for software. It is made abundantly clear that as the per-capita GDP rises, piracy decreases. However—as an econometric study by Reing and Plice (2010, 6) shows—the correlation decreases the more income increases. For an income spike from, say, \$4,000 to \$5,000, a sharper drop in piracy can be detected than for an increase from \$24,000 to \$25,000. Furthermore, two other crucial factors, besides the level of income, can be determined for software markets, which significantly influence the extent of software piracy in a country: the

level of development of the IT industry and the extent of corruption in the respective country. It is shown that

the relative size of a domestic software industry influences software piracy independent of income. [...] A one-percent increase in the relative size of the IT market would imply that over 10 percent of all software would convert from unauthorized to authorized (Reinig & Plice, 2010, 6).

Corruption, on the other hand, only affects countries with an underdeveloped IT industry, as

a one-point increase in CPI [Corruption Perception Index, A/N] would result in a reduction in piracy of over four percent of total software in low IT countries (Reinig & Plice, 2010, 6).

Their conclusion is that corruption in countries with a low level of Information Technology should be fought and, in countries with a developed IT industry, the further growth of that industry encouraged. It can be assumed that these are also suitable approaches to industries for other information goods.

A similar impression is gleaned from observing GDP growth rates. The very pronounced reduction in growth after the dot-com bubble had burst was one of the principal reasons for the music industry's loss in revenue (from CD sales) (Peitz & Waelbroeck, 2006, 93). If we consider the fact that prior to this drop it was mainly young men, whose music needs are still very high, who were concerned, it stands to reason that there has been a shift toward illegality in this area.

In keeping with the previous results, Regner and Barria (2009, 399) observed, in an empirical study of voluntary willingness to pay for online music, that in countries with a low per-capita GDP people pay a lot less than in countries whose GDP is high. The result is a distribution that mirrors the piracy quota in Figure 24.2 exactly.

## **24.4 Morals and Social Norms**

Pirates' moral views and the influences from their social surroundings concerning what is deemed normal and acceptable play an important role in answering the question of why people make illegal copies. As mentioned a number of times so far, piracy is largely a question of age. Liebowitz (2004) demonstrates, via a study of internet users in October 2002, that 41% of those aged 18-29, but only 21% of those aged 30-49 download illegally. This fact can very clearly be linked to the observation that young, male bootleggers have an underdeveloped set of morals (Levin et al., 2004; Hill, 2007, 11 with further sources). Their drive toward imme-

mediate gratification via digital goods eclipses the question of what is right and wrong. Concerning games, Anderson (2009, 72) writes that

anything at all standing between the impulse to play and playing in the game itself was seen as a legitimate signal to take the free route.

Added to this is the fact that until recently, the danger of being caught and convicted of illegal copying and downloading was relatively low. Whether the latest measures of rights holders to assert their rights more vigorously will achieve the desired results appears doubtful. For the film industry, Dördrechter (2007, 257) estimates that neither the previous PR campaigns and advertising initiatives nor the open threats (“Piracy is a crime”) have managed to perceptibly change bootleggers’ moral views. Following the Optimal Stimulus Theory addressed above, this increased pressure may even be counterproductive, as the risk of being caught increases the stimulus. As Sinha and Mandel demonstrate empirically on the example of students, this means that

for consumers with high levels of optimum stimulation (and, thus, higher tolerance for risk), increasing the perceived risk might actually backfire by slightly increasing their likelihood to pirate (Sinha & Mandel, 2008, 12).

Appeals to people’s sense of morals might thus work better for older groups of consumers.

Apart from individual attitudes to morality, the social environment plays an important role in people’s readiness to illegally consume information goods. For film piracy, empirical studies by Dördrechter (2007, 253) reveal:

By far the greatest positive influence on pirates’ consumption of downloads and copies of films is wielded by the formative construct “social environment”.

This results corresponds with other empirical studies in which the great significance of social environments, i.e. of groups norms, on the behavior in illegally acquiring software could be proven (Dördrechter, 2007, 253 and Hill, 2007, 11 with further references). In the relevant social circles, both the consumption of downloads and copies as well as the downloading and copying acts in themselves are regarded as common. Film pirates want to belong to the filesharing scene. They want to avoid incurring undesirable social sanctions for deviating from the group norm. For young male students, Sinha and Mandel (2008, 13) observe:

If anything, digital piracy is the social norm among this segment of consumers.

The social environment in toto also influences people's sense of morals (e.g. Kini et al., 2004). In societies in which private ownership had long been suppressed, and the right to intellectual property only asserted weakly, there is little or no moral pressure to stifle piracy. Furthermore, in countries like China, where many companies are state-owned, people's sense of guilt regarding theft is underdeveloped—following the dominant ideology, what belongs to those companies also belongs to the people (Hill, 2007, 12).

Another reason for moral views that endorse piracy can be found when new laws, or changes to existing laws, are deemed unfair. The restriction of private copying via the prohibition of circumventing technical protective measures in German law from the year 2003 represents such a case. Copies for private consumption, hitherto legal, became pirate material in one fell swoop. It is understandable that this change was not countenanced by everyone. For the film industry Dördrechter (2007, 257) observes:

In the eyes of the film pirates, the copying of DVDs does not result in any damage to the film industry, and what's more, the pirates claim the moral high ground. Film pirates view themselves as victims of the film industry, not the other way around.

## **24.5 Designing Products and Services**

A very important reason for the illegal acquisition of information goods lies in the designing of the legal offers. If there were more attractive legal offers, this would significantly reduce the levels of piracy. Dördrechter (2007) was able to prove this empirically for the information good film. The practice of windowing, as demonstrated by the film industry, compels pirates to create their own exploitation windows. There is no possibility, so far, of buying or renting a film legally on DVD or VHS or to view it via Video-on-Demand (VoD) while it is still running in cinemas (Dördrechter, 2007, 254-255). In the case of music, it had for a long time only been possible to debundle the rigid CD offers, where the price for an entire album had been charged even if one only wanted to own a few songs. Only the increased elaboration of the legal offer made it possible to buy only the desired titles by an artist.

For music, Deiss (2006, 87-88) was able to demonstrate empirically that the attractiveness of filesharing services is so high especially because one has a significantly greater selection of music than in stores, is able to find even the rarest songs, can get introduced to new music and sample every music title.

The use of sharing services is apparently regarded as a more attractive alternative to legal acquisition, even though the illegal path, too, is not entirely effortless (Dördrechter, 2007, 254-255). Filesharing sites are repeatedly shut down due to



police initiatives, and thus have to be continually relocated. Download speeds for new films are often relatively slow, because many users are accessing the same source file(s) at the same time. Also, quality control is elaborate because downloads and copies must be checked for viruses and their technical and contentual intactness. The film industry raises these costs deliberately by bringing so-called “decoys” into circulation before important film premieres. These are dummy files, which have the same title, file size and format as the original.

In conclusion, it can be said that filesharing services are used because they provide pronounced added value. They are free, have a large selection of music titles with corresponding sampling options and the acquisition of music is tied to relatively little effort.

## 24.6 Conclusion

Only available in the printed version.
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## 24.7 Bibliography

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