



## **The Network Studio Revisited: Becoming an Artist in the Age of "Piracy Cultures"**

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The article takes Theberge's (2004) notion of "the Network Studio" and Latour's (2005) notion of "reassembling/disassembling" as a point of departure to investigate the development of home recording and home distribution practices among semi-professional musicians. The central research questions concerns whether these new practices are used to sidestep the traditional career patterns of the music industry. In other words, do they add up to "piracy cultures" (Cardoso & Castells, 2010) that challenge and threaten established social orders? The study reveals how the rise of the networked home studio has altered the initial phases of the processes of music making in important ways. However, the musicians did not perceive the new practices of the home studio as a substitute for professional studios and traditional ways of making a career, but rather as a preparation. The study suggests that the developing practices of the home studio should be understood as the formation of "pre-distribution networks"—not actually side stepping, but eventually leading into the professional network of the music industry. Thus, the suspected piracy is still looming at best.

### **Of Network Studios and Piracy Cultures**

This article examines the appropriation of new technologies for producing and distributing music among "artists in the making," In the controversy between the music industry and Internet users, artists have had an ambiguous role. The last 10-15 years have witnessed a dramatic change in the musical landscape related to the migration of music onto computers, the Internet, and other digital devices. In this changing landscape, artists have been put into some type of a middle position. On the one hand, the changes threaten their traditional income patterns, while on the other, the same changes are potentially opening up some new ways to make a career.

Furthermore, the changes might even challenge the very notion of what being an artist is all about. In both principle and practice, today's recording possibilities are omnipresent and available for all.

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Audio recording, mixing, and editing applications are part of the basic software package for new personal computers and, lately, for many mobile phones, as well (see Milner, 2009). New recordings can be easily uploaded and distributed in various ways through the Internet. Researchers have commented that the distance between input and output, between consumption and production, has—at least in some respects—become significantly shorter. According to Wikström (2009), this has fostered “increased amateur creativity”—or what Lessig (2008) has termed “a remix culture.”

In a similar vein, Cardoso and Castells (2010) have coined the term “piracy cultures” to denote the growing number of people building media relationships outside the institutionalized set of rules in the content industries. The term “piracy” was originally coined by content industry actors to stigmatize and criminalize file-sharing activities. Somewhat uncritically, it has been taken up by academic researchers attempting to measure the effects of file sharing on record sales and the challenges this phenomenon poses for policy (see Kariithi, 2011; Peitz & Waelbroeck, 2004; Strykowski & Scorpecci, 2009; Waldvogel, 2011). In these studies, “piracy” has been used to denote acts of infringement of copyrighted content. This use of the metaphor has been criticized as running an errand for the industry, most persistently by Lessig (2002, 2004). However, as David points out, Internet activists over the last years have “inverted the negative associations given to piracy and taken this term as a symbol of rebellion against corporate authority and its attempts to police the Internet” (2010, p. 116; see also Mason, 2008; Mattelart & Morris, 2009).

In Cardoso and Castells’ conception, the notion of piracy is not confined to criminal practices in a legal sense, but is used to capture the flourishing of alternative networks and communities for the creation and distribution of content. David (2010, p. 144) lays out four hypotheses regarding the possible outcome of such activities, which can either turn out to be: 1) a relatively insignificant parasitic practice, 2) a substantive threat to cultural innovation, 3) a subversion that reinforces dominant versions (e.g., leading people to buy more music), or 4) a practice that embodies new and progressive forms of social interaction. Thus, in scenario 1, the outcome is negligible; scenario 2 would confirm the doomsday predictions of the music industry, with fewer and fewer musicians having the incentives to create music; while scenario 3 represents the ironic flip, in which alternative practices end up strengthening established orders.

Actually, it is only in scenario 4 that there are outcomes truly worthy of being called “piracy cultures.” Therefore, to address the transformative potential of the notion of piracy, I will reserve the term for practices that, in one way or another, constitute treason against established social orders. The point is not whether activities should or could be defined as illegal, but whether they have the potential to change orders. This will also be the lens through which the practices of the artists will be approached.

To denote today’s changes in recording and distribution, Theberge (2004) coined the powerful notion of “the network studio.” Theberge gives an historical account of the development of recording technologies, an evolution which he describes as a continuous movement toward “non-space” and “non-place.” In Theberge’s account, the network studio is the (possible) end point of a development that has emancipated the recording of music from place and space, propelled by an industrial logic of standardization. The network studio allows for an unprecedented degree of coordination and connectivity

at an increased speed and with lower costs. Nonetheless, the emergence of the network studio and the “anywhere/anytime logic” has opened up a paradoxical situation, according to Theberge:

(The network studio) can operate in different ways in different contexts: at times reinforcing the pattern of information “flows” characteristic of the dominant economic order, and at others working outside of it, facilitating a kind of autonomous production practice or, at the very least, a very different pattern of exchange. (ibid., p. 776)

In other words, the network studio can both heighten efficiency within the existing music industry structures, as well as foster the development of “piracy cultures” according to the definition above.

In this article, I will basically use the term “network studio” to refer to the use of “augmented” home studios facilitated by the introduction of the Internet and other digital devices, thereby exploring the possible emergence of the autonomous production and distribution practices at which Theberge has hinted. My research questions are therefore the following: *How has the network studio been appropriated, and what does it represent in terms of possibilities and opportunities for its users? To what extent are the practices of the network studio either framed within or working outside the traditionally dominant economic orders of the music industry?*

The home studio was born in the 1970s with the introduction of simple 4-track recorders with integrated mixing facilities (see Cunningham, 1999). Soon, digital technologies, such as synthesizers, drum machines, samplers, and particularly, musical instrument digital interface (MIDI) sequencers, all helped to open up the possibility for more complex recordings. Throughout the 1990s, the personal computer became the control center for the home studio, outfitted with multi-track recording software and easily available sound processing technologies (Moorefield, 2005; Tschmuck, 2006).

The augmentation of the home studio into a network studio is, of course, related to the advent of the Internet. The connectivity offered by the high-speed Internet has affected home-based music production in several respects. To mention only a few of these, consider the following examples: Most recording software is now downloaded, whether legally or illegally, from the net, with a vast array of add-ons being immediately available whenever needed. Network connectivity has made working together on a recording much easier, as music files can be transferred, developed, remixed, and mastered back and forth—such as between different members of a band. Finally, the Internet promises a new route for establishing and maintaining a relationship with fans, as music can be “tested out,” and promotion and distribution can be managed directly from the home.

The users of digital recording equipment can be charted on a continuum, ranging from low-experience users (e.g., school kids tinkering with their new equipment) to professionals (e.g., experienced musicians who wish to create extensive productions). Our interviewees are located on “the upper half” of the continuum. We have performed in-depth interviews with a total of 22 users, ranging from singer/songwriters and band members with fairly established careers to upcoming artists and people basically engaged with the production of music for others. Since none of them, at the time of the interviews, were making a full-time living out of their music, a fair common label for our interviewees could be that of “advanced users” or “advanced amateurs.”

What our interviewees have in common is that they are all experienced and dedicated users of the network studio. They each have a personal competence and interest in questions related to home-based music production and its implications. Finally, most of them expressed a motivation to go as far as possible with their music. Hence, I will argue that this group constitutes an especially interesting research subject in regard to the rise of autonomous music production and distribution practices and their transformative potential.

### **Assembling Work**

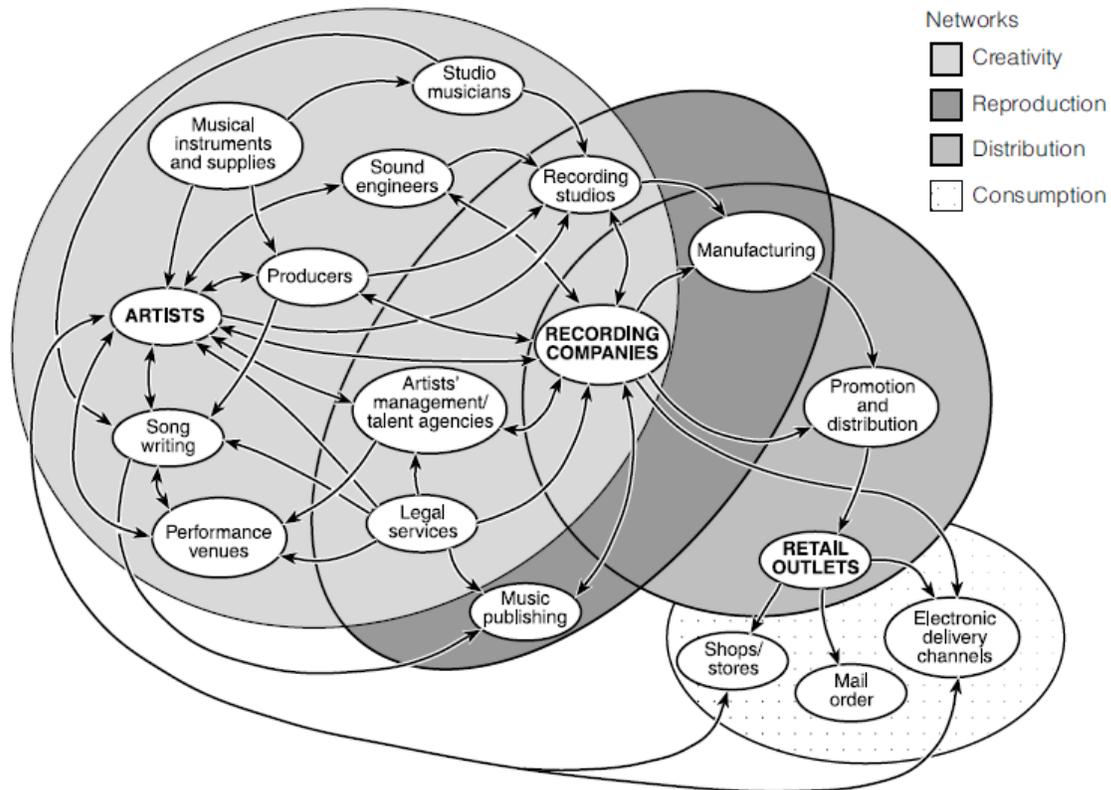
I will analyze the practices of our interviewees through the lens of actor-network theory (ANT). Developed within science and technology studies, this perspective originally aimed to offer tools for analyzing the interweaving of social and technical/"natural" elements in the construction of technological artifacts and scientific facts (Callon, 1986; Latour, 1987; Law, 1994). A central contribution from ANT is to move the focus away from simple cause and effect explanations with technology and society on each side of the equation (e.g., "Video Killed the Radio Star"). Instead, it makes possible a description of phenomena as emerging relations between humans and technologies/materials. "The network studio"—considered as a set of technologies—has no clear determining effect in and of itself. It is only "affording" or "rendering possible" certain types of actions (Latour, 2005, p. 72). What matters is how it is put to use, ascribed meaning, and connected to the rest of the world by different types of users (DeNora, 2000; Oudshoorn & Pinch, 2003).

Our surroundings can be understood as being constituted by networks and collectives built up from associations and relationships between humans and "things." Thus, the actor-networks are often referred to as "heterogeneous networks" (Law, 1994) or "hybrid networks" (Latour, 1987, 1993). ANT has always been a process-oriented perspective interested in networks as emerging entities—not only in their inception and evolvment, but also in how they eventually stabilize and produce order, at least temporally.

In recent years, Latour has come to use the notion of *assembling* to denote the work involved in tying networks—or *assemblages*—together (Latour, 2003, 2005). Assembling is the work of putting a diverse set of elements together, and depending on the circumstances, it requires a varied set of competencies, including cultural, political, esthetic, technological, legal, etc. (see also Gillespie, 2006).

The accompanying term *reassembling* only has a polemical meaning in Latour's writings (2005). In this article, I will use it to denote maintenance and repair work, the acts of putting elements back "in place." ANT has traditionally been more interested in the construction than the deconstruction of networks. This is a useful starting point for analyzing how the users of network studios have created new production and distribution networks. However, what has then happened to the old, established networks in the course of doing this? I will add the concept of *disassembling* to our toolkit in order to be able to discuss this question, denoting processes of untying and setting aside elements.

A final question has to be addressed before embarking on an empirical analysis: What did (do) the established networks of the music industry look like? Wikström (2009) discusses several models which have been developed to map the architecture of the industry. Basically following Wikström, I will present two such models that are particularly relevant for the upcoming analysis.



**Figure 1. Leyshon's (2001) Musical Networks.**

The first is Leyshon's (2001) analysis of musical networks. Leyshon argues that the music industry consists of four networks that "possess distinctive but overlapping functions, temporalities and geographies" (ibid., p. 60). These are the networks of creativity, reproduction, distribution, and consumption (see Figure 1). The creativity network is the network in which music is created through various "acts of performance," such as songwriting, performing, producing, sound engineering, etc.; the reproduction network is centered on the licensing and recording of music; the network of distribution is the area for manufacturing, distribution, and promotion; the network of consumption is organized around the activities of reading about, listening to, purchasing, and collecting music.

Leyshon argues that one of the advantages of his approach is that it makes it possible to address changes “in the complex and often messy organizational structure (of the music industry)” (ibid, p. 60). Arguably, the model presents an image of the music industry that is anti-monolithic, flexible, and multidirectional, with several entry points—one of a possibly malleable industry. He uses this model to analyze the possible impact of new digital technologies, and he claims that we are facing “the emergence of a new technological assemblage within the music industry . . . organized around software formats and Internet distribution systems” (2001, p. 74). This assemblage has the potential to reshape all four musical networks. Following Leyshon, the technologies of the network studio should clearly be reckoned as part of the greater forces which possess such reshaping potential.

In contrast, Burnett and Weber’s (1989) model presents a more monolithic picture of the recording industry. Their model more or less consists of the same components as Leyshon’s model, but is analytically divided into two, instead of four, “systems”: the system of production and the system of consumption. Burnett and Weber’s “system of production” includes Leyshon’s creative, reproduction, and distribution networks. The production system is centered on the activities of the recording companies, which are seen as the gravitational point of the industry. It is described as a highly complex system, with tight connections and ties between the various components, as well as interwoven roles, structures, and processes.

The consumption system is understood as a much more fragmented system, and it is only loosely coupled with the system of production: “The relations among record producers, artists, marketing and promotion specialists, trade press and so on are stronger than the relationships between producers and consumers” (Wikström, 2009, p. 51). In Burnett and Weber’s model, consumption and production are only connected through three weak links: the media, concerts, and the economic act of purchasing music.

On the one hand, the radical promise—or threat—of the network studio is to make the whole of Burnett and Weber’s system of production obsolete by possibly doing away with producers, record companies, and the established patterns of promotion and retailing. On the other hand, it promises new, tighter connections between production and consumption (see, for example, Kusek & Leonard, 2006; Owsinski, 2009). Will the promises be fulfilled?

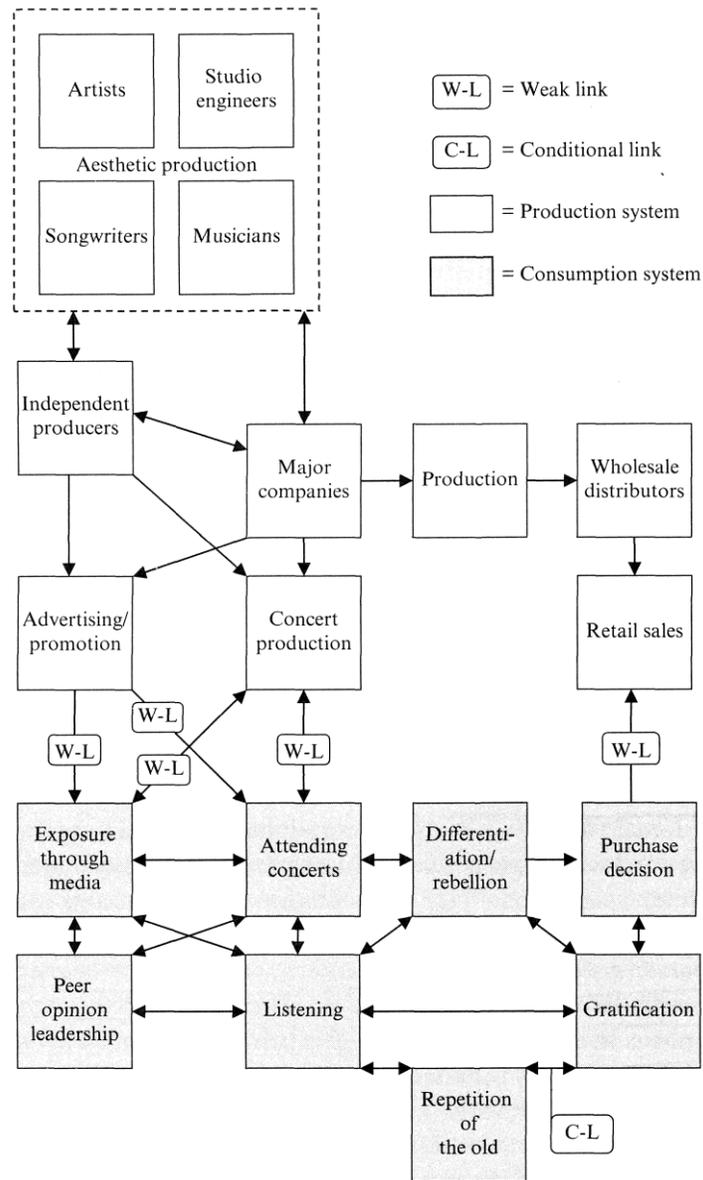


Figure 2. Burnett and Weber's (1989) Production and Consumption Systems.

### Method

This study has been performed within the framework of the larger Norwegian Science Foundation NFR project *Pandora's iPod: Music and Morality in the Information Society* (2005–2011). The overall aim of the project has been to carry out a broad, case study-based investigation of digital music distribution within the Norwegian context, comprising both production and consumption perspectives. The interviewees were all recruited from the population of musicians and producers around the Trondheim, Norway area. We conducted a total of 22 in-depth interviews: 10 interviews in the spring of 2007, and 12 interviews in the spring of 2008.<sup>1</sup> As a selection criterion, we wanted our interviewees to be experienced and dedicated users of home recording facilities.

For all the interviewees, music was their central hobby and passion. Most of them had some experience as both recording artists and live artists, and most of them had a dream or ambition to make a living and career out of their music. Consequently, a fair way to label our interviewees would be to call them "semi-professionals" or "artists in the making." The interviewees composed and performed in different music genres, from rock and pop to hip hop and electronica. They ranged from 19 to 45 years of age, with most of them in their mid-20s.

The interviews usually lasted approximately one hour. We used a theme-based interview guide covering the following main themes: music career, network, decision to invest in home studio, learning process, set-up of home studio, choice of recording equipment, working method, and home studio versus professional recording facilities, as well as use of the Internet for obtaining software, for information and problem solving, for cooperation, and for distribution and promotion. In the initial analysis, we used a classification scheme in which each interview was coded with key words according to thematic categories (Burnard, 1991; Charmaz, 2006). This made it possible to extract the most important tendencies in the material.

The next step was to write interview summaries for each interview (3–5 pages). For the first 10 interviews, these were then used to write "flat empirical stories," which are thematically structured summaries of the empirical material. For the next 12 interviews, much of the same procedure was followed, resulting in a 20-page preliminary report.

Drawing on these four sources—raw interviews, classification schemes, individual interview summaries, and the thematically structured summary/report—the material has been further systemized and organized for the purpose of this article. Based on the prior knowledge of the material, it has been analyzed according to two broad themes: 1) The use and evaluation of the home studio "per se" in the various phases of music creation, production, and dissemination, which is the theme for the first part of

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<sup>1</sup> Kristian Moen wrote his master's thesis, "The mobilizing of music" (2007) based on the first 10 interviews. Many thanks to Kristian for the use of his material. Parts of the arguments in this article are spelled out in more depth in his thesis. In 2008, he was hired as a research assistant to undertake 12 more interviews to help acquire a broader empirical grounding for the analysis.

the analysis; and 2) the relative merits of the home studio and the prospects of building a "career from home" vis-à-vis professional recording facilities and traditional career patterns in the music industry, which is the theme for the second part of the analysis.

### **A Visit to the Network Studio**

The personal computer is the production center of the home-based network studio. According to Taylor (2001), the creative process involved in the production of modern popular music can be characterized by four essential techniques: multi-track recording, MIDI programming, sampling, and sound synthesis. Among the interviewees, all these operations are basically performed through the use of a personal computer and software packages such as Cubase, Logic, or Pro Tools. Some are using more specialized software for certain tasks (e.g., using MAX to perform the programming of sound into the hardware). The technical setup of the network studio further consists of various assemblies of loudspeakers, instruments, sound transforming devices, and acoustical arrangements, all linked to the computer.

There is a division between those basically working with MIDI (computer generated sounds) and audio ("real sound" recordings). A "pure" MIDI studio would typically consist of a computer and a MIDI keyboard, or perhaps a synthesizer or a digital drum set, whereas a "pure" audio studio would consist of a computer and diverse types of equipment, such as microphones and amplifiers, as well as adjusted acoustical surroundings to record the vocals and actual instruments. Even so, the "pure" variants are possibly the rarest instances. Among my interviewees, even those essentially just working with MIDI had some additional equipment for audio recordings (e.g., a microphone for vocals). Vice versa, those with a predilection for audio recordings also used MIDI programming in parts of or throughout the recording and production process, for reasons of either efficiency or cost savings, or to obtain additional effects.

All of my interviewees were experienced users of home studio facilities. For them, the home-based network studio represented a world of new possibilities in the creative process of making music. An important motivation for the appropriation of music recording and editing technologies has been the possibility such technologies offer to tinker and experiment with sound. The opportunities to test out ideas and play with the material were central to their approach. Today's software packages offer almost unlimited possibilities for manipulating sound recordings in various ways, including pitch, beat, touch, tempo, decay, sequencing, randomizing, etc. From the Internet, the interviewees found numerous extensions to their software in the form of samplers and plug-ins. The boundlessness of possibilities is demonstrated by this passage from the interview with Hans and Dan:

Dan: When I started out, I downloaded all the time. Because then it was like, I have to have this and this and this, and I have to test that and that and that. But ...

Hans: It gets like some kind of sport in the end, to find as much as you can. You don't really do it for the sake of the music, you just sit there and become greedy.

Dan: You end up as a collector. It becomes a mania.

Actually, several of the interviewees described the work of limiting their software setup as being one of the most demanding.

The availability of advanced multi-track techniques has opened up editing options that were previously reserved for only the most expensive professional recording studios. Cutting up, mixing, and copying soundtracks are now tasks that can be done almost instantaneously. In particular, the interviewees emphasized the possibilities of altering and remaking the recordings throughout the process, in addition to being able to go back on choices made at an earlier stage. Ken, who was one of the older musicians, contrasted this to the way he was used to making recordings before:

It was a revolution in itself, as it allowed you the possibility to record your ideas and work with them back and forth at home, instead of going into a studio and paying €50 per hour to play with your music. In that way, you become a whole other type of creative musician than I think was ever possible before.

Today, musicians compose, play, record, and produce their own music. Some important aspects of the creative process are the possibilities now available to experiment with sound effects, as well as to cut and paste in the recordings and redo earlier takes.

Of course, the network studio has made recording music much more affordable. Trond, who was also one of the older musicians, said that, in the past, one had to be very well prepared before recording anything, due to the cost of the tapes:

Before, it cost €80 to do a 30 minute tape with 24 tracks, so you had to plan more in detail how you were going to use your time. At that time, you really had to rehearse before you went to a studio.

With the computer-based equipment of today, this is no longer necessary. Nonetheless, it should be noted that illegal downloading seems to be part of the explanation for why so many musicians can now record music with good sound quality on their own. Most of my interviewees admitted that they download most of the software they are using from various file-sharing networks, since the licensing fees for official versions of many of the software packages were described as prohibitively expensive.

The network studio has clearly changed the way musicians work together. Those of the interviewees who were playing in a band or working on projects with other musicians reported that it was very common to circulate work in progress between the musicians. With the network studio, musicians and band members have obtained a toolkit that simplifies and structures the process of composing and rehearsing new music.

The interview material reveals that the network studio has replaced much of the work that bands have traditionally performed in rehearsals. By recording and circulating ideas and drafts, the rehearsal process has become more efficient, because the musicians can prepare and work with their tasks before the band meets to rehearse. The use of digital recording software has made it possible to generate sheet music automatically, thereby making it easier to teach instrument parts and vocals to other musicians. On

the other hand, digital recording software was also frequently used to record rehearsals, so that bands could document and evaluate their performance.

Control was mentioned as another aspect that contributed to the appeal of the network studio. In the network studio, the interviewees were controlling all stages of the recording process, from inception to the end product. The musicians took on the multiple roles of composer, performer, technician, and producer, with no external interference. Jonas explained:

You can create music, you can arrange music, you can perform music and you can record music. You can also start on the process of distributing music, which was previously the responsibility of the record companies.

This points to a new type of assembly between technologies and activities that used to take place in separate spheres of the music production process. When music is produced in a network studio, the established distribution of the roles between producers, technicians, musicians, and manufacturers becomes blurred. The interviewees generally believed that this has given musicians greater power and control over their music than they had previously.

The network studio has also opened up new ways to expose and distribute music. All of the interviewees except for two were using the Internet to present themselves and make their music publicly available, work which was being done through homepages, blogs, MySpace, YouTube, Facebook, and the Norwegian site Urørt. The Internet was valued as a convenient tool for promotion and distribution, particularly in terms of communicating directly with fans and acquaintances. The interviewees experienced the feedback they were getting for their music as stimulating and entertaining.

For my interviewees, the appeal of the network studio can be summed up in five basic motivations: It stimulates creativity, it is economically beneficial, it is (in some respects) time efficient, it gives them increased control over the production process, and it makes it possible new ways to expose their music.

To borrow a term from Latour (1987), this has led to the rise of the network studio as being a new "center of calculation," meaning that it is a central site where the activities of modern societies burst out. As such, the network studio has not only absorbed, but also renewed and transformed practices that previously took place elsewhere. We have seen how the network studio has altered the act of recording music that used to belong to a professional studio, allowing recording to become part of an ongoing process and not just an end product. The network studio has also taken over the collaboration of activities among musicians that used to take place in rehearsals. Furthermore, the network studio has opened up a new channel for two-way communication between artists and consumers, seemingly sidestepping the weak links of Burnett and Weber's model (see Figure 2).

In important ways, the network studio has facilitated a reassembling of the creative processes of music-making that fosters the sort of autonomous production and distribution practices that Theberge (2004) foresaw. Arguably, the practices of my interviewees can also be seen as part of the "remix culture" that Lessig (2008) describes, in the novel ways they are exploiting networked digital technology to tinker

and experiment with sound. We have seen how the interviewees were using editing software to perform what Kusek and Leonard (2006) term "cut-and-paste artistry," a phrase they use to describe how musicians make new music by combining lots of "raw" prerecorded material, including sound bites, samples, and loops.

Do the new assemblages rising around the network studio also qualify as "piracy cultures?" The interviewees said that they based the setup of their network studios on illegally downloaded software, thus qualifying them as pirates within the narrow legal definition of content industries. However, in prolongation of Cardoso and Castells (2010), I suggested another definition of piracy, where piracy is understood as treason against established social orders. Framed this way, piracy can therefore also be defined as acts of disassembling. I have pointed out that the network studio has given musicians unprecedented control over all aspects of the music production process. But what are they using this control for? What are the strengths and reach of the new assemblages of music making? To appraise the dimensions of eventual treason, we have to more thoroughly investigate how the interviewees assess the network studio vis-à-vis the traditional networks and patterns of the music industry.

### **Being Within or Without the Music Industry?**

Remember, the interviewees were chosen because they were known as dedicated and experienced owners and users of home studio facilities. For that reason, it was interesting to know how they evaluated the potential of the new technologies. Numerous commentators have claimed that the widespread availability of cheap high-quality recording equipment has made professional recording studios obsolete. Kusek and Leonard, for example, comment on the possibility of artists today being able to create albums entirely in the comfort of their own home studios: "This fact has wreaked havoc on the recording studio business, as most artists no longer need to spend a fortune renting elaborate facilities for recording, editing and mixing" (2006, p. 144). Even so, they note that some artists still make their recordings in professional recording facilities, but assert that this decision comes "more often than not at the request of the record label that is backing them" (ibid.).

My interviewees were asked to compare the relative merits of the home-based network studio versus professional recording studios. As it turned out, they all actually had some arguments in favor of the professional recording studios. Counter to all claims, the professional recording studios were generally seen as offering better equipment, since they usually consist of more hardware machinery than the home-based studios. The general opinion was that such equipment generates better sound. For audio recordings, the recording outfit (microphones, preamps, cables, etc.) in professional studios is often more expensive and of better quality than what is common in home-based studios. A professional studio will also have special sound-insulated spaces for the recordings. In particular, the home-based studio was seen as unsuitable for the miking of drums, and also for some acoustic instruments. In the home-based studio, drums and other instruments could be replaced by MIDI and software instruments for practical and economic reasons. The material shows that this was the usual procedure when the interviewees worked with composition and sketches at the demo stage. However, the tendency that emerged in the interviews is that such substitutions are seen as static and unauthentic.

Another type of argument in favor of the professional studio was related to competence. Given the experience and dedication of my interviewees, one might expect that they would not feel they were in need of any external expertise. But this was not the case. The interviewees stressed that music production demands a lot of knowledge about sound and how technology affects it, as well as a lot of experience and training in how it can be manipulated. In her study of recording engineers, Horning noted:

Yet while it is truer than ever that “anyone” can make records of reasonable quality, would-be recording engineers now must have extensive training and experience even to work as an intern in a professional studio. . . . The value placed on tacit knowledge, experience, and human interaction in professional recording has not diminished. (2004, p. 705)

This was also true for my interviewees. All of the interviewees except one had used professional studios on one occasion or another. The use of professional recording facilities was seen as an important arena, both for feedback on one’s work, and for exceeding one’s competence.

Those of the interviewees who had already released their own albums had all chosen to do the final mixing and mastering in professional studios. This also functioned as a way to secure the quality of the artwork. In reality, this finding demonstrates some of the limitations of the “remix culture,” in which affirmation is given and competence developed in communication with peers in (Web-based) communities of interest (Lessig, 2008). We have seen how all the interviewees were engaged in various forms of such communication. However, when the content production gets as ambitious as it did for my interviewees, relying solely on such feedback is not seen as being sufficient.

In fact, after analyzing the relationship of the interviewees with doing professional recording, a somewhat different picture of the home-based network studio starts to emerge. The home-based studio has given the interviewees the possibility of recording reasonably good music demos without relying on professional recording facilities. This was regarded as being of importance, since such demos can be circulated among musicians, fans, radio stations, record companies, music reviewers, and organizers of live events. Yet, the tendency that emerged in the interviews was that the music produced solely in home-based studios was simply regarded as “demo music.” Real releases demanded the expertise and equipment of the professional recording studios—at least for some parts of the job.

We saw earlier how home studio facilities have made recording an integral part of the creative processes of making music, not just the result of these processes. However, from the viewpoint of the interviewees, the final dynamics were missing. Thus, home studio recording became only the beginning of a process that, for them, would hopefully end up somewhere else.

This also affected how they comprehended the material they made available through the Internet. None of the interviewees put out their entire “catalogue” online. On the contrary, the rule was to be quite restrictive about it. The material released on homepages, MySpace, and the like was seen as demos, sketches, and “situation reports.” Their function was basically meant to be samples and “teasers” for something that would soon appear through other distribution channels. Thus, music distributed directly through the Web was looked upon as being in a more unfinished state—and was accordingly given lower

status than music distributed in more traditional ways. Another finding was that some of the interviewees revealed scruples against releasing music produced in their home-based studio, since the music had been produced with the aid of illegally downloaded software.

Based on my material, it also seems that we are faced with quite an astonishing paradox: The flourishing of home-based studios has not driven musicians away from the professional studios. On the contrary, home-based studios have given more musicians than ever the possibility of making professional recordings! By doing parts of the recording at home, the musicians saved money and time in the professional studios, thereby allowing them both to be better prepared, and to use their energy more effectively while in the professional studios. As a consequence, it has become cheaper to make professional recordings, and thus, more musicians can afford to do so. Actually, what we witness here is an example of David's (2010) third scenario—a subversion that ends up reinforcing the dominant order.

We have seen that competence and equipment were central arguments in favor of doing professional recordings. It is also possible to identify a few more underlying causes. These have to do with the comprehension of the professional recording studio as a meeting place and entrance point to the industry. The interviewees did not believe that marketing and promotion through the Internet was very effective. As Trond puts it: "The chances of being discovered by the right people through the Internet amounts to zero." To reach a wider audience, it was seen as a necessity to employ the resources and channels of the established music industry. In this picture, the professional recording studio served a function as a site where musicians could get their foot in the door—a place where people met, contacts were made, names were dropped, tips were circulated, and recommendations were given.

It can even possibly be argued that the actual network building that takes place within the professional recording studios was not the most important aspect. Rather, it was how the use of professional recording facilities tapped into the self-esteem of my interviewees as musicians and their "feel for the game" of what is the decent and proper way of going about things. The understanding of a professional recording studio as an entry point can be seen as a symbolic ascription which is part of a wider construction of what it is like to be a real artist. In this construction, to record in a professional studio not only functions as an actual quality check of an artist's work, but also as a symbolic hallmark signaling the seriousness of the artist. Proper music should be recorded in professional studios. Real artists make albums. They sign contracts with established record companies and release their music in a traditional manner. Traditional forms of marketing and promotion are necessary. Based on my material, this model of making a career seems to be a quite strong and "locked" construction—even, or perhaps especially, among dedicated home studio users.

### **The Pre-Distribution Network and the Professional Network**

Spearheaded by the Internet, new digital technologies have brought us to period of transition in how we relate to music that deserves to be labeled as revolutionary. Users the world over have embraced the new technologies and found new ways to copy, share, and distribute music. Through the Internet, vast amounts of legal and illegal material have been made available for everyone. As numerous commentators have noted, this has put the established music industry under tremendous pressure (see, for example,

Boyle, 2008; Fisher, 2004; Gillespie, 2007; Lessig, 2008; Patry, 2009). In recent years, the music industry has responded to the challenge by agreeing to try new business models, such as pay-per-download services like iTunes, or subscription services like Spotify. Nevertheless, it remains to be seen whether these new models will reaffirm the relationship between the music industry and music users (see Wikström, 2009).

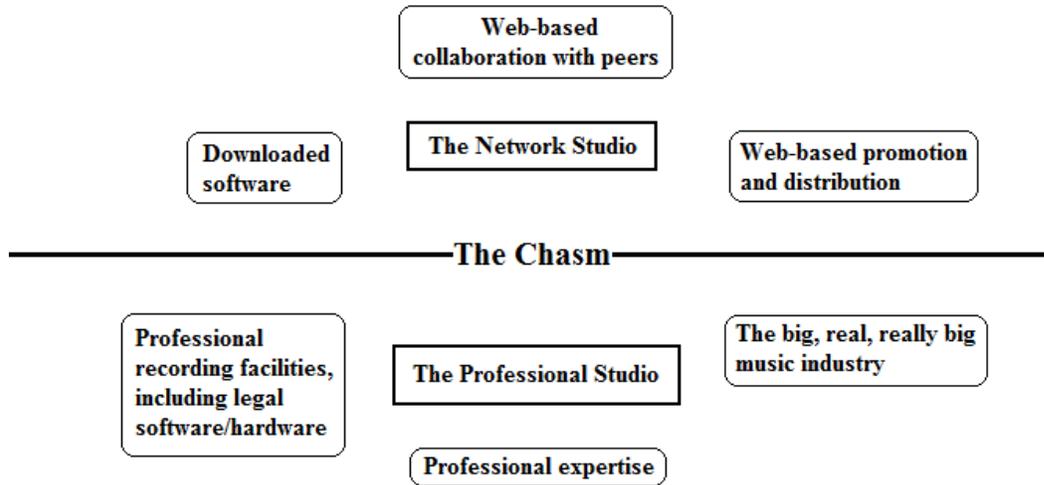
The central question brought up by the rise of the home-based network studio is whether musicians and would-be musicians will become part of the digital music revolution. In Theberge's (2004) original account, he asked whether the network studio would operate outside the established music industry, facilitating new patterns of exchange. For several commentators, the answer has been obvious. Owsinsky ascertains that, today, "record labels, radio and television [have] become mostly irrelevant" (2009, p. ix). In addition, some popular examples have repeatedly been taken as proof of this development. One of them is the band Radiohead, which in 2007 released its new album, "In Rainbows", for which fans were allowed to pay whatever they wanted, even nothing. Another is Trent Reznor's (who records under the stage name Nine Inch Nails) release of "Ghosts I-IV" on the official Nine Inch Nails website nin.com. The release came in four different versions, ranging from free downloads of a sample of the songs to a deluxe edition consisting of all 36 songs, as well as a lot of additional bonus material, costing \$300. Moreover, fans were encouraged to make their own remixes of the songs and upload them on a special section of the website (see Wikström, 2009). These are rare examples, though, and the broad awareness of these examples could be as much a reflection of how some commentators want the world to look as one of how it actually looks.

In the beginning of this article, I contrasted two models of the music industry. In Leyshon's model, the music industry is characterized by four overlapping networks, representing its "complex and often messy organizational structure" (2001, p. 61). Leyshon portrays a volatile industry, one in which the different networks (creativity, reproduction, distribution, and consumption) are quite open to change. Actually, Leyshon predicts that this will be the result of the appearance of the network studio:

Low-cost recording equipment . . . has created the conditions for a different form of "technoscape"—one that encourages largely independent, autonomous forms of local production rather than contributing to the dominant networks of power. (ibid., p. 73)

In contrast, Burnett and Weber (1981) present a "two-world model" with tight, not easily untied connections within the established music industry, in addition to a more fragmented community of users with only weak links to the industry. Based on my findings, it seems that Burnett and Weber's model has offered the better prediction. I will now attempt to further qualify that conclusion.

The analysis presented in this article has documented how the home-based network studio has become part of two different assemblages, as illustrated in Figure 3.



**Figure 3. The Pre-Distribution Network and The Professional Network.**

On the one hand, the network studio has become the "calculation center" of a network of new production and distribution activities. As we have seen, this network essentially consists of an assembly of downloaded software, computers, various types of recording equipment, Web-based collaborations with fellow musicians, and the application of various Web services for the promotion and distribution of music. I have employed Latour's (2005) notion of "reassembling" as a reference point for my analysis. "Reassembling" refers to the processes that tie various sorts of actors together in new constellations. The network studio has clearly reassembled some of the processes of music-making. In some respects, the activities rendered possible by the network studio appear as "autonomous production spheres" (Theberge, 2004), where musicians can develop their musical identity on their own terms. Furthermore, its networking characteristics make the network studio into an arena to conduct self-presentation and build contacts.

I have also asked whether the practices of the network studio have any "disassembling" effects—whether they constitute a threat and a treachery against the established practices and structures of the music industry. The eventual treason is, of course, related to the potentially unlimited reach of the Internet, which, in theory, makes it possible to sidestep the traditional patterns of music production and distribution. Still, the networks that my interviewees assembled were basically of a local character, with limited outreach. It was seen as being very difficult to target a wider audience by making one's music available through the Internet. Furthermore, there was no money in it. The interviewees referred to the problem of "information overload" on the Internet. Some mentioned that they seldom listened themselves to music uploaded to sites such as MySpace, YouTube, and Urørt, both because of the amount of music available there, and because the quality of the material is so often poor. As a result, these sites have the character of a "test bed," while real life goes on elsewhere.

On the more positive side, the network studio was evaluated as an important element in the process of making music. For many, it has become an indispensable tool for being able to create music at all. The network studio has altered the process of music-making, allowing recording to become an integrated part of an on-going process of music composition and rehearsal. It has made it possible to continuously produce demo material that can be tested on fans, peers, and fellow musicians. In this way, the network studio has extended the space for activities related to communication and feedback. I will argue that the network studio constitutes the central node in small and limited, but effective, *pre-distribution networks*.

In contrast to these pre-distribution networks stands the established *professional network* of the music industry. We have seen how the use of professional recording studios for my interviewees served as a (practical and mental) entry point to the professional network. Here, the interviewees obtained access to professional expertise and equipment, as well as possible contacts and recommendations that could lead them deeper into the network. Thus, for my interviewees, the use of professional recording facilities was seen as a necessary precondition for producing "proper" music, making "albums," and becoming "real" artists.

In the professional network, the home-based network studio plays a rather marginal role. However, we have observed the emergence of a possible division of labor between the network studio and the professional studio. Some parts of the music production process have been delegated to the network studio—typically, generating ideas, experimenting, and making demos. Others were delegated to the professional studio—e.g., the audio recording of certain instruments, and the final mixing and mastering. In this way, we may have witnessed the integration of the home-based network studio into the massive hybrid network of the music industry.

### **Hail to the Album!**

In the introduction, I commented on how, to some degree, the term "piracy" has moved from the accusations of the content industries to be taken by Internet activists as a symbol of rebellion against corporate authority. This was, for example, clearly the case when the anti-piracy campaign of the Norwegian music industry, labeled "Piracy kills music," was met with the counter-campaigns "Piracy kills no music" and "Piracy creates music" (see Spilker, 2009). The same, of course, holds true for the popular Swedish torrent site Pirate Bay. Cardoso and Castells' (2010) concept of "piracy cultures" is formulated in somewhat the same vein to denote the growing number of people building media practices and relationships outside the institutionalized set of rules in the content industries.

I also suggested that the importance of these practices and relationships could fruitfully be assessed using David's (2010) four scenarios as a lens. In the first scenario, the outcome of the formation of the non-institutionalized practices and relationships would turn out to be rather insignificant and negligible, though some might be tempted to conclude that the practices of the network studio users belong to this category, given the limited outreach of the networks that my interviewees were building and the low importance ascribed to them. However, such an inference would neglect the significance of the network studio in the creative processes of music-making. Clearly, there is nothing in my material to

support David's second scenario—that these new practices should somehow constitute a threat to cultural innovation.

By and large, my findings are most in accordance with the third scenario—the ironic flip, in which alternative practices end up strengthening established orders. This is most obvious in the way that the rise of the network studio has actually made the use of professional recording facilities more accessible for a larger number of musicians. On a larger scale, it is visible in how most of the activities of my interviewees are directed toward, and not against, the established music industry. Thus, David's fourth scenario, the emergence of new and progressive forms of social interaction, receives limited support from this case study. Although the creative processes have changed, the perspectives on how to build careers have not.

Consequently, the practices and relationships of my interviewees do not really constitute a "piracy culture" according to the definition put forward in the introduction. It is interesting to reflect on the difference between David's findings and mine. David has performed case studies on the practices of six artists (Arctic Monkeys, Enter Shikari, Simply Red, The Charlatans, Madonna, and Radiohead), strategically chosen to unfold the breadth of alternative stances taken by artists today. His conclusion is that the current situation offers more freedom to artists and fosters new relations between artists and audiences—thereby supporting the fourth scenario.

However, the difference between our studies is that David has basically looked at established artists with the time, opportunity, and (occasionally, at least) nerve to experiment. In addition, his sample includes two well-known examples of entrepreneurial bands, Arctic Monkeys and Enter Shikari. On the other side, my interviewees were not in the same position as musicians on the verge of a career, nor did they have the same entrepreneurial spirit. It would clearly be interesting to know more about the distribution of the entrepreneurial spirit among established and not-so-established artists on a broader scale.

I think that one of the most important contributions of this study is the identification of an inherent conservatism that probably exists among many artists and would-be artists. The music industry has only had a limited degree of success using their technical, legal, and media strategies to regulate the practices of Internet users (see Spilker, 2011). However, this study indicates that the industry has done far better in making artists stick, as it seems that the music industry is able to effectively reproduce a conservative, "naturalized" understanding of what becoming an artist should look like. For the bulk of my interviewees, the norm for a "real" career is to still use professional recording studios, be contracted by a record company, release traditional albums, distribute them through established channels, and leave the marketing and promotion to the trade.

It might be apt to use some caution in relation to these conclusions. Over time, it may very well be the case that the practices of the network studio can turn out to be more transformative than my interviewees were able to survey. Hence, it cannot be ruled out that, in the future, the network studio will become a powerful tool in an upheaval against some of the core structures of the music industry. As this study has indicated, too much uncertainty exists so far as relates to the striking power of the network

studio, vis-à-vis traditional production practices and distribution channels, to make it appear as a trustworthy alternative.

In the autumn of 2010, Erlend Mogaard-Larsen, the director of By:Larm, which is the biggest music trade venue in the Nordic countries, took the initiative to found a Nordic Music Prize, an inter-Nordic selection of the best music album of the year. Interestingly, he stated the reason for the founding as such:

Actually, it is totally far out to do this in an era where the sale of albums is declining year by year. But we want to honor what seems to be the driving force for many musicians, the desire to create something authentic, an artwork if you like, that lasts for 30 or 40 minutes. Everyone can make a song or two, but not everyone can make an album. (Quoted in Bryne, 2010, p. 44)

The possibly nostalgic attitude that Mogaard-Jensen puts on display here would certainly be appreciated by my interviewees. In the turmoil of today's music life, the consumers (that is, consumers as file-sharers) could be said to be acting as revolutionaries. By contrast, the artists and musicians (that is, musicians as network studio owners) should, at best, be described as evolutionaries—or even revisionists. Hail to the album!

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